By mail and Post

कार्यालय कलेक्टर (खनिज शाखा) जिला दमोह

कमांक क/खनिज/2022/564 दमोह,दिनांक 31/08/2022

प्रति,

State Expert Appraisal Committee (SEAC)
Paryavaran Parisar, E-5, Arera Colony, Bhopal, Madhya Pradesh 462016

विषय– सस्टेनेबल सेण्ड माइनिंग मेनेजमेंट गाईडलाइन 2016 एवं इनफोर्समेंट मॉनिटरिंग फॉर सेंण्ड माइनिंग 2020 के अंतर्गत रेत खनिज हेतु जिला सर्वेक्षण रिपोर्ट तैयार किये जाने के संबंध में।

संदर्भ– 1. संचालनालय का पत्र कमांक 2981/खनिज/विविध/न.क./2022 भोपाल दिनांक 03.03.2022
2. इस कार्यालय का पत्र कमांक क/खनिज/2022/341 दमोह दिनांक 17.05.2022
3. 576वी राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 10 जून 2022
4. इस कार्यालय का पत्र कमांक क/खनिज/2022/503, दमोह दिनांक 20.07.2022
5. 577वी राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 03 अगस्त 2022

–00–

उपरोक्त विषयांतर्गत संदर्भित पत्र प्राप्त हुआ है, संदर्भित पत्र अनुसार जिला सर्वेक्षण रिपोर्ट (DSR) गठित कमेटी द्वारा तैयार किये जाने के निर्देश दिये गये है। संबंधित जिला सर्वेक्षण रिपोर्ट कमेटी के माध्यम से तैयार करा कर जिला पोर्टल पर दावे/आपत्ति प्राप्ति हेतु 21 दिवस तक अपलोड की जाना है।

गठित समिति द्वारा प्रारूप डीएसआर तैयार की जाकर, समिति के सदस्यो द्वारा दिनांक 18.04.2022 को अनुमोदन उपरांत कार्यालयीन पत्र कमांक क/खनिज/2022/229 दमोह दिनांक 18.04.2022 से जिला पोर्टल (damoh.nic.in) पर सूचना जारी होने की दिनांक से 21 दिवस तक उक्त जिला सर्वेक्षण रिपोर्ट के संबंध में आमजन के दावा/आपत्ति ई–मेल modgmdam@mp.gov.in पर अथवा खनिज कार्यालय में कार्यालयीन समय में स्वयं उपस्थित होकर प्रस्तुत किये जाने हेतु अपलोड़ कराया गया। सूचना जारी होने की दिनांक से 21 दिवस उपरांत जिला सर्वेक्षण रिपोर्ट के संबंध में किसी भी प्रकार की कोई दावा/आपत्ति इस कार्यालय में प्राप्त नहीं हुआ, तत्संबंध में कार्यालयीन पत्र कमांक क/खनिज/2022/341 दमोह दिनांक 17.05.2022 के माध्यम से जिला सर्वेक्षण रिपोर्ट (DSR) आपके समक्ष प्रस्तुत की गई, 576वी राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 10 जून 2022 एवं 577वी राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 03 अगस्त 2022 चर्चा उपरांत समिति की यह अनुशंसा है कि दमोह जिले की जिला सर्वेक्षण रिपोर्ट को समिति द्वारा सुझाई गई उपरोक्त अनुशंसाओं के तारतम्य में अद्यतन (अपडेट) किया जाये तथा संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25.07.2018 के अनुसार पुनः प्रस्तुत की जाये।

अतः 577वी राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 03 अगस्त 2022 के पालन में प्रारूप जिला सर्वेक्षण रिपोर्ट (DSR) में संशोधित कर आवश्यक कार्यवाही हेतु प्रेषित है।

संलग्न–उपरोक्तानुसार

कलेक्टर,
जिला दमोह.
दमोह,दिनांक /08/2022

पृ0कमांक क/खनिज/2022
प्रतिलिपिः–

1. प्रमुख सचिव, मध्यप्रदेश शासन खनिज साधन विभाग, मंत्रालय वल्लभ भवन, एनेक्सी–2 भोपाल की ओर सूचनार्थ सादर प्रेषित।
2. सदस्य सचिव, State Environment Impact Assessment Authority, M.P. की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु।
3. संचालक, प्रशासन तथा खनिकर्म, संचालनालय भौमिकी तथा खनिकर्म, मध्यप्रदेश 29–ए खनिज भवन, अरेरा हिल्स भोपाल की ओर सूचनार्थ सादर प्रेषित।
4. संबंधित समिति सदस्य ..... की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

खनि अधिकारी,
कार्यालय कलेक्टर (खनिज शाखा) दमोह

Table of Contents

Table of Contents

State Level Environment Impact Assessment Authority, M.P. (EIA)

List of Tables

List of Figures

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

District Survey Report SAND: Damoh

1 Introduction

In pursuance to the Gazette Notification, Ministry of Environment, Forest and Climate Change (MoEF & CC), the **Government of India Notification No. S.O. 141 (E) Appendix–X, Dated 15.01.2016 & S.O. 3611 (E) New Delhi, 25th 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 (MoEF & CC) 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.
- Illegal and uncontrolled illegal mining also leads to loss of revenue to the State and degradation of the environment.

District Survey Report SAND: Damoh

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 Boundary: Damoh is a district of Madhya Pradesh State located in Central India. The district is part of Sagar Division. It is situated in the north-eastern part of the State and geographically located at 23 degree 09' north latitude and 79 degree 03' east longitude. The district is surrounded by Sagar in the west, Narsinghpur & Jabalpur in the South, Chhatarpur in the North, Panna & Katni in the east. It is situated in a plateau region about 12 miles (19 km) south-east of the Sonar River. It is at an average elevation of 595 metres (1,952 ft). The district of Damoh has an area of 7,306 square km (2,821 sq mi).

The district has several places of historical importance. One example is the town of Nohta, which is located 21 km from Damoh on the banks of the Gauraya River. It was once a capital of the Chandela Rajputs and has many temples.

Origin of Name: The city's name comes from Damayanti, the wife of King Nal of Hindu mythology. Damoh was part of the province (subah) of Malwa during the reign of the Mughal emperor Akbar. The city has several old sculptures, including those of the Hindu deities Shiva, Parvati, and Vishnu.

History: Stone Age tools have been found in Singrampur Valley and it is believed that the area has been inhabited for thousands of years.[4] Around the 5th century, it was part of the empire of Guptas of Pataliputra. This has been evidenced by plaques and coins, and monuments from the reigns of Samudragupta, Chandragupta I, and Skandgupta. From the 8th to 12th centuries, some parts of the Damoh district were in the Chedi Empire, ruled by the Kalchuri dynasty from its capital Tripuri. The temple at Nohta demonstrates Kalchuri's influence in the 10th century. Some regions of the district were under the Chandels of the Jejak-Bhukti.

District Survey Report SAND: Damoh

General Features

Table 1 Administrative Setup of the District

District	TEHSIL& BLOCKS
Damoh	Damoh
	Pathariya
	Batiagarh
	Hatta
	Patera
	Tendukheda
	Jabera
Total	**7**

Location of the District

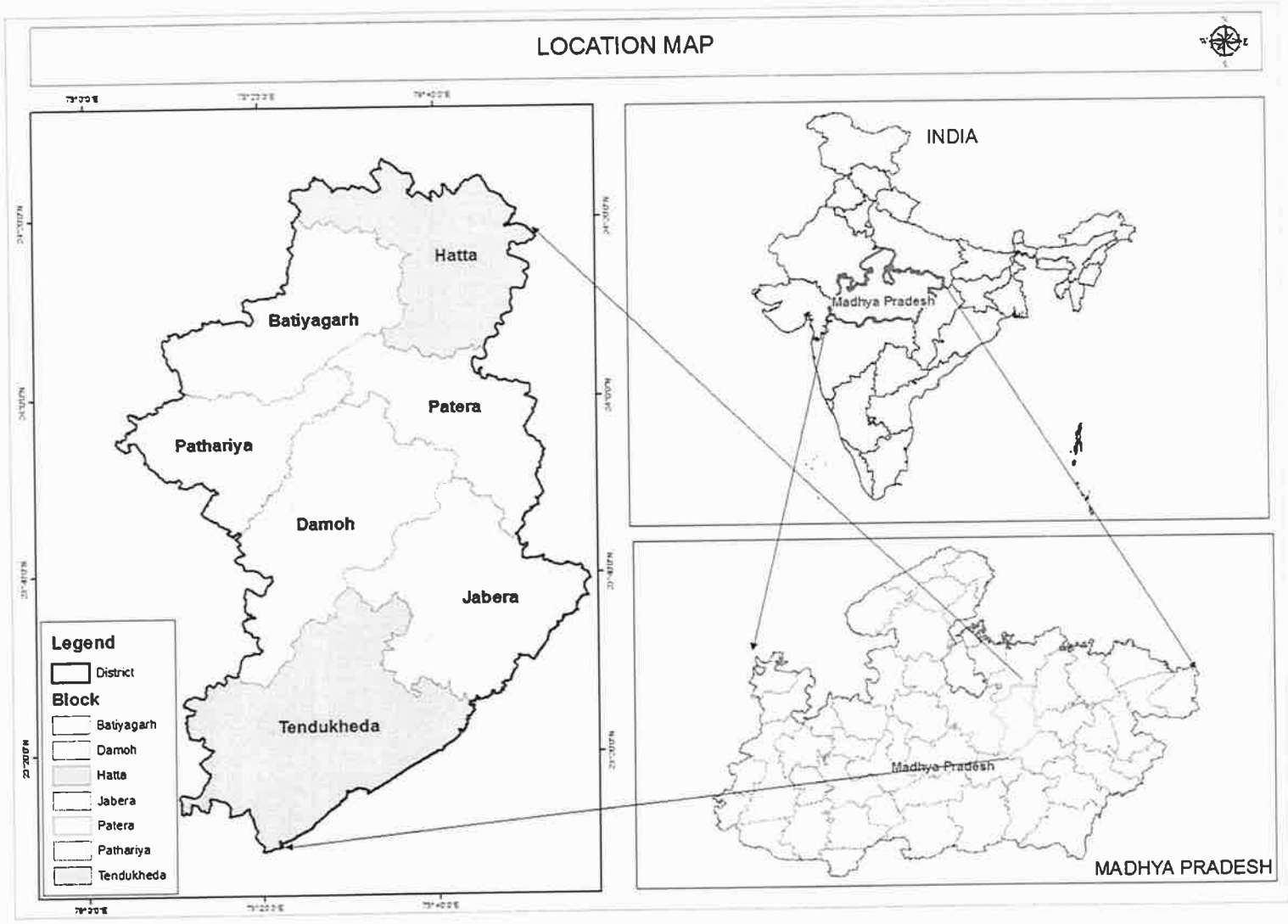
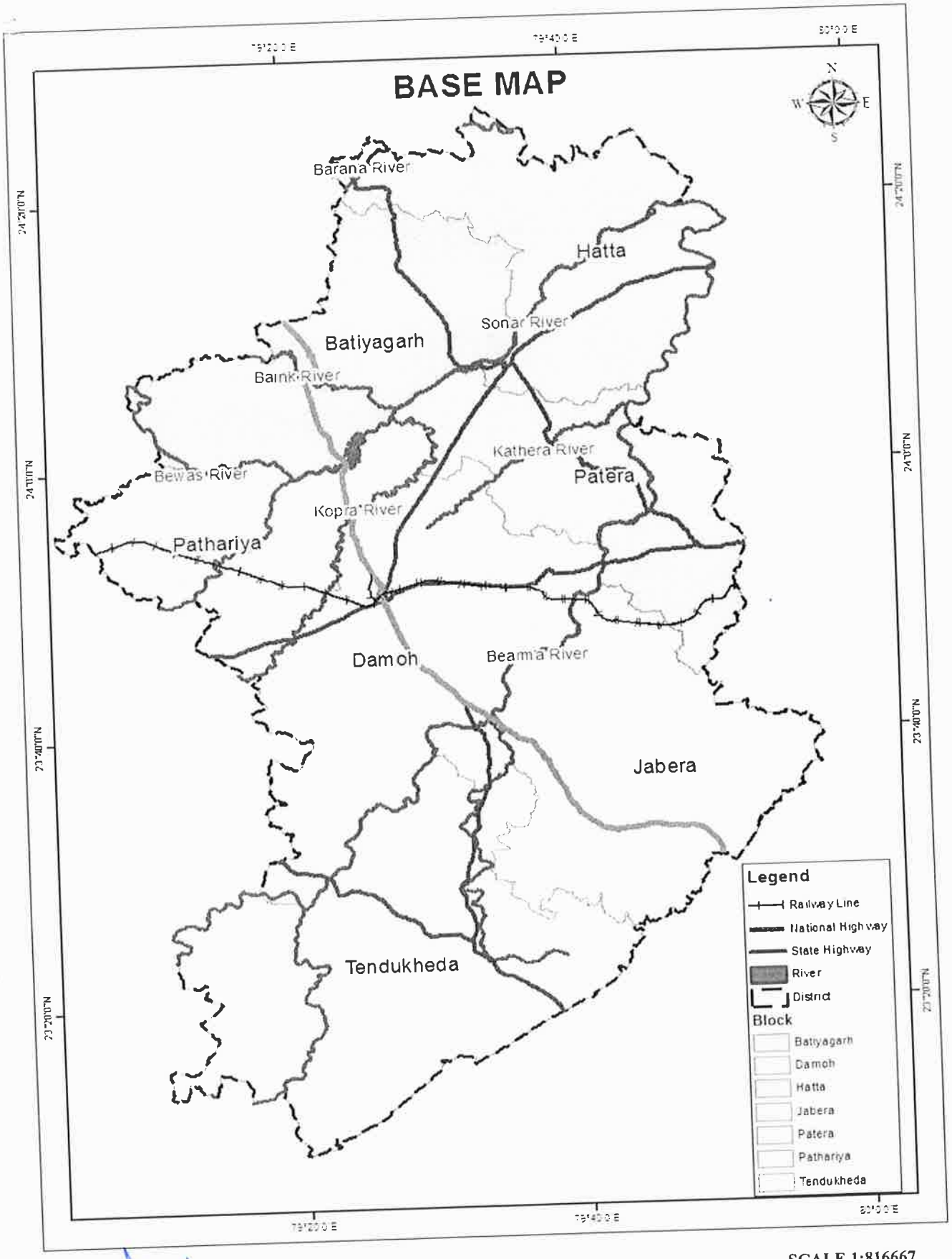


Figure 1 Location Map of the District



SCALE 1:816667

Figure 2 Base Map of the District

2 Overview of Mining Activity in the District

The mineral found in Damoh include Flagstone etc. The other minerals found in district are Limestone .Major productions in the district are Sand, Stone Gitti, Flagstone and Murrum.

Table 2 Mineral Production in the District

Sr. No.	Mineral	Production in Cubic m.	No. of Lessees	Total Area (Hec.)
Major Mineral				2702-737
1.	Limestone	4500000 Met. Tone	10	
Minor Mineral				
1.	Sand	35000	24	
2.	Stone/Gitti	144614	10	
3.	Murrum	1660	1	
4.	Flagstone	14370	8	

Mineral production Chart

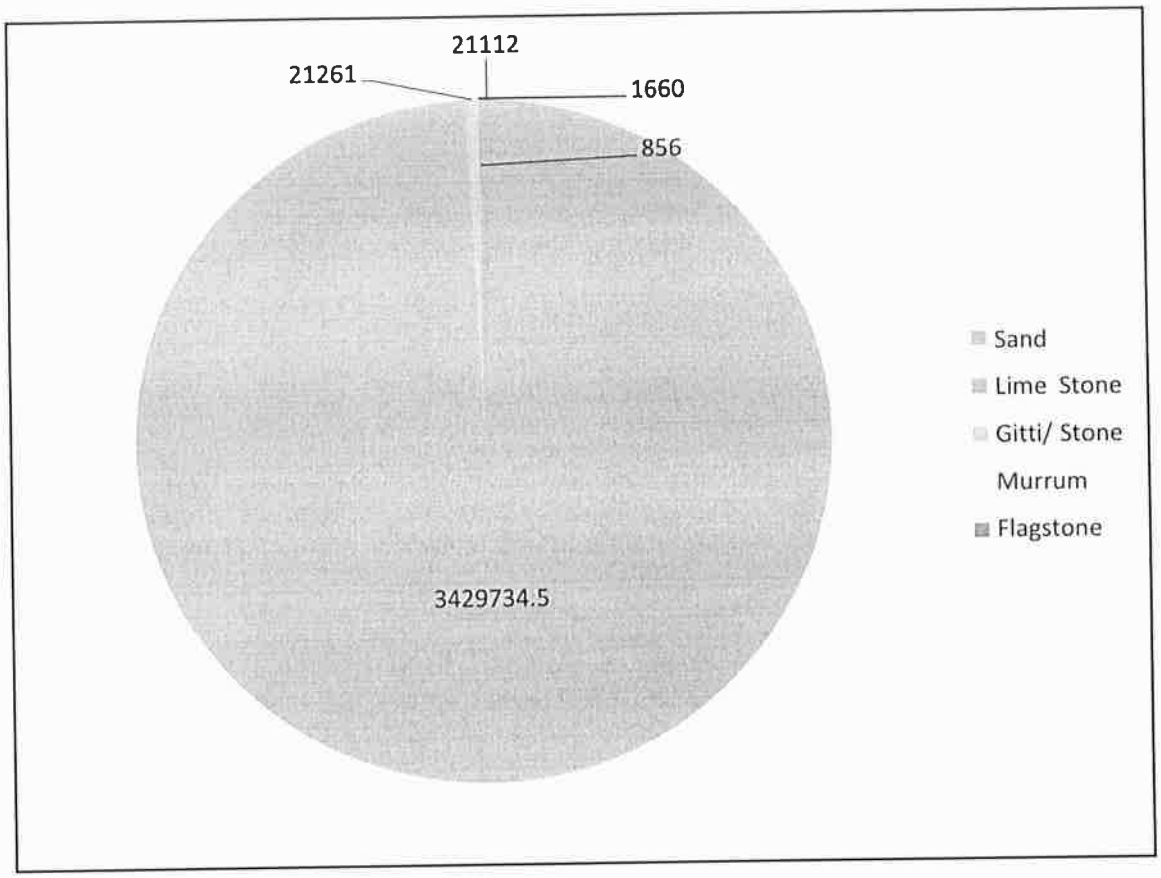


Figure 3 Mineral production in the District

Table 3 Sand Mines in the District

S. No.	Village	Tehsil	Khasra Number	Area (In ha.)	Name of the River	Estimated Production (In cubic meters)	Coordinates		
							BP. No.	Latitude	Longitude
1.	Dandi	Hata	1	5	Sunar	4500	1	24°13'49.84"N	79°38'57.57"E
							2	24°13'52.05"N	79°38'51.55"E
							3	24°14'0.55" N	79°38'57.08"E
							4	24°13'58.31"N	79°39'1.99"E
2.	Belkhedi	Pathriya	1	5	Sunar	2000	BP. No.	Latitude	Longitude
							1	23°53'22.94"N	79°14'42.35"E
							2	23°53'23.31"N	79°14'40.12"E
							3	23°53'32.22"N	79°14'41.74"E
							4	23°53'31.87"N	79°14'49.05"E
							5	23°53'20.82"N	79°14'53.72"E
							6	23°53'19.38"N	79°14'52.41"E
							7	23°53'30.80"N	79°14'47.71"E
							8	23°53'30.73"N	79°14'43.72"E
3.	MadhlaKhiriya	Damoh	1	5	Kopra	1000	BP. No.	Latitude	Longitude
							1	23°53'12.95"N	79°23'2.46"E
							2	23°53'13.92"N	79°23'2.11"E
							3	23°53'45.47"N	79°23'22.19"E
							4	23°53'44.89"N	79°23'23.14"E
4.	Barakhar	Jabera	1	5	Vyarama	1000	BP. No.	Latitude	Longitude
							1	23°38'39.48"N	79°29'35.65"E
							2	23°38'44.25"N	79°29'35.66"E
							3	23°38'48.63"N	79°29'38.95"E
							4	23°38'47.99"N	79°29'41.97"E
							5	23°38'38.91"N	79°29'42.33"E
5.	Payrapura	Damoh	1,218	5	Kopra	1550	BP.	Latitude	Longitude

							No.		
							1	23°54'00.14"N	79°23'33.19"E
							2	23°54'00.71"N	79°23'31.96"E
							3	23°54'18.65"N	79°23'12.99"E
							4	23°54'18.69"N	79°23'14.53"E
6.	Ramgadha	Patera	86	5	Vyarama	3500	**BP. No.**	**Latitude**	**Longitude**
							1	23°59'38.34"N	79°45'6.71"E
							2	23°59'53.51"N	79°44'53.06"E
							3	23°59'55.19"N	79°44'55.57"E
							4	23°59'40.00"N	79°45'9.22"E
7.	Kakra	Pathriya	24,204, 164	5	Kopra	1530	**BP. No.**	**Latitude**	**Longitude**
							1	23°55'34.83"N	79°23'28.07"E
							2	23°55'35.77"N	79°23'26.60"E
							3	23°55'52.89"N	79°23'44.61"E
							4	23°56'07.67"N	79°24'04.28"E
							5	23°56'19.96"N	79°24'03.13"E
							6	23°56'18.66"N	79°24'04.47"E
							7	23°56'12.56"N	79°24'05.67"E
							8	23°55'51.21"N	79°23'46.54"E
8.	Harat	Batiyagarh	638	9	Sunar	3000	**BP. No.**	**Latitude**	**Longitude**
							1	24°7'13.54"N	79°33'19.28"E
							2	24°7'15.57"N	79°33'18.95"E
							3	24°7'19.38"N	79°33'15.43"E
							4	24°7'27.30"N	79°33'31.66"E
9.	RajghatPipariya	Damoh	126	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°52'27.01"N	79°23'17.37"E
							2	23°52'37.023"N	79°23'7.569"E
							3	23°52'36.395"N	79°23'5.818"E
							4	23°52'15.265"N	79°23'26.011"E
10.	Sitanagar	Pathriya	469	5	Sunar	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°03'18.90"N	79°26'46.52"E

							2	23°03'16.72"N	79°26'52.11"E
							3	23°03'15.09"N	79°26'59.69"E
							4	23°03'11.95"N	79°26'59.22"E
							5	23°03'11.42"N	79°26'53.37"E
							6	23°03'12.86"N	79°26'48.38"E
							7	23°03'14.05"N	79°26'49.00"E
							8	23°03'16.41"N	79°26'45.26"E
11.	ImliyaRawat	Patera	343	5	Vyarama	1000	**BP. No.**	**Latitude**	**Longitude**
							1	24°4'39.08"N	79°45'43.68"E
							2	24°5'00.42"N	79°45'39.66"E
							3	24°5'00.46"N	79°45'45.55"E
							4	24°4'38.60"N	79°45'45.96"E
12.	Aak-kheda	Damoh	1,213	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°59'00.58"N	79°28'46.58"E
							2	23°59'01.46"N	79°28'47.05"E
							3	23°59'03.53"N	79°29'04.03"E
							4	23°59'20.28"N	79°28'57.53"E
							5	23°59'33.69"N	79°29'07.08"E
							6	23°59'32.56"N	79°29'06.69"E
							7	23°59'20.35"N	79°28'59.08"E
							8	23°59'03.44"N	79°29'05.51"E
13.	Parasai	Damoh	1	5	Kopra	1200	**BP. No.**	**Latitude**	**Longitude**
							1	23°56'51.62"N	79°24'30.25"E
							2	23°56'52.96"N	79°24'29.55"E
							3	23°56'55.25"N	79°24'35.73"E
							4	23°57'05.91"N	79°24'37.07"E
							5	23°57'11.55"N	79°24'50.53"E
							6	23°57'09.08"N	79°24'51.04"E
							7	23°57'04.98"N	79°24'38.65"E
							8	23°56'54.29"N	79°24'37.75"E
14.	Chharpat	Pathriya	1,97,110	5	Kopra	1200	**BP. No.**	**Latitude**	**Longitude**

State Level Environment Impact Assessment Authority, M.P. (EPCO)

							1	23°49'31.96"N	79°21'24.26"E
							2	23°49'34.001"N	79°21'22.530"E
							3	23°49'33.856"N	79°21'23.808"E
							4	23°49'58.937"N	79°22'3.535"E
15.	Barwasa	Damoh	1,103	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°49'34.02"N	79°21'48.64"E
							2	23°49'35.06"N	79°21'48.18"E
							3	23°49'53.89"N	79°22'03.08"E
							4	23°50'16.25"N	79°22'05.55"E
							5	23°50'16.17"N	79°22'06.65"E
							6	23°49'53.33"N	79°22'04.73"E
16.	SimriKirat	Damoh	93	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°50'54.76"N	79°22'25.49"E
							2	23°51'05.64"N	79°22'37.87"E
							3	23°51'14.61"N	79°22'36.96"E
							4	23°51'14.78"N	79°22'38.73"E
							5	23°51'04.62"N	79°22'39.19"E
							6	23°50'53.79"N	79°22'27.46"E
17.	Devri-Kishundas	Damoh	1,12	5	Kopra	1200	**BP. No.**	**Latitude**	**Longitude**
							1	23°49'25.31"N	79°21'21.80"E
							2	23°49'6.799"N	79°21'18.041"E
							3	23°49'6.660"N	79°21'14.67"E
							4	23°49'35.075"N	79°21'43.164"E
18.	PuraPayra	Pathriya	129,577/1	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°53'14.19"N	79°23'02.94"E
							2	23°53'14.80"N	79°23'02.70"E
							3	23°53'54.23"N	79°23'22.47"E
							4	23°53'53.84"N	79°23'23.35"E
19.	Hinota-Narsinghgarh	Pathriya	4,31,584	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°48'31.49"N	79°20'47.51"E
							2	23°48'43.90"N	79°20'37.91"E

							3	23°48'50.71"N	79°20'44.28"E
							4	23°48'56.97"N	79°20'38.10"E
							5	23°49'04.54"N	79°20'51.93"E
							6	23°49'06.24"N	79°20'50.83"E
							7	23°48'06.88"N	79°20'51.42"E
							8	23°49'04.63"N	79°20'53.27"E
20.	Kulpura	Damoh	15	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°48'26.87"N	79°39'49.64"E
							2	23°48'25.40"N	79°39'46.88"E
							3	23°48'41.79"N	79°39'37.95"E
							4	23°48'43.00"N	79°39'40.71"E
21.	Bari	Damoh	1	5	Kopra	1200	**BP. No.**	**Latitude**	**Longitude**
							1	23°58'06.91"N	79°27'17.12"E
							2	23°58'07.32"N	79°27'16.12"E
							3	23°58'18.76"N	79°27'19.83"E
							4	23°58'08.59"N	79°27'33.35"E
							5	23°58'26.48"N	79°27'31.30"E
							6	23°58'34.32"N	79°27'32.66"E
							7	23°58'33.48"N	79°27'33.64"E
							8	23°58'26.40"N	79°27'32.23"E
							9	23°58'07.93"N	79°27'33.78"E
							10	23°58'17.70"N	79°27'20.15"E
22.	Amoda	Damoh	1,11,56	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°58'6.09"N	79°26'32.92"E
							2	23°58'6.82"N	79°26'33.21"E
							3	23°57'45.27"N	79°26'1.69"E
							4	23°57'44.98"N	79°26'2.90"E
23.	Badagao	Pathriya	710	5	Kopra	1000	**BP. No.**	**Latitude**	**Longitude**
							1	23°59'07.77"N	79°28'38.10"E
							2	23°59'08.39"N	79°28'38.62"E
							3	23°58'58.28"N	79°29'01.03"E
							4	23°59'23.53"N	79°28'55.97"E

							5	23°59'23.83"N	79°28'56.79"E
							6	23°58'58.45"N	79°29'01.93"E
24.	Vijwar	Hata	481	5	Vyarama	3000	**BP. No.**	**Latitude**	**Longitude**
							1	24°6'57.42"N	77°47'5.64"E
							2	24°6'57.60"N	77°47'4.37"E
							3	24°7'18.15"N	77°47'1.79"E
							4	24°7'19.16"N	77°47'3.09"E

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

3 List of the Letter of the Intent Holder and Details of the existing Lease in the District

Major Minerals Mined in the District

Table 4 Major Mines in the District

S. No.	Name of the Lessee	Name of the Mineral	Village	Tehsil	Khasra Number	Area	Validity	Operational/ Non-Operational	Coordinates
1.	Shri Prakash Kumar Duve R/o Sarkhadi Hal Mukam Damoh	Limestone	Bandarkola	Jabera	5/3, 613/4, 13/532/4, 32/5, 34, 35, 36, 37, 3	8.353	28-8-2001 to 27-8-2021	Non-Operational	23°36'32.46"N 79°49'49.2"E
2.	Shri Mangat Singh Badhwa R/o Guard Line Damoh	Limestone	Karondi-Mangarh	Jabera	262	28.13	24-8-2002 to 23-8-2022	Non-Operational	-
3.	Shri Pushpendra Singh Hazari R/o Hata Tehsil Hata District Damoh	Limestone	Panji	Hata	230, 231/1, 231/2	5.66	09-03-2006 to 8-3-2026	Non-Operational	-
4.	Shri Hariram Karoliya R/o Shrivastava Colony	Limestone	Sagodikhurd	Jabera	509	7.268	20-10-92 to 19-10-2042	Operational	23°37'39.0"N 79°49'24.6"E

	Damoh								
5.	Shri Rajendra Krishna Kusamriya Sakin Sakor Tehsil Hata District Damoh	Limestone	Dhurkheda / Purainkanti	Hata	90, 150	15.546	07-06-2007 to 06-06-2027	Non-Operational	-
6.	Shrimati Sneh Salila Hazari R/o Tehsil Hata District Damoh	Limestone	Patariya	Hata	2/2, 2/3, 2/6	4.99	17-6-2010 to 16-6-2030	Non-Operational	-
7.	Shrimati Sarita Singh S/o Late Shri Shivshankar Singh District Nagpur	Limestone	Kondakhurd	Jabera	49, 50, 52, 61, 62, 58, 54, 53	29.989	7-10-1997 to 6-10-2017	Non-Operational	23°35'01.2"N 79°49'58.6"E
8.	ONGC Dehradun Uttrakhand	Natural Oil and Gas	Nohta Damoh Jabera			1150 Varg K.M.	10-02-15 to 09-02-2022	Non-Operational	-
9.	M/s Sharda Minerals Indore	Antimony and Stibnite	Choraiya	Hata	RF NO. 35,37	40.468	11-01-17 to 10-1-67	Non-Operational	24°24'54.6"N 79°34'07.4"E
10.	M/s Diamond Cement Company (Pro. Indilverg Cement India Ltd. Narsinghgarh) District Damoh	Limestone	Botrai, Jagthar, Negua, Satpara	Pathriya	1170, 1241, 1249, 1288, 1295, 1315, 1359, 1387 etc.	1247.27	11-11-12 to 10-11-2012; 11-11-12 to 10-11-2042	Operational	23°57'06.7"N 79°08'32"E

Minor Minerals Mined in the District

Table 5 Gitti/Stone, Murrum &Flagstone Mines in the District

S. No.	Name of the Lessee	Name of the mineral	Village	Tehsil	Khasra Number	Area in Ha.	Validity	Operational/ Non-Operational	Coordinates
1.	Dilmeet Singh Khaduja S/o Shri Trilok Singh Khaduja R/o Mangaj Ward Damoh	Stone/Gitti	Jamuniya	Damoh	67	1	23/05/2012-22/05/2022	Operational	23°45'39.7"N 79°23'22.4"E
2.	Dilmeet Singh Khaduja S/o Shri Trilok Singh Khaduja R/o Mangaj Ward Damoh	Stone/Gitti	Imliya Nayak	Damoh	470	1	07/07/2014-06/07/2024	Operational	23°42'19.36"N 79°29'22.44"E
3.	Jagdish Patel S/o Shri Todal Prasad Patel R/o Gram Khaderi Tehsil Batiyagarh District Damoh	Stone/Gitti	Khaderi	Batiyagarh	15/1	2	26/09/2017-25/09/2027	Operational	24°3'32.94"N 79°15'5.45"E
4.	Jagdish Patel S/o Shri Todal Prasad Patel R/o Gram Khaderi Tehsil Batiyagarh District Damoh	Stone/Gitti	Khaderi	Batiyagarh	14	1.78	26/09/2017-25/09/2027	Operational	24°3'28.66"N 79°15'10.28"E
5.	Indrapal Patel S/o Shri Shivcharan Patel R/o Gandhi Ward Hata	Stone/Gitti	Paderi	Patera	49	2	17/05/2018-16/05/2028	Operational	23°53'46.83"N 79°47'16.83"E
6.	P.V.S Resource Pvt. Ltd.	Stone/Gitti	Padajhir	Tenduk	121,	6	22/03/2018-	Operational	23°20'9.4"N 79°36'30.4"E

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

	Add. 127/1, Sangam Colony Baldev Bag Jabalpur			heda	123, 127, 128, 129, 130		21/03/2028		
7.	Dulichand Patel S/o Shri Babulal Patel R/o Village Majhguwa District Sagar	Stone/Gitti	Gugraka la	Batiyag arh	760/1/2, 760/1/2, 760/1/2, 762, 764, 763	2.05	17/05/2018-16/05/2028	Operational	24°2'45.93"N 79°12'25.82"E
8.	Arjun Nirman Infra R/o D 2 Vaishali Nagar Damoh	Murrum	Kulua urf Marutal	Damoh	1/147/2 1/147/3	1	05/08/2016-04/08/2026	Operational	23°47'37.34"N 79°26'44.69"E
9.	Dilip Kumar Rai S/o Shri Shankarlal Rai R/o Jabalpur naka Damoh	Flagstone	Lakhni	Jabera	897/2,8 97/3,63 9	1	23/08/2016-22/08/2026	Operational	23°42'5.91"N 79°39'15.97 "E
10.	Ashish Kumar Bhatt S/o Shri Govind Shankar Bhatt R/o Damoh	Flagstone	Padri Kumhar i	Patera	46	1	10/07/2017-09/07/2027	Non-Operational	23°53'40.28"N79°47'12.78"E
11.	Narmada Prasad Dubey S/o Shri Kundanlal Dubey R/o Village Sahajpur Tehsil Tendukheda	Flagstone	Bagdari	Tehduk heda	10	1	27/04/2018-26/04/2028	Operational	23°26'30.69"N 79°27'31.10"E
12.	Shri Ramakant Ram Bald Shri Narmada Prasad R/o Bamhori Mala Tehsil jabera	Flagstone	Sagra	Tenduk heda	13	1	14/10/2019-13/10/2029	Operational	23°44'40.44"N 79°42'47.71"E
13.	Pappu Nayak Sakin Civil Ward No. 2 Damoh	Flagstone	Panda	Damoh	70/1	1	08/03/2012-07/03/2022	Operational	23°52'44.2"N 79°38'57.6"E
14.	Dananjay Jain Sakina	Flagstone	Richhai	Jabera	280	1	23/01/2017-	Operational	23°43'26.00"N 79°44'27.27"E

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

District Survey Report SAND: Damoh

	Sagra						22/01/2022		
15.	Bharat Pratap Singh Thakur R/o Hindoriya	Flagstone	Hindoriya	Damoh	1651	1	02/12/2015-01/12/2025	Operational	23°54'19.93"N 79°37'53.80"E
16.	Arjun Nirman Infra. Add. D2 Vaishali Nagar Damoh	Stone/Gitti	Jamuniya	Damoh	112	2	15/12/2020-14/12/2030	Operational	23°46'11.2"N 79°22'28.1"E
17.	Shrimati Tapaswani Dubey	Flagstone	Lakhani	Jabera	755, 766,767, 768/3	1	11/12/2020-10/12/2030	Operational	23°41'44.69"N 79°38'44.41"E
18.	Nandkishor Sahu S/o Shri Ghanshyam Sahu R/o Botrai Road, Tehsil Pathriya District Damoh	Stone/Gitti	Pathriya	Pathriya	23/1/K	4	22/05/2021-21/05/2031	Operational	23°53'44.22"N 79°09'.35.07"E
19.	Sanjay Kumar Chourasiya Aajad ward Hatta	Stone/Gitti	Fatehpur	Hatta	05	3	11/12/2020-10/12/2030	Operational	24°13'20.59"N 79°30'42.89"E

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

4 Details of Royalty and Revenue received in last three years for Sand, Major and Minor Mineral Mine (2019-20, 2020-21 and 2021-22):

Table 6 Revenue received in last three years for Sand Mine

Year	Revenue (In Rs.)
2019-20	1831880
2020-21	68191761
2021-22	0

Table 7 Revenue received in last three years for Major & Minor Mineral Mine

S.No.	Name of Mineral	Year	Revenue (In Rs.)
1	Lime Stone	2019-20	294316000
		2020-21	274378767
		2021-22	335335784
2	Gitti/ Stone	2019-20	6594119
		2020-21	2551318
		2021-22	4451457
3	Flagstone	2019-20	41000
		2020-21	256650
		2021-22	1603773
4	Murrum	2019-20	83000
		2020-21	0
		2021-22	280000

5 Details of Sand and Major Minor Mineral Production in last 3 years (2019-20, 2020-21 and 2021-22):

Table 8 Sand Production in last 3 years

Year	Production (In Cu.M)
2019-20	25650
2020-21	21112
2021-22	0

Table 9 Major & Minor Mineral Production in last 3 years

S.No.	Name of Mineral	Year	Production(In Cu.M)
1	Lime Stone	2019-20	3678950
		2020-21	3429735
		2021-22	3882769
2	Gitti/ Stone	2019-20	45919
		2020-21	65941
		2021-22	37095
3	Flagstone	2019-20	386
		2020-21	137
		2021-22	4582
4	Murrum	2019-20	1660
		2020-21	0
		2021-22	5600

6 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 wind 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.

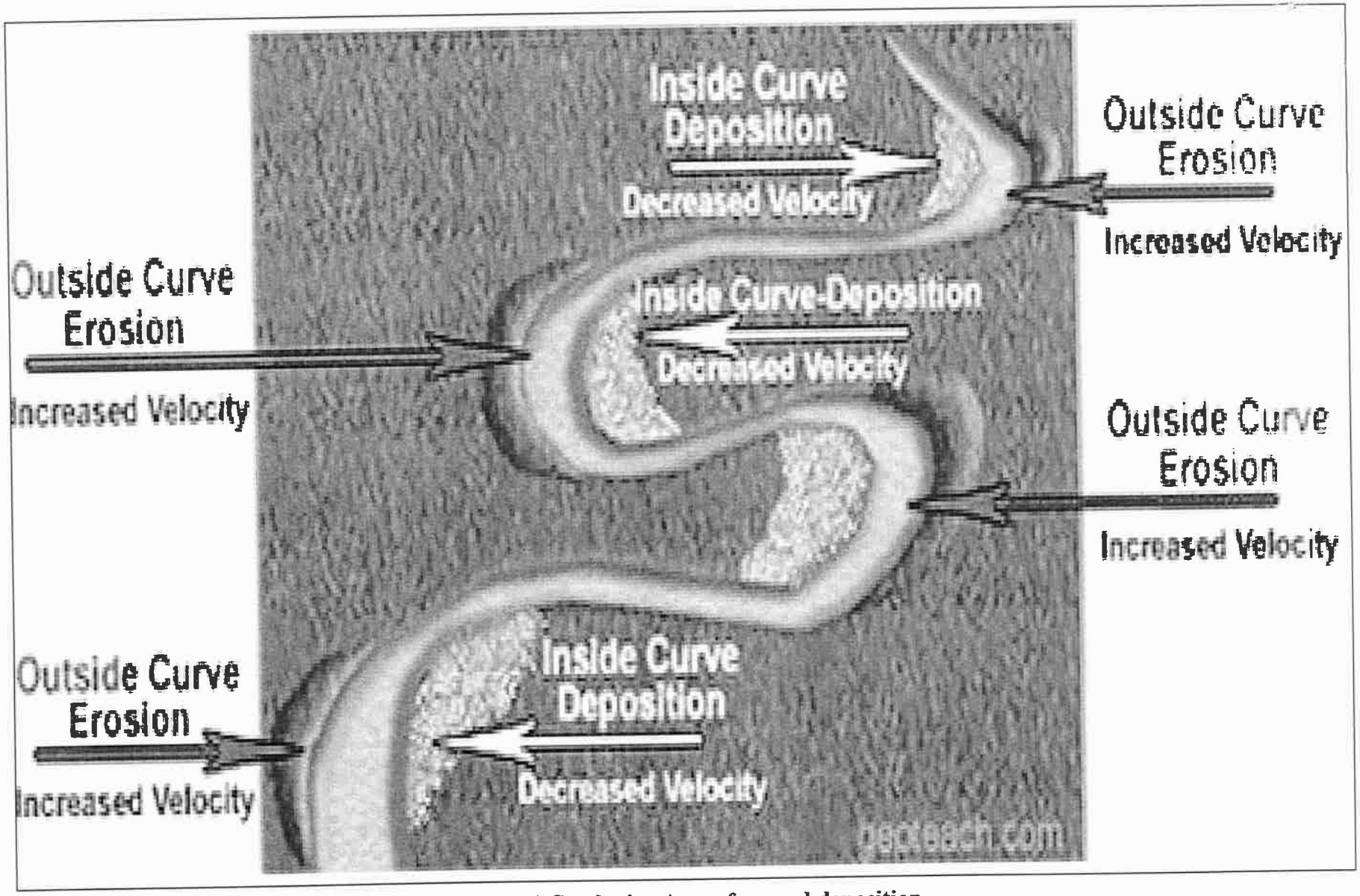


Figure 4 Conducive Areas for sand deposition

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 kilometer (1 km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a

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

- 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 ¼thor 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 3/4th width of the river/rivulet or 7.5 meters (inward) from river banks but up to 10% of the width of the river, as the case may be and decided by regulatory authority while granting environmental clearance in consultation with irrigation department. Regulating authority while regulating the zone of river bed mining shall ensure that the objective to minimize the effects of riverbank erosion and consequential channel migration are achieved to the extent possible. In general, the area for removal of minerals shall not exceed 60% of the mine lease area, and any deviation or relaxation in this regard shall be adequately supported by the scientific report.

- The mining from the area outside river bed shall be permitted subject to the condition that a safety margin of two meters (1 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 (3 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.

7 General Profile of the District

1.Geographical Position	Damoh District lies between 23°9' and 24°27' North latitude and between 79°3' and 79°57' East longitude. And Falls under the survey of India Toposheet No. 55M/5
2. Area and Population	I. Geographical Area (Sq. Km) Total Area (Sq. Km): 7306 Km^2 II. CENSUS 2011 I. Population a. Total Population:1,264,219 b. Male Population: 661,873 c. Female Population: 602,346 II. Literates a. Total Literates: 747,715 b. Male: 445,737 c. Female: 301,978 III. Main Workers (Census 2011) a. Total Workers: 574,595 b. Male Workers: 367,711 c. Female Workers: 206,884 d. Cultivators: 114,611 e. Agricultural Labourers: 250,165 f. Other Workers: 142,436 V. Languages Spoken in the District At the time of the 2011 Census of India, 68.63% of the population in

	the district spoke Hindi and 30.27% Bundeli as their first language.
3. Temperature	Mean- Maximum temperature: 32.6°C Mean- Minimum temperature: 18.9°C
4. Rainfall (In mm)	Normal – South West Monsoon:1065.4mm Annual Rainfall: 1173.00mm
5.Agriculture	a. Total Cultivable Area (Ha):322.6 b. Net Area Sown (Ha): 311.4 c. Area Sown more than once (Ha): 94.2
6.**Rivers, etc.**	The area is mainly drained by the Sonar river and by the Bearma river.
7. Revenue Administrative Divisions	Revenue Divisions: a. Revenue Tehsils: 7 b. Revenue Villages: 1229
8. Local Bodies	a. Municipalities: 6 b. Village Panchayats:460

7.1 Census Data 2011

Table 10 Census Data for year 2011

Description	**2011**
Actual Population	12,64,219
Male	6,61,873
Female	6,02,346
Population Growth	16.63%
Area Sq. km.	7,306
Density/KM^2	173
Proportion to population of Madhya Pradesh	1.74%
Sex Ratio (Per 1000)	910
Child Sex Ratio (0-6 Age)	928
Average Literacy	69.73
Male Literacy	79.27
Female Literacy	59.22
Total Child Population (0-6 Age)	1,91,968
Male Population (0-6 Age)	99,544
Female Population (0-6 Age)	92,424
Literates	7,47,715

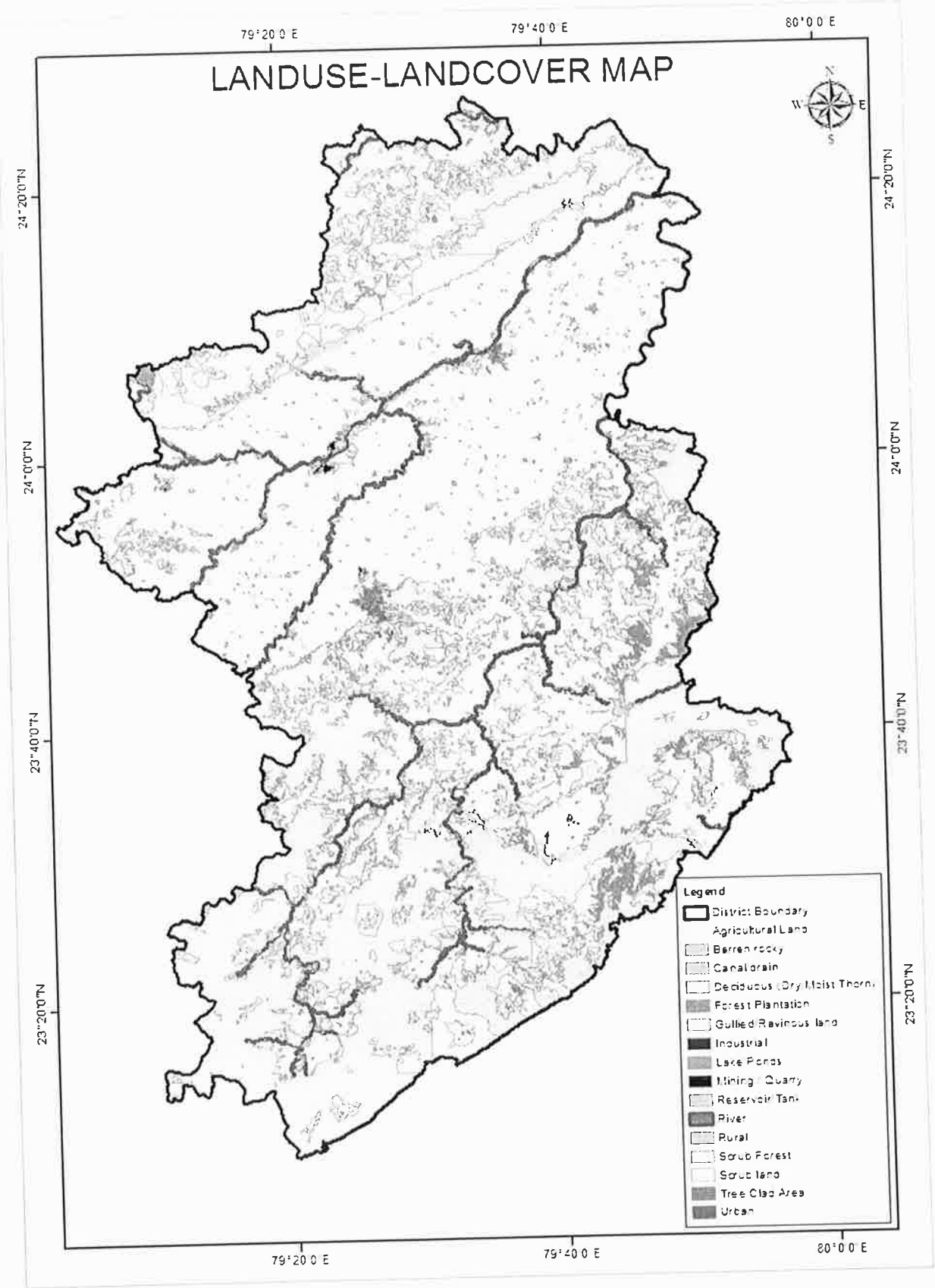
Male Literates	4,45,737
Female Literates	3,01,978
Child Proportion (0-6 Age)	15.18%
Boys Proportion (0-6 Age)	15.04%
Girls Proportion (0-6 Age)	15.34%

8 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 11 Land Use Pattern of the Study Area

Sr. No.	Class	Area in Ha.	Percentage of coverage
1	Agricultural Land	376065	51.30 %
2	Agricultural Plantation	78	0.01 %
3	Barren rocky	1010	0.14 %
4	Deciduous (Dry/Moist/Thorn)	202656	27.63 %
5	Forest Plantation	57	0.01 %
6	Gullied/Ravenous land	603	0.08 %
7	Industrial	156	0.02 %
8	Lake/Ponds	3099	0.42 %
9	Mining / Quarry	2702.737	0.36 %
10	Reservoir/Tank	3699	0.51 %
11	River	6392	0.87 %
12	Rural	4092	0.56 %
13	Scrub Forest	33280	4.54 %
14	Scrub land	88566	12.08 %
15	Tree Clad Area	8738	1.20 %
16	Urban	1793	0.24 %
	Total	730854	100 %



SCALE 1:816667

Figure 5 Land Use and Land Cover Map of the District

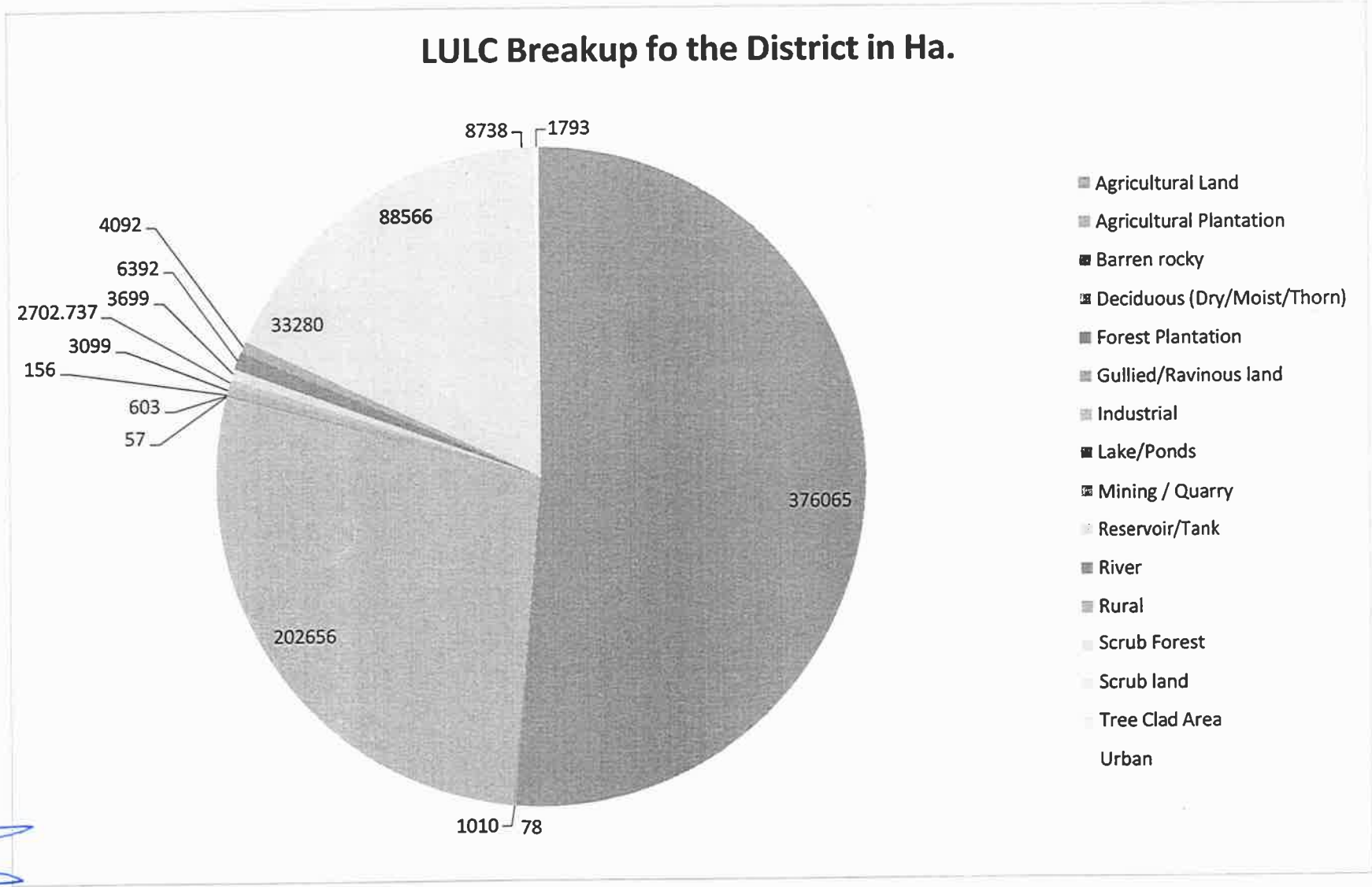


Figure 6 Land Use and Land Cover Breakup of the District

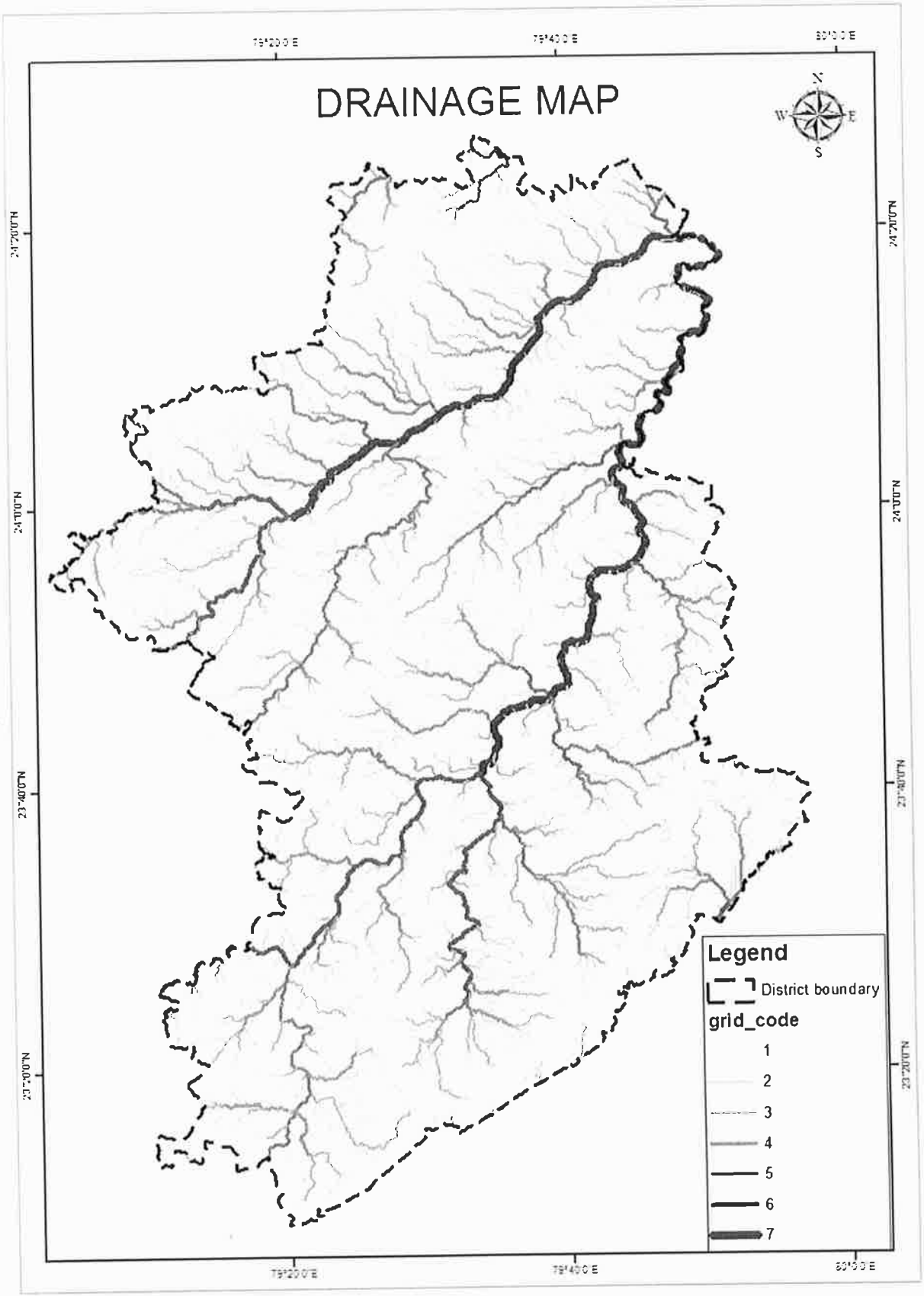
Drainage and Irrigation Pattern

Drainage Pattern

The area is mainly drained by Sonar River and the Bearma River, which flow in the general slope of the country and flow a tributary of the Narmada, the entire district is drained by Sonar, Bearma and through the tributaries and feeders of the Ken River into Yamuna.

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.



SCALE 1:816667

Figure 7 Drainage Map 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.

During Pre- Monsoon, water level ranged between1.5 m bgl at Patera and 24.47m bgl at Bhonrasa. Water levels, in general fall between 5 - 20 m bgl. Shallow water levels of less than 3 m bgl occur in a patch in the south-western part of the district falling in Tendukheda block, eastern & central part of Jabera block and central part of Patera block. Maximum part of the district lies between 3-10 mbgl. Deeper water levels, more than 15 m occur in western part of Patharia block. In Batiyagarh , Patharia and Jabera blocks wells are fast drying up perhaps due to higher ground water development.

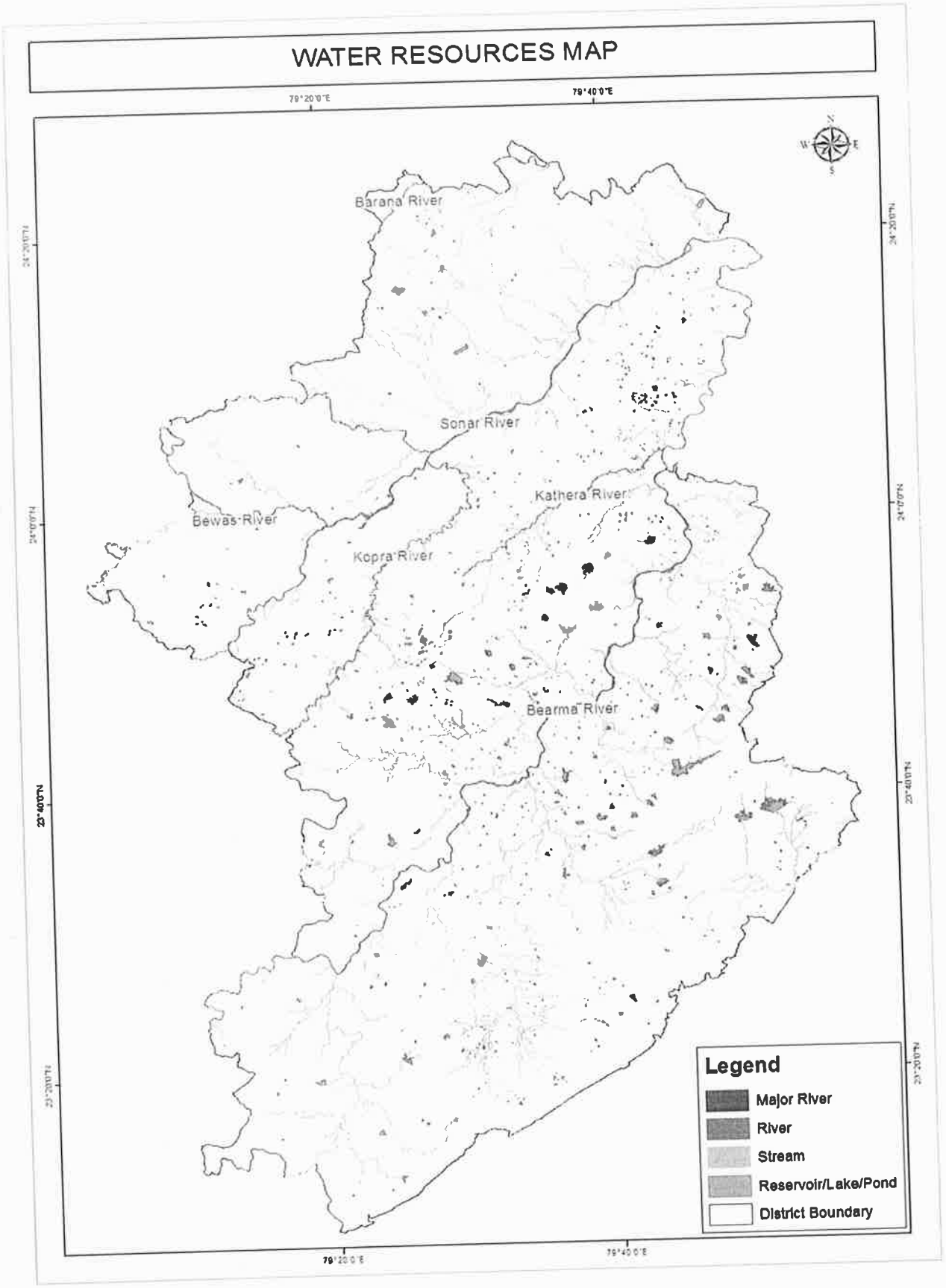
During post-monsoon period, , the water levels varied from 0.06m bgl at Dhayali to 15.19m bgl at Bhonrasa. The water level, in general lies between 2 to 10 m bgl during this period. Shallow water levels, less than 3 m bgl occur in a small part of the district covering parts of Hatta, Patharia,Patera,Jabera & Tendukheda blocks. Deep water levels above 10 m bgl occur in the northeastern part in Patta, and south western part of Jabera blocks.

Major part of the district shows seasonal fluctuation rise more from 3-10m and in small parts of block Hatta, Patera Cetral part of Damoh, Jabera & Tendukeda blocks shows fluctuation fall from >3to >10m.

Surface Water

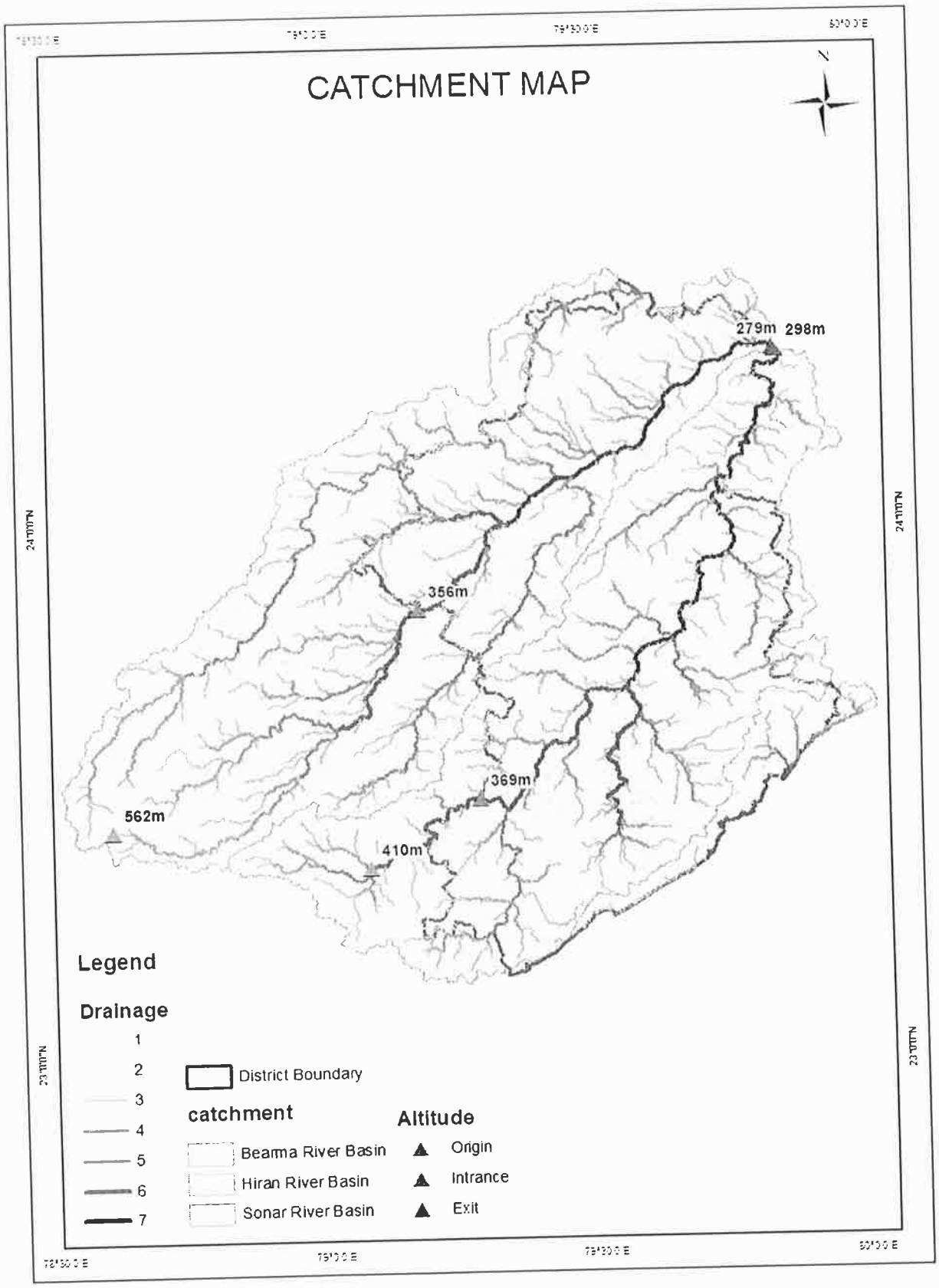
The area is mainly drained by Sonar River and the Bearma River, which flow in the general slope of the country and flow a tributary of the Narmada, the entire district is drained by Sonar, Bearma and through the tributaries and feeders of the Ken River into Yamuna.

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



SCALE 1:816667

Figure 8 Water Resources Map of the District



SCALE 1:816667

Figure 9 Catchment Map of District

Table 12 Details of Catchment Area

Sr. No.	Properties	Bearma River Basin	Sonar River Basin
1	Catchment Area up to Exit spot of Particular District	5,949 sq. km	6,958 sq. km
2	Catchment Area of Particular District	4,279 sq. km	2,067 sq. km
3	Length of the Catchment Area	148 km	166 km
4	Length of the Catchment Area of Particular District	136 km	86 km
5	Altitude at Origin of the River	410 m	562 m
6	Altitude at Entrance of the Particular District	369 m	356 m
7	Altitude at Exit of the Particular District	298 m	

Details of Eco – Sensitive Area, if any, in the District

Nauradehi Wildlife Sanctuary, covering about 1,197 km^2, is the largest wildlife sanctuary of Madhya Pradesh state in India. This wildlife sanctuary is a part of 5500 km^2 of forested landscape. It is located in the centre of Madhya Pradesh, covering parts of Sagar, Damoh, Narsinghpur, and Raisen Districts. It is about 90 km from Jabalpur and about 56 km from Sagar.It is a potential site for the Cheetah Reintroduction in India. The cheetah prey density was reasonable and based on current prey density the area could support about 25 cheetahs. An area of 750 km^2 was recommended by relocation of 23 villages. After relocating the species, the site could support over 50 cheetahs and Nauradehi could harbor over 70 individuals.

The protected area sits astride two major river basins of India, namely the Narmada, flowing west to the Arabian Sea and the Ganges, flowing east to the Bay of Bengal. Three-fourths of the wildlife sanctuary falls in the basin of Ganges tributary, the Yamuna River, of which the Ken River is a tributary, and one fourth of the sanctuary falls in the Narmada basin. The north flowing Kopra River, Bamner River, Vyarma River and Bearma River, which are tributaries of the Ken River, are the major rivers of this protected area. Some smaller streams flow southerly to the Narmada River in the south of the sanctuary.

Veerangana Durgawati Wildlife Sanctuary is another wildlife sanctuary in Damoh district of Madhya Pradesh, India. Named after Rani Durgavati, a queen of the Gondi people, and covering an area of only 24 sq km, the sanctuary was notified by the Government of Madhya Pradesh in

1996. It lies on either side of the State Highway 36 and lies between the towns of Damoh and Jabalpur. The sanctuary hosts 18 species of mammals, including the leopard, wolf, jackal, Indian fox, the striped hyena and sloth bear besides several species of deer. Besides these, the sanctuary is also home to 177 species of birds, 16 species of fish and reptiles and 10 species of amphibians

Co-ordinates of Veerangana Durgawati Wildlife Sanctuary

Direction	Co-ordintes	
	Longitude	Latitude
North (A)	79°45'25.129"	23°34'01.527"
East (B)	79°49'13.283"	23°31'20.661"
South (C)	79°48'31.757"	23°30'49.125"
West (D)	79°42'39.339"	23°32'11.2"

ANNEXURE- II

Co-ordinates of Eco-sensitive Zone

Direction	Co-ordintes	
	Longitude	Latitude
North (A1)	79°45'26.26"	23°35'6.548"
East (B1)	79°50'23.638"	23°31'15.657"
South (C1)	79°48'31.229"	23°29'44.128"
West (D1)	79°41'28.575"	23°32'11.473"

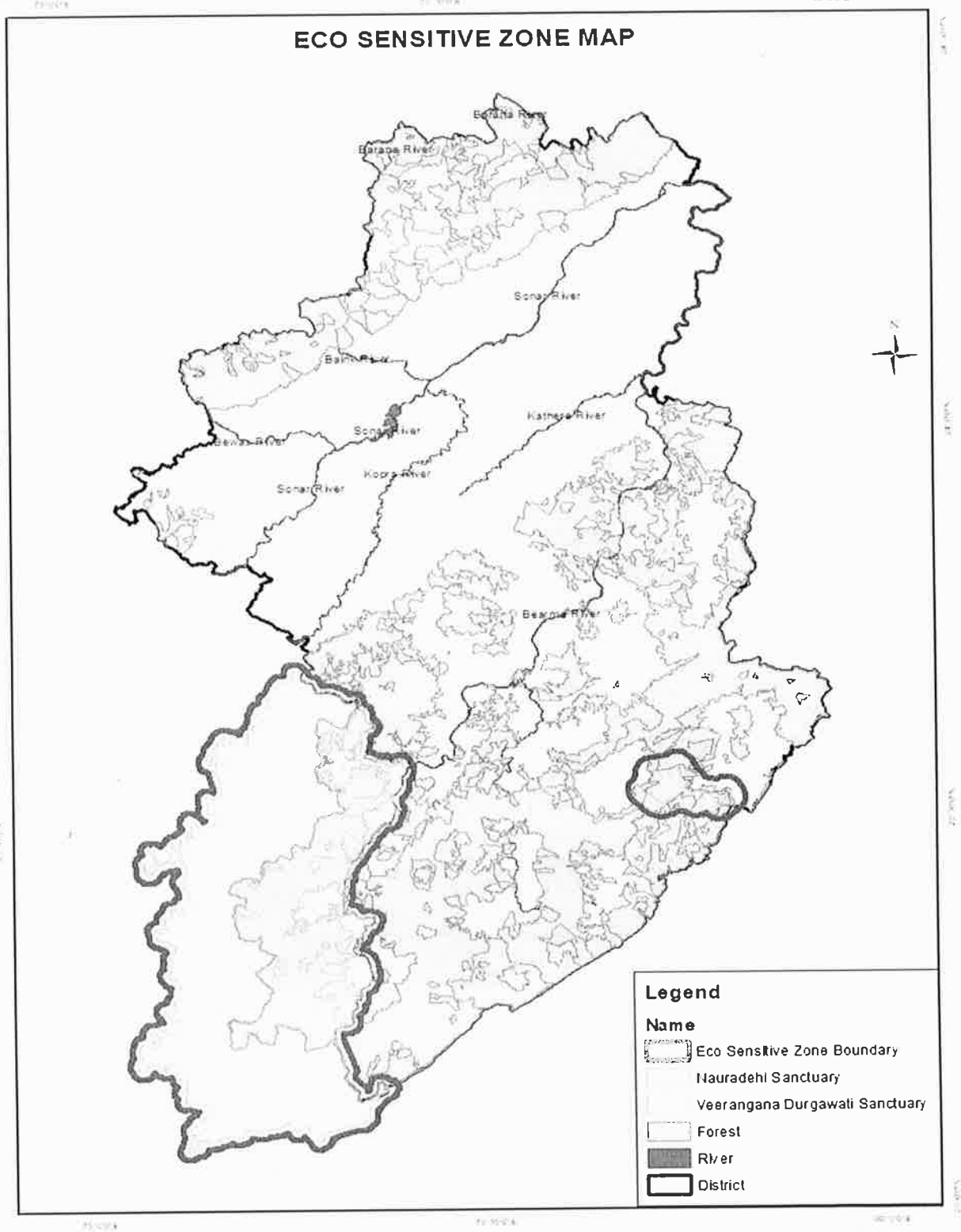
Detail of villages within the Eco-sensitive Zone

Sl. No.	Name of division	Name of village	District	Longitude	Latitude
1	Damoh	Deotara Puranyau	Damoh	79°42'35.12"	23°32'39.33"
2	Damoh	Tilgwan	Damoh	79°46'44.4"	23°32'24.4"
3	Damoh	Gubra	Damoh	79°49'57.2"	23°31'74.0"
4	Damoh	Bhainsa	Damoh	79°45'25.8"	23°30'44.6"
5	Damoh	Dhaneta	Damoh	79°49'35.70"	23°32'58.32"
6	Damoh	Lamtara	Damoh	79°50'17.25"	23°32'24.93"
7	Damoh	Singrampur	Damoh	79°44'58.9"	23°38'15.2"
8	Damoh	Tanwra	Damoh	79°44'19.64"	23°30'45.67"
9	Damoh	Jogikhera	Damoh	79°41'47.97"	23°32'04.56"
10	Damoh	Sanwra	Damoh	79°44' 01.7"	23°29'57.21"

List of Villages with Geographical Coordinates within the Nauradehi Eco sensitive Zone

35	Nauradehi	Chirai	Damoh	79°22'33.10"E	23°38'42.65"N
36	Nauradehi	Mankagaon	Damoh	79°21'56.57"E	23°37'4.65"N
37	Nauradehi	Hinoti	Damoh	79°19'30.81"E	23°35'22.10"N
38	Nauradehi	Murai	Damoh	79°20'15.44"E	23°34'28.28"N
39	Nauradehi	Amtikalan	Damoh	79°20'6.53"E	23°33'47.30"N
40	Nauradehi	Khagar	Damoh	79°21'34.87"E	23°36'35.58"N
41	Nauradehi	Maujakalan	Damoh	79°21'6.19"E	23°35'44.13"N
42	Nauradehi	Suhela	Damoh	79°22'54.05"E	23°34'41.98"N
43	Nauradehi	Jamuniya	Damoh	79°24'29.74"E	23°35'6.12"N
44	Nauradehi	Somkheda	Damoh	79°24'15.68"E	23°34'4.79"N
45	Nauradehi	Duhli	Damoh	79°22'0.99"E	23°31'19.30"N
46	Nauradehi	Guari	Damoh	79°21'50.72"E	23°31'28.68"N
47	Nauradehi	Seoradehi	Damoh	79°22'9.97"E	23°30'50.62"N
48	Nauradehi	Mgabiher	Damoh	79°22'5.71"E	23°30'34.03"N
49	Nauradehi	Nayakheda	Damoh	79°22'12.41"E	23°30'22.03"N
50	Nauradehi	Jhapan	Damoh	79°22'17.34"E	23°30'9.41"N
51	Nauradehi	Sihri	Damoh	79°21'47.23"E	23°27'20.99"N
52	Nauradehi	Dhana	Damoh	79°19'43.62"E	23°25'36.86"N
53	Nauradehi	Cheema Dhana	Damoh	79°20'24.18"E	23°25'36.94"N
54	Nauradehi	Chikhli	Damoh	79°19'51.78"E	23°19'44.88"N
55	Nauradehi	Bansi	Damoh	79°20'21.43"E	23°19'37.27"N
56	Nauradehi	Pidrai	Damoh	79°19'56.58"E	23°18'57.17"N
57	Nauradehi	Kopadeori	Damoh	79°20'33.73"E	23°17'46.88"N
58	Nauradehi	Tarahi	Damoh	79°20'57.92"E	23°17'18.42"N
59	Nauradehi	Jhanara	Damoh	79°19'20.02"E	23°15'13.12"N
60	Nauradehi	Pipla	Damoh	79°18'48.89"E	23°16'50.68"N
61	Nauradehi	Khantara	Damoh	79°18'38.85"E	23°17'41.53"N
62	Nauradehi	Sarasbagli	Damoh	79°19'23.52"E	23°16'1.93"N
63	Nauradehi	Chorkhamariya	Damoh	79°19'30.43"E	23°16'29.07"N
64	Nauradehi	Sarratuda	Damoh	79°19'10.88"E	23°16'0.39"N
65	Nauradehi	Kotkheda	Damoh	79°19'14.07"E	23°15'13.19"N

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



SCALE 1:816667

Figure 10 Eco-sensitive map of the District

9 Physiography of the District

Damoh is located among rising hills and following rivers, in the central part of Madhya Pradesh. The district is divided into three physiographic sub-divisions, namely Vindhyan range, Vindhyan Scraps and Bundelkhand uplands. The Vindhyan Scrap covers the entire Sonar Valley and the southern plateau excluding the main line of hills belonging to Vindhyan range. The Sonar Valley can be considered to be separate divisions and the Vindhyan range may be grouped with the rest of the Southern hills. Thus, there are three distinct divisions in the district: -

1. The Southern Plateau

   (a) The Vindhyan range and the Southern precipice.

   (b) The broad Southern Plateaus.

2. The Sonar Valley.

3. The Northwest hill range.

In Damoh the Southern part of Vindhyan range is up to Katangi is called the Bharner range. Beyond this point, the escarpment enclosing the land- lock valley of Singrampur and the hill range in continuation is called Kaimur range. The Southern edge of the plateau and the hills scrap steeply to the South facing the Narmada Valley and the Valley of the Hiran.

The Sonar Valley (Haveli) extends in a belt across the North Central part of the district. It is about 80 Km long from Southwest to Northeast and 32 to 43 Km wide between the Scraps of the Southern and Northern plateau of the Vindhyans, which also forms the local watershed between the Sonar and the Bearma Nala to the Northwest. The drainage lines of the Sonar valley and the Kopra lies into a broad belt of the low alluvial country between the line dissected hills on the Southwest and the scraps of the Northwestern plateau. Thus, the plateau region has been separated from the Northwestern hill range. The Southern plateaus extend in a broad belt from Southwest to Northeast. It is centrally drained by the Bearma and is transverse by a number of spurns and ridges of Vindhyan range.

10 Rainfall of the District and Climate Conditions

Rainfall

The average annual rainfall of Damoh district is 1173.0 mm. Damoh district received maximum rainfall during southwest monsoon period i.e. June to September. About 90.4% of the annual rainfall received during monsoon season. Minimum rainfall is 632mm and Maximum is 1573 mm. Only 9.6% of the annual rainfall takes place between Octobers to May period. Thus, surplus water for ground water recharge is available only during the southwest monsoon period.

Details of Month wise Rainfall data of 1 year

2021-22

Ser. No.	Month	Rainfall
1	June	105-9
2	July	245-5
3	August	248-3
4	September	123-3
5	October	15-8
6	November	Nil
7	December	10-3
8	January	34-7
9	February	8-1
10	March	52-9
11	April	51-0
12	May	2-9

Climatic Conditions

The Climate of Damoh district, M.P. characterized by a hot summer and general dryness except during the southwest monsoon season. The year may be divided into four seasons. The cold season, December to February is followed by the hot season from March to about the middle of June. The period from the middle of June to September is the southwest monsoon. October and November form the post monsoon or transition period. The nearest observatory is Jabalpur. The meteorological parameters of Jabalpur plateau are used except rainfall.

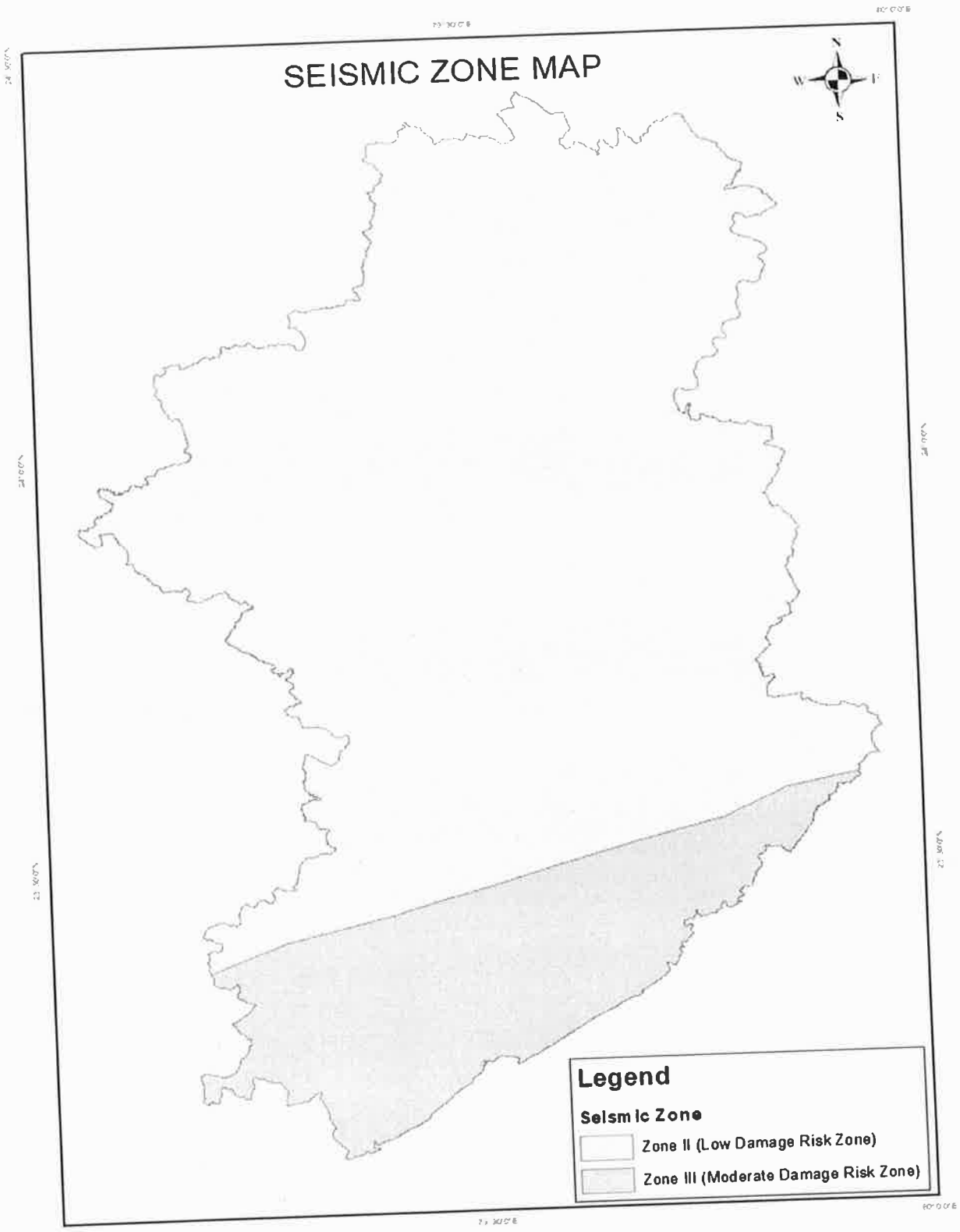
The normal maximum temperature received during the month of May is42.0°C and minimum during the month of December/ January is 9.7°C. The normal annual mean maximum and minimum temperatures of Damoh district is 32.6°C and 18.9°C respectively.

During the southwest monsoon season the relative humidity generally exceeds 88% (August month). In the rest of the year it is drier. The driest part of the year is the summer season, when relative humidity is less than 31%. May is the driest month of the year.

The wind velocity is higher during the pre-monsoon period as compared to post monsoon period. The maximum wind velocity 8.2 km/hr observed during the month of June and minimum 2.6 km/hr during the month of December. The average normal annual wind velocity of Damoh district is 4.9 km/hr. Normal climatologically parameter of Damoh district.

11 Geology of the District

The geologic successions of the district consist of Basalt, Limestone/Dolomitic Limestone, Porcellanite with shale, Quartzitic Sandstone, Shale, Shale with limestone/Sandstone, Unconsolidated Sediment with conglomerate/ Breccia and Vindhyan Sandstone. The very hard and compact sandstone because of fractures act as good repository of groundwater. Shales are clayey in nature and have medium porosity and movement of groundwater through these pore spaces takes place by capillary action. Limestone is also very hard and compact in nature and has very poor porosity opening. Due to secondary porosity, Limestone form good aquifers. Alluvial formations are unconsolidated sediments having high porosity.



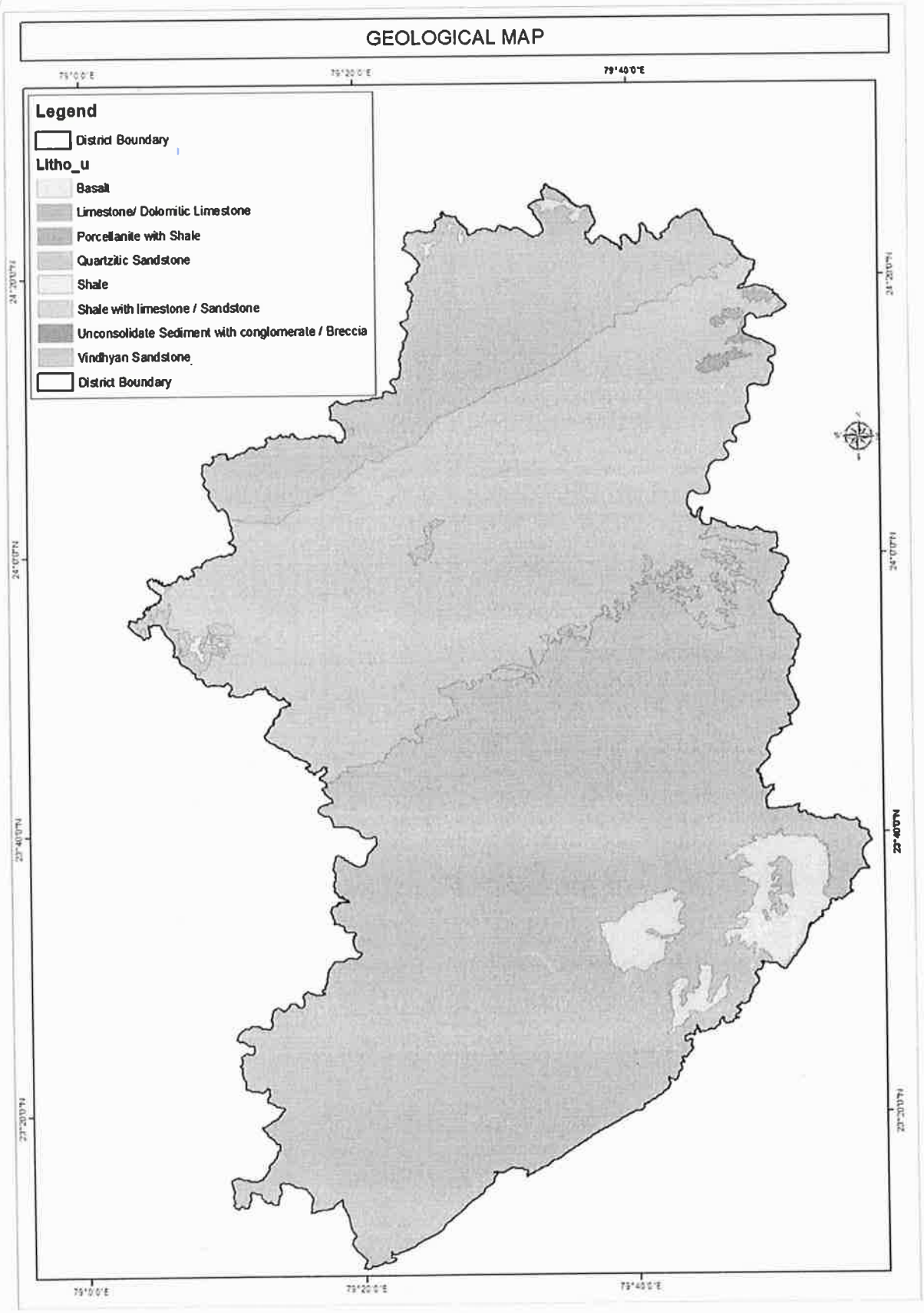
SCALE 1:816667

Figure 11 Details of the Seismic Zone map

Table 13 Geological Profile of the District

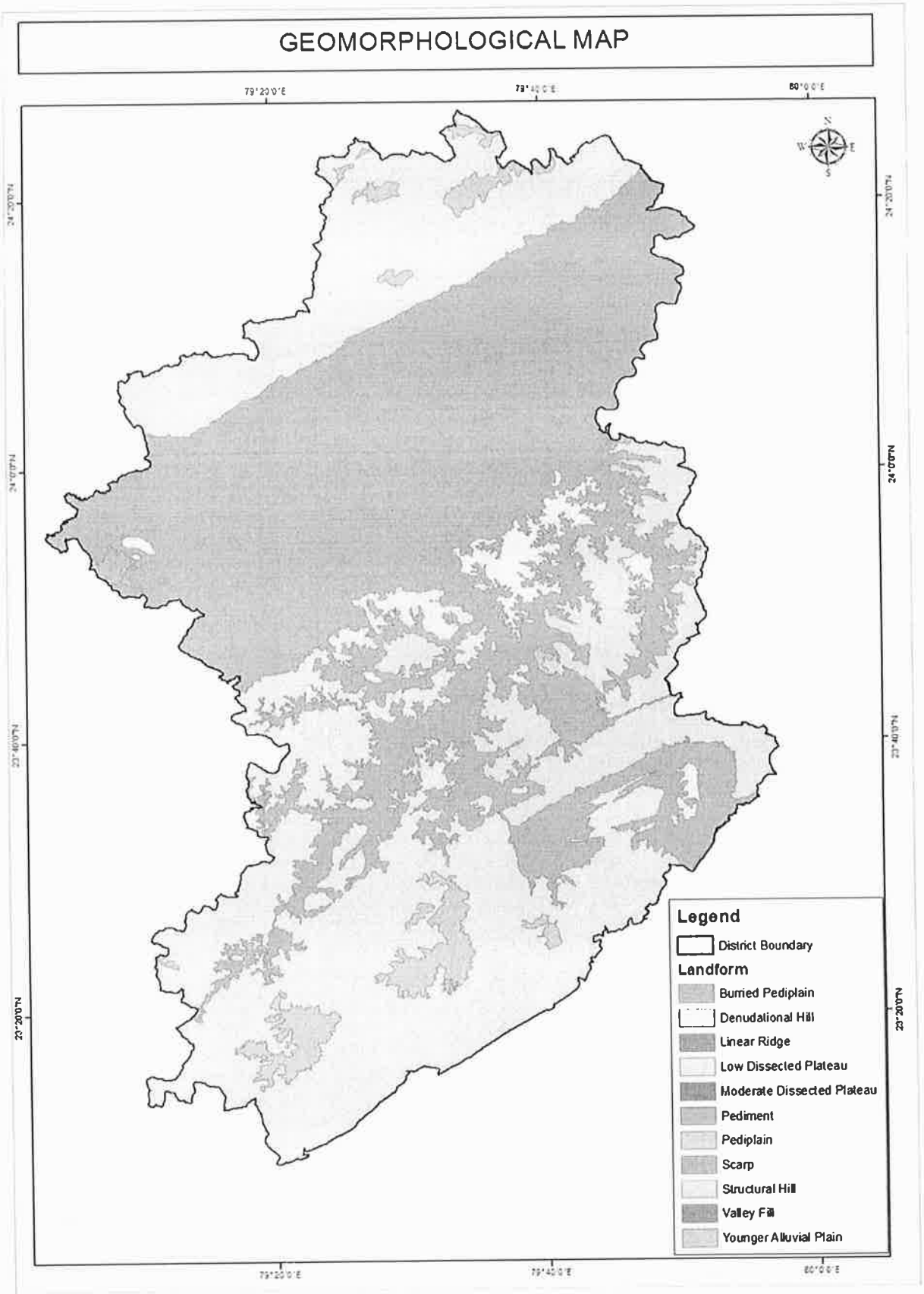
Regional Geological succession	
Group	**Lithology**
Recent	Alluvium
Sub Recent	Laterite/ Murram
Deccan Trap	Amarkantak Basaltic Lava
Lameta Group	Sandstone, Grit stone, Limestone
Gondwana Group	Shale ,Sandstone, Silltstone
Vindhyan Group	Bhander Group, Sandstone, Shale, Rewa Group Shale, Limestone Semri Group Limestone, Shale with siltstone
Jangle Group	Sandstone Conglomerates, Quartz vain
---------- **Intrusive Rock**----------	
Mahakaushal Group	Phyllite, Conglomerate, quartz, Dolerite dyke,Granite complex body Pegmatite vein etc.

Lithological Succession	
Group	**Lithology**
Deccan Trap	Amarkantak group Basaltic Lava
Lameta Group	Sandstone, gritstone, Limestone
Gondwana Group	Shale, Sandstone and Siltstone



SCALE 1:816667

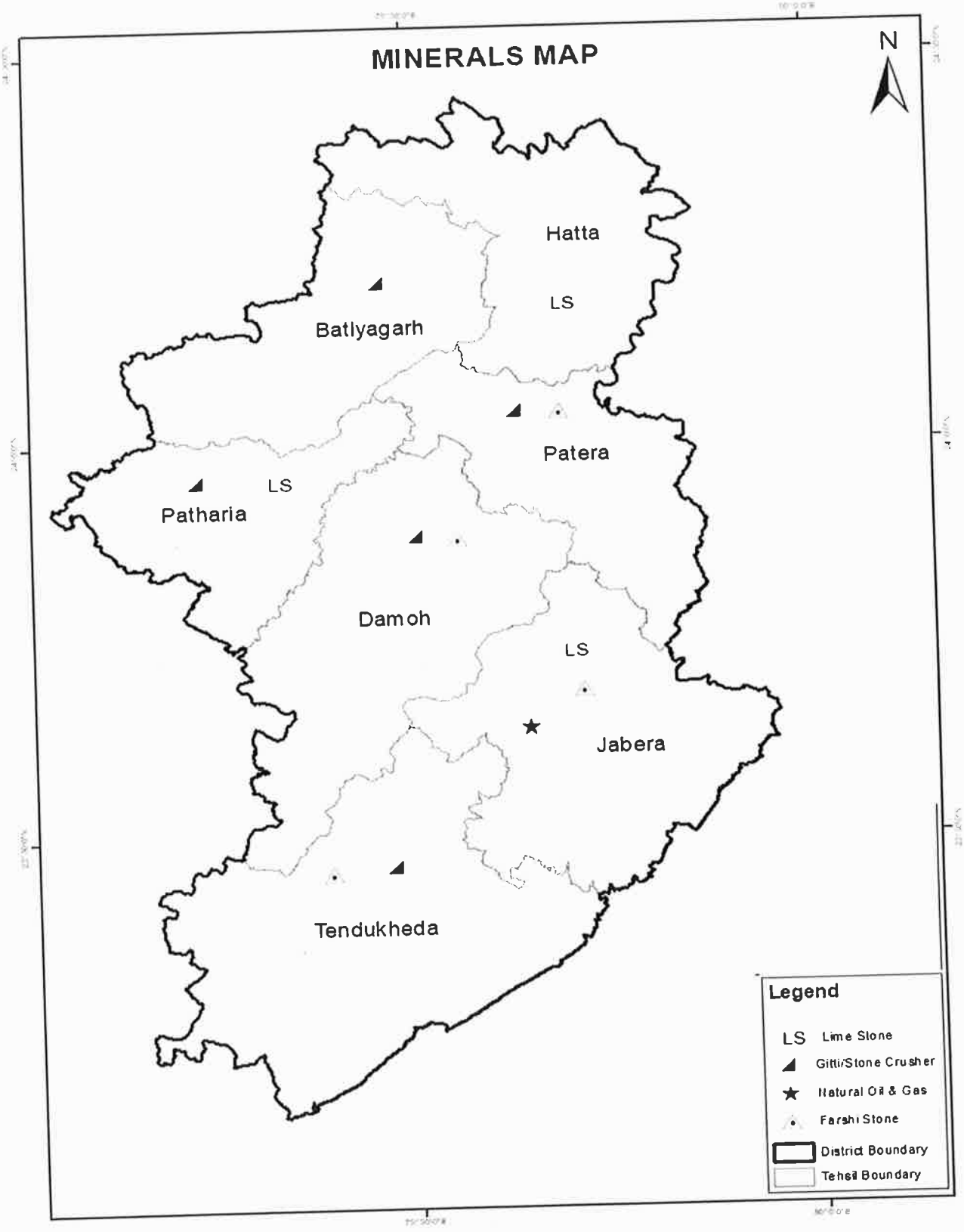
Figure 12 Geological Map of the District



SCALE 1:816667

Figure 13 Geomorphologic Map of the District

Mineral map of the District



SCALE 1:816667

Figure 14 Mineral Map of the District

Total Mineral Reserve available in the District

Table 14 Total mineral reserve available in the district

S.No.	Name of Mineral	Production(In Cu.Mt)
1	Lime Stone	11036850
2	Gitti/ Stone	532484
3	Flagstone	7516
4	Murrum	5000

Quality/Grade of Mineral available in the District

There is quality of mineral available as a major and minor grade is present in the Damoh District.

As we have assessed mineral availability of the district is fare and acceptable quality and it has commercial value.

There are various minerals and ore available in the district as it is given in our next Table 14

Table 15 Details of quality/grade mineral available in district

S. no.	Mineral Name	Quality/ Grade
1.	Lime Stone	Cement Plant

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 molding 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.

Limestone- In Cement Plant, pigment..etc.

Demand and supply of the Mineral in Last three Year

Table 16 Demand and supply of the Minerals in last three year

S.No.	Name of Mineral	Year	Production(In Cu.Mt)	Remark
1	Lime Stone	2019-20	425414-62	Cement Plant
		2020-21	3678950	
		2021-22	3429734-5	
2	Gitti/ Stone	2019-20	45919	Minor mineral such as Tone/gitti,sand,murrum etc. Are supply basis of demand on the Market
		2020-21	65941	
		2021-22	21261	
3	Flagstone	2019-20	386	
		2020-21	137	
		2021-22	856	
4	Murrum	2019-20	1660	
		2020-21	0	
		2021-22	5600	
5	Boulder	2019-20	27350	
		2020-21	886	
		2021-22	120	

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_x and SO_x) 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.

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.

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.

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.

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.

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

12 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.

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

Table 17 Details of the cluster of Sand Mining Lease

S. No.	Name of the Mine	Khasra Number	Area	Tehsil	Cluster and Non - Cluster
1.	Dandi	1	5	Hata	Non - Cluster
2.	Belkhedi	1	5	Pathriya	Non - Cluster
3.	Madhla Khiriya	1	5	Damoh	Cluster
4.	Payrapura	1,218	5	Damoh	
5.	Pura Payra	129,577/1	5	Pathriya	
6.	Barakhar	1	5	Jabera	Non - Cluster
7.	Ramgadha	86	5	Patera	Non - Cluster
8.	Kakra	24,204, 164	5	Pathriya	Non - Cluster
9.	Harat	638	9	Batiyagarh	Non - Cluster
10.	Rajghat Pipariya	126	5	Damoh	Non - Cluster
11.	Sitanagar	469	5	Pathriya	Non - Cluster
12.	Imliya Rawat	343	5	Patera	Non - Cluster
13.	Badagaon	710	5	Pathriya	Cluster
14.	Aakkheda	1,213	5	Damoh	
15.	Parasai	1	5	Damoh	Non - Cluster
16.	Chharpat	1,97,110	5	Pathriya	Non - Cluster
17.	Barwasa	1,103	5	Damoh	Non - Cluster
18.	Simri Kirat	93	5	Damoh	Non - Cluster

District Survey Report SAND: Damoh

19.	Devri- Kishundas	1,12	5	Damoh	**Non - Cluster**
20.	Hinota-Narsinghgarh	4,31,584	5	Pathriya	**Non - Cluster**
21.	Kulpura	15	5	Damoh	**Non - Cluster**
22.	Bari	1	5	Damoh	**Non - Cluster**
23.	Amoda	1,11,56	5	Damoh	**Non - Cluster**
24.	Vijwar	481	5	Hata	**Non - Cluster**

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

Mining Lease Marked on the District Map

SCALE 1:816667

Figure 15 Mining Lease Marked on the District Map

14 Sand Replenishment Plan and Projections

14.1 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 o0ffice. 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.

15 Need for Sand Replenishment Study and Factors to be 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:

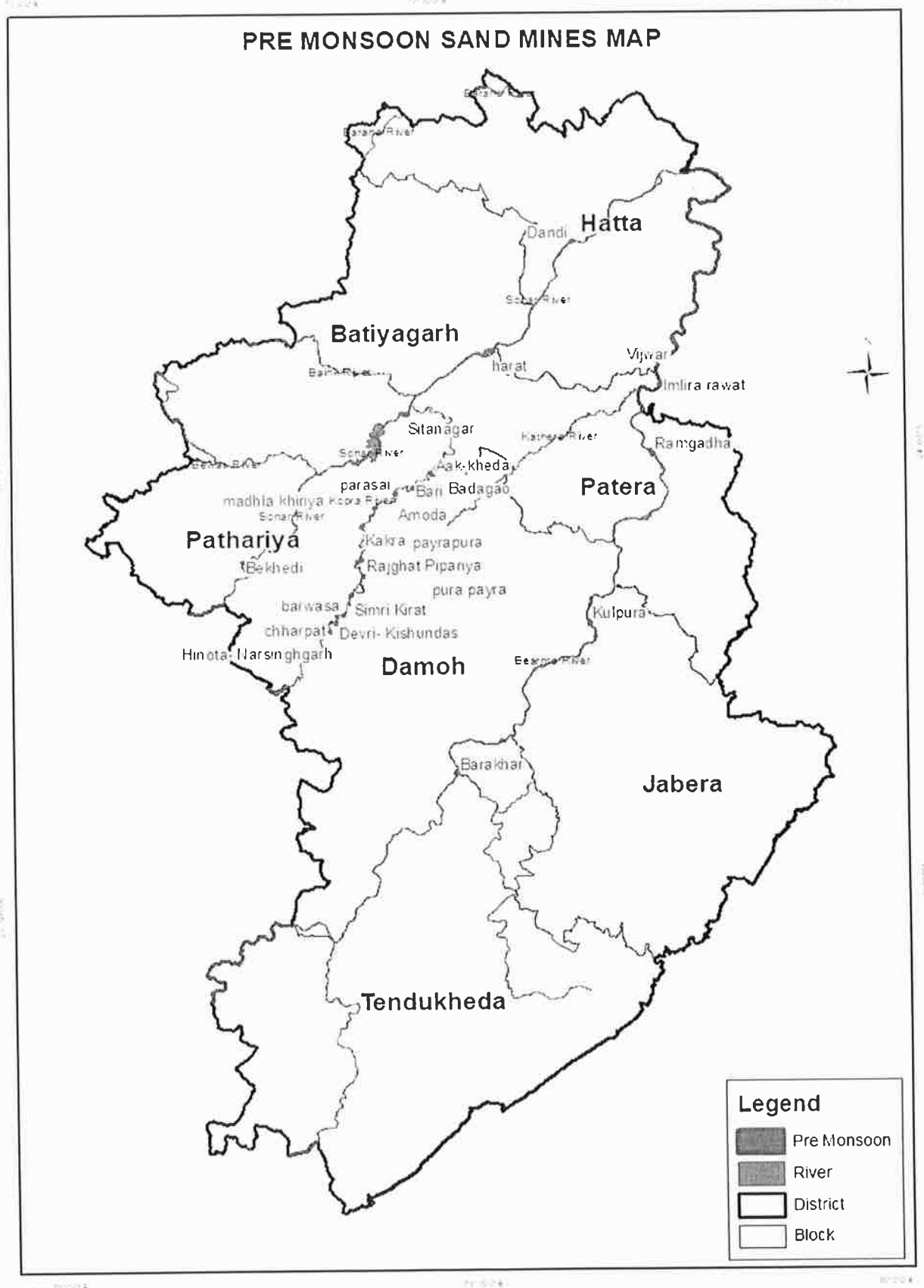
District Survey Report SAND: Damoh

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



SCALE 1:816667

Figure 16 Sand Mining Map of the District – Pre- Monsoon

District Survey Report SAND: Damoh

S.N.	Name of River or Stream Portion of the river or stream recommended for mineral concession	Length of area recommended for mineral concession)In km.(	Average width of area recommended for mineral concession)In meters(	Area recommended for mineral concession (in $m^{2)}$ Area (rounded) x Depth	Total Sand Potential in m^3 Area x Depth =Volume	Mineable mineral potential (in m^3 (60% of total mineral potential) = Volume x 60/100	Last 3 year Sand Excavation Details		
							2019-20	2020-21	2021-22
1	dksijk □□□□□ – vk[k[ksMk □□□□ □□ – 1, 213	0.1495	22.22	3321.89 x 0.5	1660.945	996.567	0	0	0
2	dksijk □□□□□ –veksnk □□□□ □□ – 1, 11, 56	0.1673	20.83	3484.859 x 0.5	1669.5245	1001.7147	0	0	0
3	dksijk □□□□□ – cM+kxkWo □□□□ □□ – 710	0.1635	20.7	3384.45 x 0.5	1742.4295	1045.4577	0	1000	0
4	O;kjek □□□□□ – cjk[kkj □□□□ □□ – 1	0.0972	35.13	3414.636 x 0.5	1707.318	1024.3908	0	1000	0
5	dksijk □□□□□ – cjh □□□□ □□ - 1	0.2038	20.28	4133.064 x 0.5	2066.532	1239.9192	0	0	0
6	dksijk □□□□□ – cjoklk □□□□ □□ – 1, 103	0.1683	21.84	3675.672 x 0.5	1837.836	1102.7016	0	1000	0
7	lqukj □□□□□ – csy[ksMh □□□□ □□ – 1	0.1994	34.08	6795.552 x 0.5	3397.776	2038.6656	0	0	0
8	dksijk □□□□□ – NijV □□□□ □□ – 197,	0.2072	20.66	4280.752 x 0.5	2140.376	1284.2256	0	1200	0

9	lqukj □□□□□ – MkaMh □□□□ □□ - 1	0.1215	122.2	14847.3 x 0.5	7423.65	4454.19	0	4500	0
10	dksijk □□□□□ – nsojhfd'kqunkl □□□□ □□ - 1, 12	0.1613	20.78	3351.814 x 0.5	1675.907	1005.5442	0	0	0
11	lqukj □□□□□ – gkjV □□□□ □□ - 1638	0.8862	13.5	11963.7 x 0.5	5981.85	3589.11	0	0	0
12	dksijk □□□□□ – fguksrkujflagx< □□□□ □□ – 431, 584	0.1569	22.29	3497.301 x 0.5	1748.6505	1049.1903	0	0	0
13	O;kjek □□□□□ – befy;kjkor □□□□ □□ – 343	0.1625	20.83	3384.875 x 0.5	1692.4375	1015.4625	0	1000	0
14	dksijk □□□□□ – ddjk □□□□ □□ – 24,204,164	0.2418	23.89	5776.602 x 0.5	2888.301	1732.9806	0	0	0
15	dksijk □□□□□ – dqyiqjk □□□□ □□ – 15	0.1585	22.57	3577.345 x 0.5	1788.6725	1073.2035	0	0	0
16	dksijk □□□□□ – eMyk f[kfj;k □□□□ □□ – 1	0.1652	20.29	3351.908 x 0.5	1675.954	1005.5724	0	1000	0
17	dksijk □□□□□ – ijklbZ □□□□ □□ – 1	0.2234	17.9	3998.86 x 0.5	1999.43	1199.658	0	0	0
18	dksijk □□□□□ – ik;jkiqjk □□□□ □□ – 1, 218	0.2443	20.95	5118.085 x 0.5	2559.0425	1535.4255	0	0	0

19	dksijk □□□□□ – iqjkik;jk □□□□ □□ – 129, 577/1	0.1376	22.42	3084.992 x 0.5	1542.496	925.4976	0	0	0
20	dksijk □□□□□ – jkt?kkVfiifj;k □□□□ □□ – 126	0.1685	20.11	3388.535 x 0.5	1694.2675	1016.5605	0	0	0
21	O;kjek □□□□□ – jex<k □□□□ □□ – 86	0.4042	29.24	11818.808 x 0.5	5880.164	3528.0984	0	3500	0
22	dksijk □□□□□ –flejhdhjr □□□□ □□ – 93	0.1075	32.01	3441.075 x 0.5	1720.5375	1032.3225	0	1000	0
23	lqukj □□□□□ – lhrkuxj [kljk □□ –469	0.0736	77.75	5722.4 x 0.5	2861.2	1716.72	0	0	0
24	O;kjek □□□□□ – fctokj □□□□ □□ – 481	0.8935	13.53	12089.055 x 0.5	6044.5275	3626.7165	0	0	0
	Total	**5.6627 (Approx)**	**29 (Approx)**	**130903.53 x 0.5**	**65399.8245**	**39239.8947**	**0**	**15200**	**0**

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

Table 18 Sand Mining Area based on Pre- Monsoon Map

Table 18 Sand Mining Area based on Pre- Monsoon Map

Sr. No.	Name Of Mines	Total Area (In Sq.Meter)	Length Of Area (In Meter)	Width Of Area (In Meter)	Avg. Depth Of Area (In Meter)	Sand Mines Quantity (In Cubic Meters)	60% Total Mineral Potential (In Cubic Meters)	Sand Mines Quantity (InTonne)	60% Total Mine Potential (InTonne)
1	Aak-kheda	50000	149.5	22.22	0.5	1660.945	996.567	2325.323	1395.1938
2	Amoda	50000	167.3	20.83	0.5	1669.5245	1001.7147	2337.3343	1402.40058
3	Badagao	50000	163.5	20.7	0.5	1742.4295	1045.4577	2439.4013	1463.64078
4	Barakhar	50000	97.2	35.13	0.5	1707.318	1024.3908	2390.2452	1434.14712
5	Bari	50000	203.8	20.28	0.5	2066.532	1239.9192	2893.1448	1735.88688
6	Barwasa	50000	168.3	21.84	0.5	1837.836	1102.7016	2572.9704	1543.78224
7	Belkhedi	50000	199.4	34.08	0.5	3397.776	2038.6656	4756.8864	2854.13184
8	Chharpat	50000	207.2	20.66	0.5	2140.376	1284.2256	2996.5264	1797.91584
9	Dandi	50000	121.5	122.2	0.5	7423.65	4454.19	10393.11	6235.866

State Level Environment Impact Assessment Authority, M.P.

10	Devri-Kishundas	50000	161.3	20.78	0.5	1675.907	1005.5442	2346.2698	1407.76188
11	Harat	90000	886.2	13.5	0.5	5981.85	3589.11	8374.59	5024.754
12	Hinota-Narsinghgarh	50000	156.9	22.29	0.5	1748.6505	1049.1903	2448.1107	1468.86642
13	Imliya Rawat	50000	162.5	20.83	0.5	1692.4375	1015.4625	2369.4125	1421.6475
14	Kakra	50000	241.8	23.89	0.5	2888.301	1732.9806	4043.6214	2426.17284
15	Kulpura	50000	158.5	22.57	0.5	1788.6725	1073.2035	2504.1415	1502.4849
16	Madhla Khiriya	50000	165.2	20.29	0.5	1675.954	1005.5724	2346.3356	1407.80136
17	Parasai	50000	223.4	17.9	0.5	1999.43	1199.658	2799.202	1679.5212
18	Payrapura	50000	244.3	20.95	0.5	2559.0425	1535.4255	3582.6595	2149.5957
19	Pura Payra	50000	137.6	22.42	0.5	1542.496	925.4976	2159.4944	1295.69664
20	Rajghat Pipariya	50000	168.5	20.11	0.5	1694.2675	1016.5605	2371.9745	1423.1847
21	Ramgadha	50000	404.2	29.24	0.5	5880.164	3528.0984	8232.2296	4939.33776
22	Simri Kirat	50000	107.5	32.01	0.5	1720.5375	1032.3225	2408.7525	1445.2515
23	Sitanagar	50000	73.6	77.75	0.5	2861.2	1716.72	4005.68	2403.408
24	Vijwar	50000	893.5	13.53	0.5	6044.5275	3626.7165	8462.3385	5077.4031
			5662.7	**29**	**0.5**	**65399.8245**	**39239.8947**	**91559.7543**	**54935.85**

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

SCALE 1:816667

Figure 17 Sand Mining Map of the District – Post- Monsoon

Table 19 Sand Mining Area based on Post-Monsoon Map

Sr. No.	Name Of Mines	Total Area (In Sq.Meter)	Length Of Area (In Meter)	Width Of Area (In Meter)	Depth Of Area (In Meter)	Sand Mines Quantity (In Cubic Meters)	60% Total Mineral Potential (In Cubic Meters)	Sand Mines Quantity (In Tonne)	60% Total Mineral Potential (In Tonne)
1	Aak-kheda	50000	201.62	23.3	0.5	2348.873	1409.3238	3288.4222	1973.05332
2	Amoda	50000	182.22	21.55	0.5	1963.4205	1178.0523	2748.7887	1649.24322
3	Badagao	50000	169.08	20.8	0.5	1758.432	1055.0592	2461.8048	1477.08288
4	Barakhar	50000	103.62	35.25	0.5	1826.3025	1095.7815	2556.8235	1534.0941
5	Bari	50000	223.5	20.45	0.5	2285.2875	1371.1725	3199.4025	1919.6415
6	Barwasa	50000	169.01	22.10	0.5	1867.5605	1120.5363	2614.5847	1568.75082
7	Belkhedi	50000	222.35	34.75	0.5	3863.33125	2317.99875	5408.66375	3245.19825
8	Chharpat	50000	218	20.9	0.5	2278.1	1366.86	3189.34	1913.604
9	Dandi	50000	130.22	123.2	0.5	8021.552	4812.9312	11230.1728	6738.10368
10	Devri-Kishundas	50000	202.57	20.8	0.5	2106.728	1264.0368	2949.4192	1769.65152
11	Harat	90000	902.89	14.2	0.5	6410.519	3846.3114	8974.7266	5384.83596
12	Hinota-Narsinghgarh	50000	158.01	22.6	0.5	1785.513	1071.3078	2499.7182	1499.83092
13	ImliyaRawat	50000	189.79	20.9	0.5	1983.3055	1189.9833	2776.6277	1665.97662
14	Kakra	50000	256.9	24.1	0.5	3095.645	1857.387	4333.903	2600.3418

15	Kulpura	50000	162.01	22.75	0.5	1842.86375	1105.71825	2580.00925	1548.00555
16	MadhlaKhiriya	50000	168.02	20.8	0.5	1747.408	1048.4448	2446.3712	1467.82272
17	Parasai	50000	236.31	18	0.5	2126.79	1276.074	2977.506	1786.5036
18	Payrapura	50000	253.77	21.2	0.5	2689.962	1613.9772	3765.9468	2259.56808
19	PuraPayra	50000	166.02	22.9	0.5	1900.929	1140.5574	2661.3006	1596.78036
20	RajghatPipariya	50000	175.66	20.6	0.5	1809.298	1085.5788	2533.0172	1519.81032
21	Ramgadha	50000	421.79	29.75	0.5	6274.12625	3764.47575	8783.77675	5270.26605
22	SimriKirat	50000	114.54	32.4	0.5	1855.548	1113.3288	2597.7672	1558.66032
23	Sitanagar	50000	86.6	78.25	0.5	3388.225	2032.935	4743.515	2846.109
24	Vijwar	50000	913.56	13.75	0.5	6280.725	3768.435	8793.015	5275.809
			6028.06	**29.3875**	**0.5**	**71510.44475**	**42906.26685**	**100114.62265**	**60068.77359**

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

Table 20 Comparative Study: Pre and Post Monsoon Scenarios

				Pre- Monsoon Study		Post-Monsoon Study		Pre-Monsoon and Post Monso Difference	
Sr. No.	Name of Mines	Name of the River	Tehsil	Total Area in sqm	Estimated Production	Total Area in sqm	Estimated Production	Quantity	Quantity %age
1	Dandi	Sunar	Hata	50000	1000	50000	1344	344	25.60%
2	Belkhedi	Sunar	Pathriya	50000	1000	50000	1145	145	12.66%
3	Madhla Khiriya	Kopra	Damoh	50000	1000	50000	1050	50	4.76%
4	Barakhar	Vyarama	Jabera	50000	1000	50000	1050	50	4.76%
5	Payrapura	Kopra	Damoh	50000	1200	50000	1341	141	10.51%
6	Ramgadha	Vyarama	Patera	50000	1000	50000	1000	0	0.00%
7	Kakra	Kopra	Pathriya	50000	2000	50000	2268	268	11.82%
8	Harat	Sunar	Batiyagarh	90000	1200	90000	1308	108	8.26%
9	Rajghat Pipariya	Kopra	Damoh	50000	4500	50000	4774	274	5.74%
10	Sitanagar	Sunar	Pathriya	50000	1200	50000	1258	58	4.61%
11	Imliya Rawat	Vyarama	Patera	50000	3000	50000	3115	115	3.69%
12	Aak-kheda	Kopra	Damoh	50000	1000	50000	1000	0	0.00%
13	Parasai	Kopra	Damoh	50000	1000	50000	1186	186	15.68%

14	Chharpat	Kopra	Pathriya	50000	1530	50000	1610	80	4.97%
15	Barwasa	Kopra	Damoh	50000	1000	50000	1000	0	0.00%
16	Simri Kirat	Kopra	Damoh	50000	1000	50000	1000	0	0.00%
17	Devri-Kishundas	Kopra	Damoh	50000	1200	50000	1269	69	5.44%
18	Pura Payra	Kopra	Pathriya	50000	1550	50000	1595	45	2.82%
19	Hinota-Narsinghgarh	Kopra	Pathriya	50000	1000	50000	1071	71	6.63%
20	Kulpura	Kopra	Damoh	50000	1000	50000	1000	0	0.00%
21	Bari	Kopra	Damoh	50000	3500	50000	3700	200	5.41%
22	Amoda	Kopra	Damoh	50000	1000	50000	1100	100	9.09%
23	Badagao	Kopra	Pathriya	50000	1000	50000	1149	149	12.97%
24	Vijwar	Vyarama	Hata	50000	3000	50000	3097	97	3.13%

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

15.1Aggradations and Degradation Study

SCALE 1:816667

Figure 18 Aggradations Map of the District

SCALE 1:816667

Figure 19 Degradation Map of the District

Table 21 Block Wise Details of Aggradations and Degradations

Aggradations (Pre-Monsoon)				Degradation (Post-Monsoon)	
Sr. No.	Block Name	Total Area in sq. m	Total Quantity in Cubic m	Total Area in sq. m	Total Quantity in cubic m
1	Batiyagarh	90000	3175	90000	3408
2	Damoh	550000	13370	550000	14997
3	Hata	100000	7755	100000	8095
4	Jabera	50000	1175	50000	1408
5	Patera	100000	4740	100000	5060
6	Pathriya	350000	9565	350000	10678

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 22 Drainage System with description of main Rivers

S. NO.	Name of the River	Area Drained	Area Drained in the District
1	Bearma River Basin	5,949 sq. km	4,279 sq. km
2	Sonar River Basin	6,958 sq. km	2,067 sq. km

Table 23Salient Features of Important Rivers and Streams

S. NO.	Name of the River or Stream	Total Length in the District (in km)	Place of Origin	Altitude at origin
1	Bearma River Basin	136 km	Didhiya Reserve Forest, Didhiya Village	410 m
2	Sonar River Basin	86 km	Nearby Tada Village, Sagar	562 m

Table 24 Details of the Concession area in the District

S.N.	Name of River or Stream recommended the for mineral concession	Portion of the River / Stream Recommended for Mineral Concession	Length of area recommended area for mineral concession (in metre)	Average width of area recommended area for mineral concession (in meters)	Area recommended for mineral concession (in sq. meters)	Mineable mineral potential (in metric tonne) (60 % of total mineral potential)
1	Kopra	MadhlaKhiriya, Payrapura, Kakra, RajghatPipariya, Aak-kheda, Parasai, Chharpat, Barwasa, SimriKirat, Devri-Kishundas, PuraPayra, Hinota-Narsinghgarh, Kulpura, Bari, Amoda, Badagao	2824.6	21.85875	800000	25545
2	Sunar	Dandi, Belkhedi, Harat, Sitanagar	1280.7	61.8825	240000	16518
3	Vyarama	Barakhar, Ramgadha, Imliya-Rawat, Vijwar	1557.4	24.6825	200000	12873
	Total for the District		**5662.7**	**29**	**1240000**	**54936**

State Level Environment Impact Assessment Authority, M.P. (EPCO) Parvavaran Parisar

Table 25 Details of Annual Deposition

S.N.	Name of River or Stream recommended the for mineral concession	Portion of the River / Stream Recommended for Mineral Concession	Length of area recommended area for mineral concession (in metre)	Average width of area recommended area for mineral concession (in meters)	Area recommended for mineral concession (in sq. meters)	Mineable mineral potential (in metric tonne) (60 % of total mineral potential)
1	Kopra	MadhlaKhiriya, Payrapura, Kakra, RajghatPipariya, Aak-kheda, Parasai, Chharpat, Barwasa, SimriKirat, Devri- Kishundas, PuraPayra, Hinota- Narsinghgarh, Kulpura, Bari, Amoda, Badagao	3057.24	22.203125	800000	28108
2	Sunar	Dandi, Belkhedi, Harat, Sitanagar	1342.06	62.6	240000	18214
3	Vyarama	Barakhar, Ramgadha, Imliya-Rawat, Vijwar	1628.76	24.9125	200000	13747
	Total for the District		**6028.06**	**29.3875**	**1240000**	**60069**

Table Mineral Potential is calculated

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
0	0	191674.38	191674.38

Annual Deposition

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
0	0	115005	115005

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

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

16 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
- 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.

17 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: -

District Survey Report SAND: Damoh

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.

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

Table 26 Number of Health Centres in Damoh District

S. no.	Name of District	Block Name	DH/CH	CHC	PHC	SHC	MO	Total No. of Beds	Total No. of Ambulance
1.	Damoh	Damoh	1	1	1	30	17	211	3
2.		Batiagarh	0	0	1	20	7	22	1
3.		Hattaa	1	2	1	21	5	40	2
4.		Jabera	0	1	1	27	1	36	1
5.		Patharia	0	1	1	23	2	36	2
6.		Patera	0	1	1	18	4	36	1
7.		Tendukhera	0	1	1	23	2	36	1
8.			2	7	7	162	38	417	11

Table 27 Number Tuberculosis Patient's list of Damoh District.

Sr. No.	Year	Tuberculosis Patient's
1	2017	3043
2	2018	3190
3	2019	3240
4	2020	2932
5	2021	3106

Table 28 Silicosis Patient's list of Damoh District

Sr. No.	Year	Silicosis Patient's
1	2017	Ni
2	2018	Nil
3	2019	Nil
4	2020	Nil
5	2021	Nil

No Silicosis Patient's in the district

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 endeavor will be an important chapter in the history of control of infectious diseases.

Tuberculosis is a disease dreaded due to it's social consequences and age old myths and misconceptions regarding it's 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.

18 Plantation and Green Belt Development in respect of lease granted in the District:

Mining activities result in pollution of the environment. This requires protection of our environment. Plantation is the oldest technology for the restoration of the land damaged by the human activities as well as air pollution.

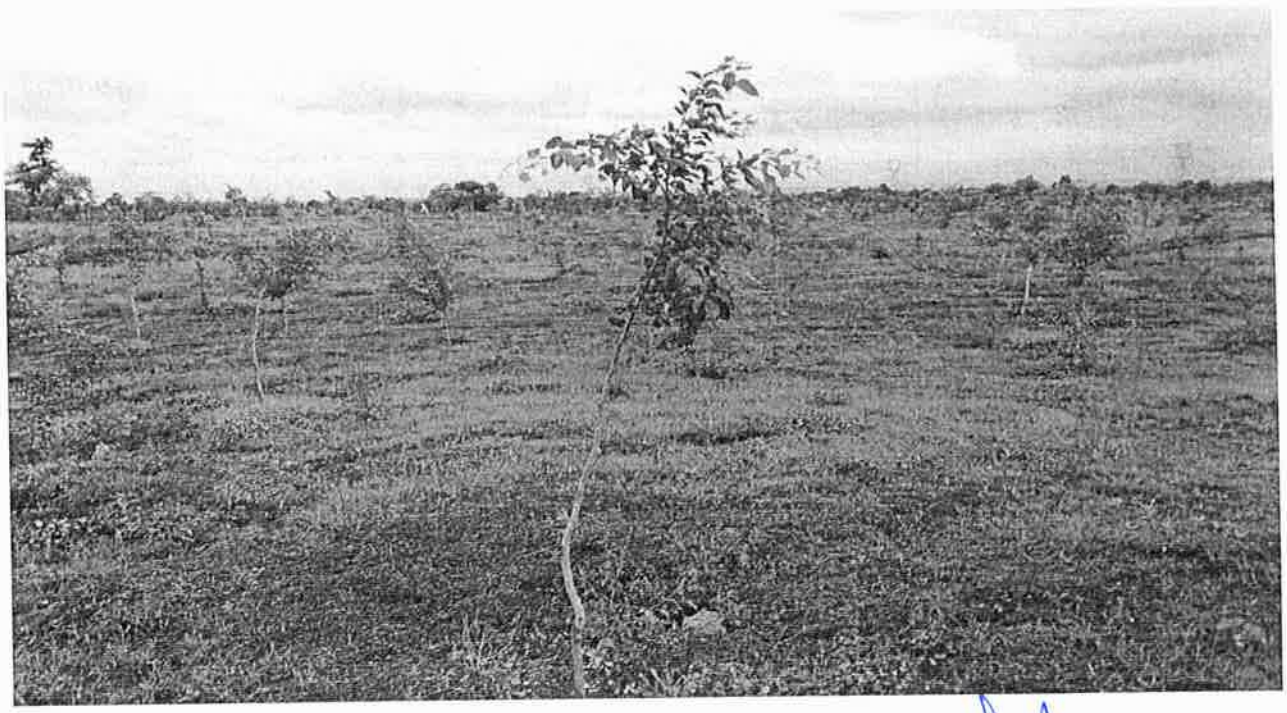
Trees are highly suitable for the detection and monitoring of the air pollutants and have been effectively used at various places

By planting trees we can achieve the dual purpose of bio aesthetics as well as mitigation of pollution. Proper planning and plantation scheme depends upon the magnitude and type of pollution, selection of pollution tolerant and dust capturing plants

The plants should be ever green, large leaved, with rough bark, ecologically compatible, with low water requirement, requiring minimum care, capable to absorb pollutants, pollutant resistant, agro climatically suitable, fast growing, free from wind throw and breakage and with high pollution tolerance index. The specious should be suitable to the climate, topography and soil. A minimum two rows of plantation will be carried out to minimize the effect of pollution. This would attenuate the pollutants level.

However the afforestation should always be carried out in a systematic and scientific manner. It is proposed to carry the plantation along the river bank, both side of approach roads by considering 80% rate of survival. Trees like Karanj, Sheesham, Mango, Neem and some other varieties will be planted in consultant with forest department.

Plantation in District Mine Site



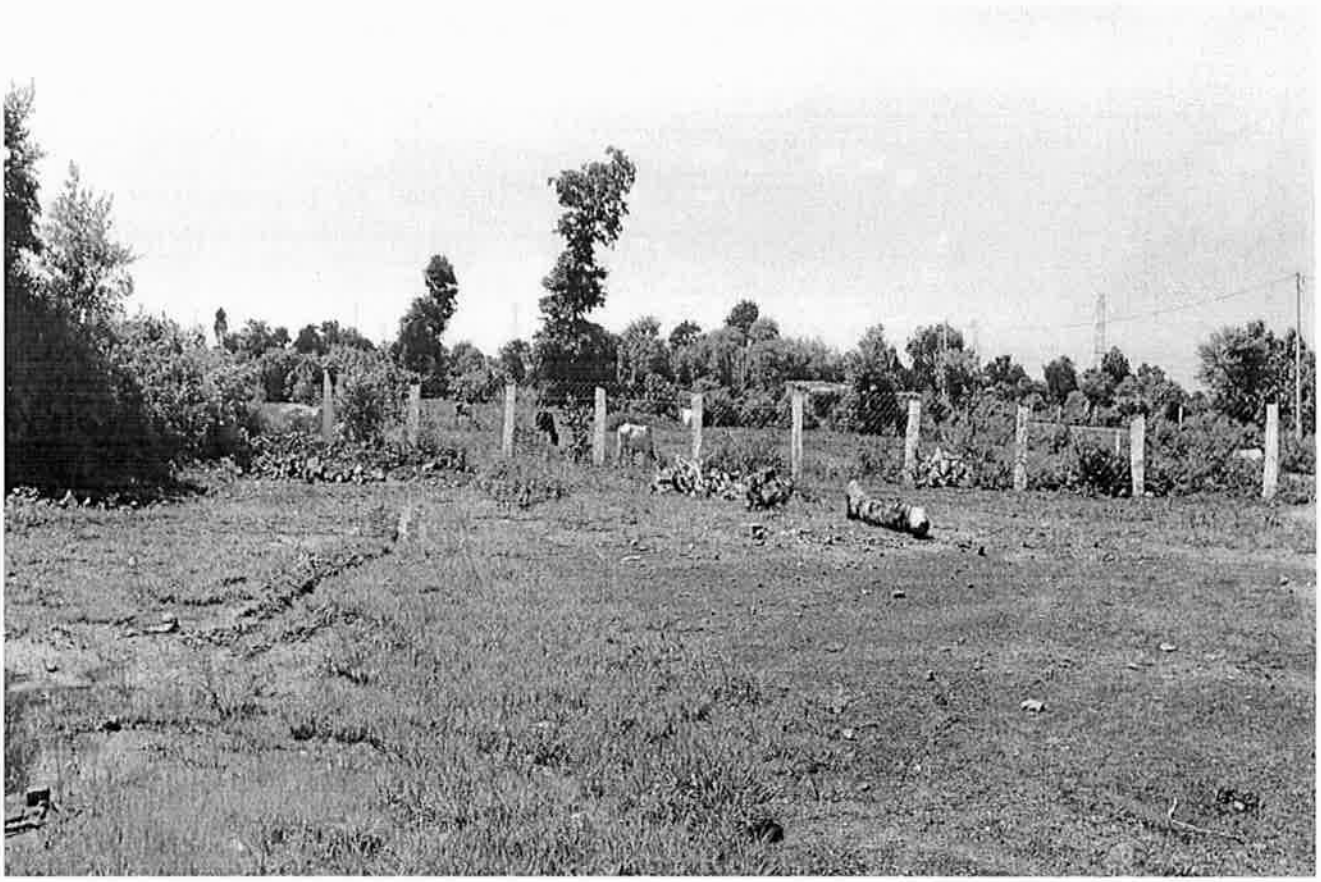
Green Belt Development

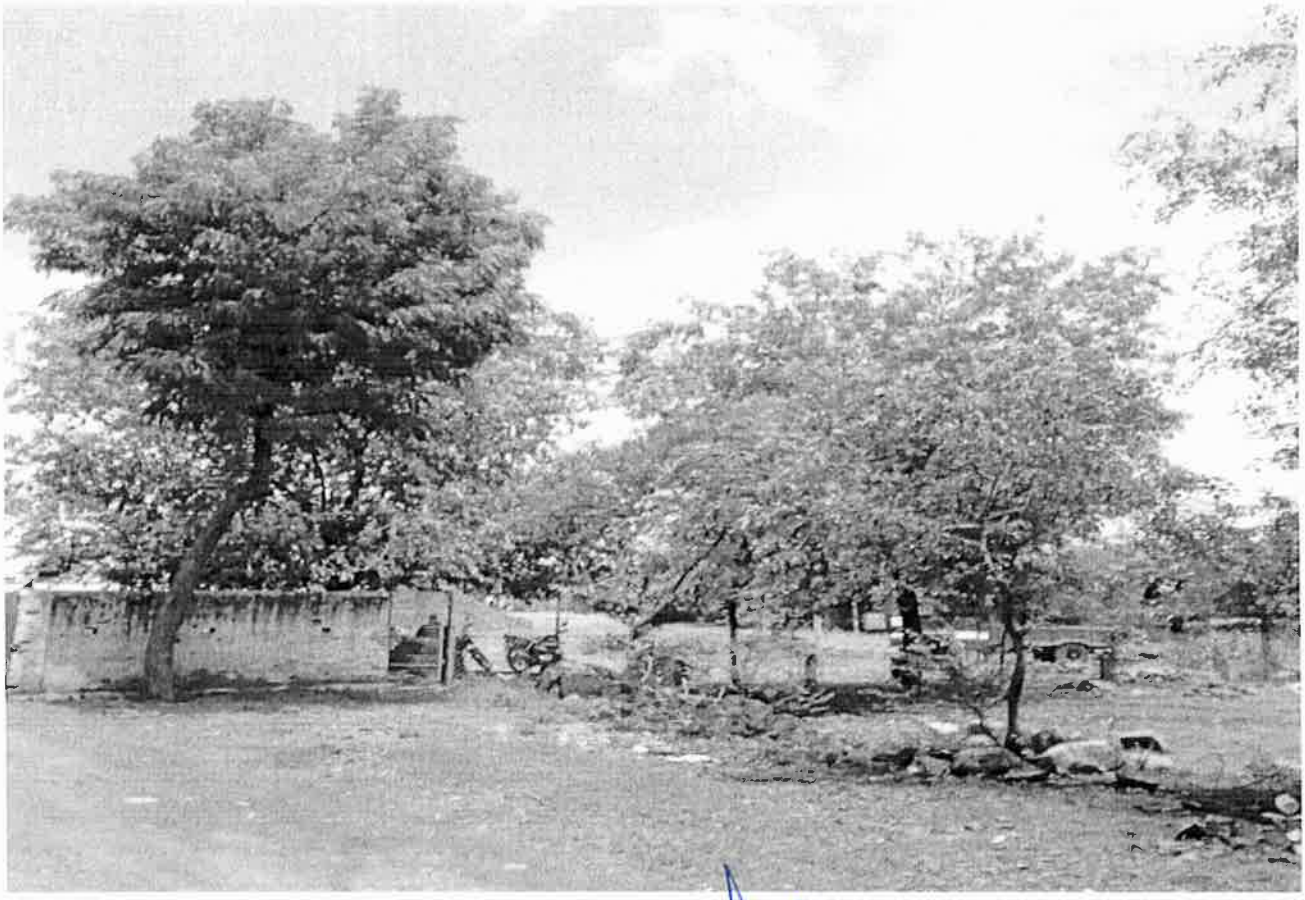
State Level Environment Impact
Assessment Authority, M.P.
(EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

AAQMS at view point near crusher area

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

District Survey Report SAND: Damoh

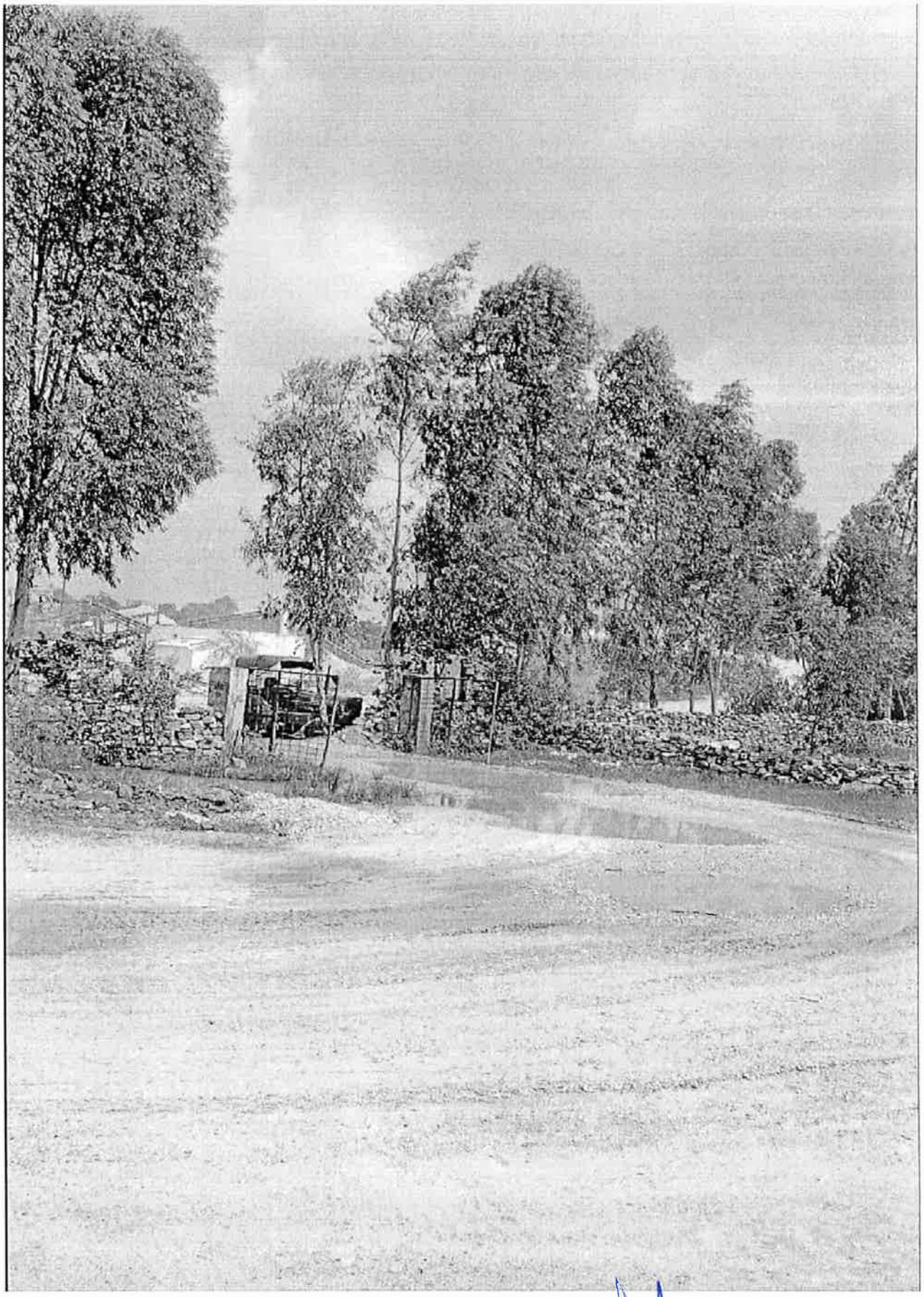




District Survey Report SAND: Damoh

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

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



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

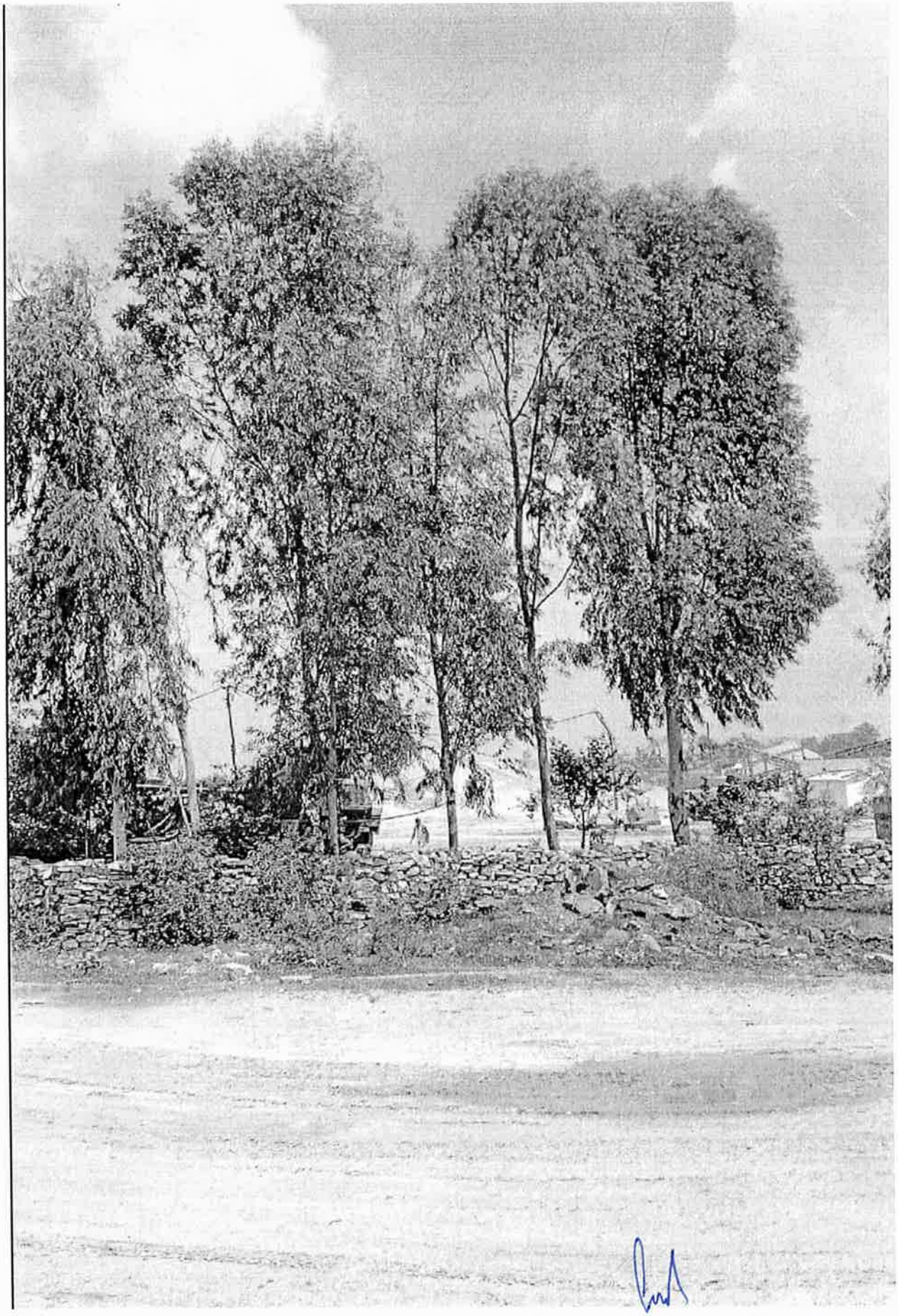


Table 29 Recommended Plant species for green belt development/plantation.

S.No.	Botanical Name	Family	Common Name
1.	Bougainvillea glabra Choisy	Nyctaginaceae	Booganbel
2.	Hibiscus rosa- sinensis L	Malvaceae	Gurhal
3.	Nerium indicum Mill	Apocynaceae	Kaner
4.	Polyalthia longifolia	Annonaceae	Ashok
5.	Ailanthus excelsa Roxb	Simaroubaceae	Maha nimba
6.	. Butea monosperma (Lamk.) Taub	Fabaceae	Khakhra/Palash
7.	Cassia fistula L.	Caesalpiniaceae	Amaltas
8.	Mangifera indica L.	Anacardiaceae	Mango
9.	Terminalia cattapa L.	Combretaceae	Jangli badam
10.	. Tectona grandis L	Verbenaceae	Teak/ Sagun
11.	Mangifera Indica	Anacardiaceae	Mango
12.	Bambusa Vulgaris	Poeceae	Bamboo
13.	Artocarpur hetreophyllus	Moraceae	Kathal
14.	Azadirachta indica A. Juss	Meliaceae	Neem
15.	Ficus religiosa L	Moraceae	Pipal
16.	Dalbergia sissoo	Fabaceae	Sissoo
17.	Ficus benghalensis	Moraceae	Bargad
18.	Manilkara hexandra	Spotaceae	Khirni
19.	Terminalia chebula	Combretaceae	Harra
20.	Phyllanthus emblica	Phyllanthaceae	Amla
21.	Terminalia bellircia	Combretaceae	Bahera
	Psidium guajaya	Myrtaceae	Guava

Plantation has been done by project proponent on Barrier Zone, Non Mining Area, Approach road, nearby river bank and ravines etc. as per the suggestions of the authority.

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

राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण, म.प्र.

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

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

No: 1638 / SEIAA/2022
Date: 23/9/22

प्रति,

कलेक्टर
जिला – दमोह (म.प्र.)

विषयः नवीन जिला सर्वेक्षण रिपोर्ट – जिला दमोह (रेत खनिज)

संदर्भः आपका पत्र क्र. 564, दिनांक 31.08.2022।

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 592वीं बैठक दिनांक 06/09/2022 में जिला दमोह की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

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

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 592वीं बैठक दिनांक 06/09/2022 की अनुशंसा को मान्य करते हुए दमोह जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट (रेत खनिज) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है। तदानुसार जिला कलेक्टर, दमोह को पुनरीक्षित जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।

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

(श्रीमन् शुक्ला)
सदस्य सचिव

क्र.. /SEIAA/2022 भोपाल दिनांक

प्रतिलिपि :–

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

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

25. <u>जिला सर्वेक्षण रिपोर्ट, जिला – नीमच (गौण खनिज)</u>

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 592वीं बैठक दिनांक 06/09/2022 में जिला नीमच की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

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

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 592वीं बैठक दिनांक 06/09/2022 की अनुशंसा को मान्य करते हुए नीमच जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट (गौण खनिज) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

26. <u>जिला सर्वेक्षण रिपोर्ट, जिला – देवास (अन्य गौण खनिज रेत को छोड़कर)</u>

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 592वीं बैठक दिनांक 06/09/2022 में जिला देवास की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

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

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 592वीं बैठक दिनांक 06/09/2022 की अनुशंसा को मान्य करते हुए देवास जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट (अन्य गौण खनिज रेत को छोड़कर) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

27. <u>जिला सर्वेक्षण रिपोर्ट, दमोह – रेत खनिज</u>

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 592वीं बैठक दिनांक 06/09/2022 में जिला दमोह की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

"..... समिति द्वारा सुझाई गई उपरोक्त अनुशांसाओ के साथ दमोह जिले की जिला

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

सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघॉत निर्धारण प्राधिकरण की ओर प्रेषित किया जाये।"

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (**SEIAA**) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत **SEAC** की 592वीं बैठक दिनांक 06/09/2022 की अनुशंसा को मान्य करते हुए दमोह जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट (रेत खनिज) का अनुमोदन **SEAC** द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

28. <u>जिला सर्वेक्षण रिपोर्ट, जिला – सिवनी (रेत खनिज)</u>

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (**SEAC**) की 592वीं बैठक दिनांक 06/09/2022 में जिला सिवनी की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

"..... समिति द्वारा सुझाव गई उपरोक्त अनुशंसाओं के साथ सिवनी जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये ।"

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (**SEIAA**) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत **SEAC** की 592वीं बैठक दिनांक 06/09/2022 की अनुशंसा को मान्य करते हुए सिवनी जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट (रेत खनिज) का अनुमोदन **SEAC** द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

29. <u>जिला सर्वेक्षण रिपोर्ट, जिला – ग्वालियर (गौण एवं रेत खनिज)</u>

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (**SEAC**) की 592वीं बैठक दिनांक 06/09/2022 में जिला ग्वालियर की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

"..... समिति द्वारा सुझाव गई उपरोक्त अनुशंसाओं के साथ ग्वालियर (रेत खनिज)की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।"

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (**SEIAA**) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत **SEAC** की 592वीं बैठक दिनांक 06/09/2022 की अनुशंसा को मान्य करते हुए ग्वालियर जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट (गौण एवं रेत खनिज) का अनुमोदन **SEAC** द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

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

सुझाई गयी उपरोक्त अनुशंसाओं के तारतम्य में अद्यतन (अपडेट) किया जाये तथा संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय की अधिसूचना दिनांक 25/07/18 के अनुसार पुनः प्रस्तुत की जावे तत्संबंध में उपस्थित खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गयी।

9. जिला सर्वेक्षण रिपोर्ट, दमोह – रेत खनिज

Mineral	**Sand**
Earlier DSR Discussed	SEAC 576th, 588th Meeting dated 10.06.2022, 16.08.22
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (**Sand Mineral**)
Deliberation in the SEAC 576th & 588th Meeting dated 10.06.2022 & 16.08.22	**राज्य स्तरीय मूल्यांकन समिति की 576 वीं बैठक दिनांक 10/06/22 रेत खनिज, जिला दमोह. –** कार्यालय कलेक्टर (खनिज शाखा) जिला दमोह के पत्र क्रमांक 341 दिनांक 17/5/22 के माध्यम से जिला सर्वेक्षण रिपोर्ट, जिला दमोह सीधे सेक को प्राप्त हुई थी, जिसकी प्रतिलिपि सिया को दी गई थी जिसमें यह उल्लेखित है कि इस रिर्पोट को जिला सूचना केन्द्र के बेव पोर्टल पर 21 दिन की अवधि हेतु अपलोड किया गया तथा जिला के सर्वेक्षण रिपोर्ट में कोई आपत्ति/सुझाव प्राप्त नहीं हुए। जिला स्तर पर गठित समिति द्वारा प्रारूप जिला सर्वेक्षण रिपोर्ट का अनुमोदन दिनांक 18/04/22 को किया गया । उक्त जिला सर्वेक्षण रिपोर्ट, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के सदस्यों को दिनांक 01/06/22 (सॉफ्टकापी) को प्रेषित की गई थी तथा उस पर चर्चा राज्य स्तरीय मूल्यांकन समिति की 576वीं बैठक दिनांक 10/06/22 में प्रस्तावित की गई । कार्यालय (खनिज शाखा) जिला दमोह म.प्र. ने पत्र क्रमांक–229 दिनांक 18/04/22 के माध्यम से अवगत कराया है कि इस जिला सर्वेक्षण रिपोर्ट पर सुझाव आमंत्रित करने बावत् उसे जिले के पोर्टल पर 21 दिवस के लिए अपलोड किया गया था । उक्त अवधि में कोई आपत्ति/सुझाव प्राप्त नहीं होने पर जिला स्तरीय समिति के अनुमोदन उपरांत जिला सर्वेक्षण रिपोर्ट 2022 प्रस्तुत की गई है । राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की 576वीं बैठक दिनांक 10/06/22 में बड़वानी जिले की जिला सर्वेक्षण रिपोर्ट पर चर्चा की गई । चर्चा के दौरान खनिज विभाग, दमोह की ओर से श्री मेजर सिंह जावरा, प्रभारी खनिज अधिकारी एवं श्री सत्यम सिंह परिहार ऑनलाईन उपस्थित हुए जिसमें पाया गया कि :– ➢ तालिका क्रमांक–2 में जिला का मिनरल उत्पादन दर्शाया गया है, जिसमें स्टोन का उत्पादन शून्य बताया गया है जबकि तालिका क्रमांक–5 एवं फिगर–3 अनुसार जिले में कई स्टोन खदानें कार्यरत है, स्पष्ट करें । ➢ तालिका–11 में कॉलम–5 में नक्शा के अंतर्गत दी गई जानकारी अस्पष्ट है एवं रेत खदानों की गहराई का उल्लेख नहीं है । ➢ तालिका–11 एवं 12 में प्री–मानसून एवं पोस्ट–मानसून में प्रदाय की गई अनुमानित रेत की मात्रा में लीजवार (60 प्रतिशत टोटल मिनरल पोटेंशियल) (लम्बाई एवं चौड़ाई के साथ) नहीं दी गई है । ➢ प्रस्तुत जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 में निर्धारित फार्मेट अनुसार नहीं बनाई गई है तथा कई जानकारियॉ वांछित तालिका में नहीं दी गई है जिस कारण रिपोर्ट अपूर्ण है। बिंदु क्रमांक–26 की जानकारी जो माईनर मिनरल (रेत छोडकर) से संबंधित है, के अवलोकन से ज्ञात होता है कि जिले में हरित क्षेत्र के विकास हेतु खदानों में वृक्षारोपण की जानकारी नहीं दी गई है, जिसको अद्यतन किया जाना चाहिए । साथ ही निर्धारित लक्ष्य के विरूद्ध कितना वृक्षारोपण किस वर्ष किया है, उसको भी अंकित किया जाना चाहिए ।

- इसी प्रकार जिले में स्वीकृत/प्रस्तावित खदानों को को–आर्डिनेट के अनुसार डिजिटाईज मेप (आर्क व्यू / गूगल अर्थ कम्पेटेवल – सी.डी.में) भी संलग्न किया जाये ताकि पर्यावरण अभिस्वीकृति के समय खदानों की सही स्थिति ज्ञात करने में तथा 500 मीटर के अंदर स्थित अन्य स्वीकृत खदानों की जानकारी प्राप्त करने में सुविधा हो ।
- प्रायः देखा जा रहा है जिला सर्वेक्षण रिपोर्ट में रेत निर्माण होने की भू–वैज्ञानिक विधि की सामान्य जानकारी दी जाती है जो सभी जिला सर्वेक्षण रिपोर्टो में एक जैसी ही है जिसके स्थान पर जिलें में मिलने वाली नदी के अपस्ट्रीम क्षेत्र में मिलने वाली चट्टानों का (रॉक फार्मेशन) का समावेश होना चाहिए ।
- जिला सर्वेक्षण रिपोर्ट में प्रदर्शित नक्शों में जो भी फीचर्स दिखाया जाता है उसको संबंधित नक्शें के लीजेंड में भी दिखाया जाना चाहिए एवं नक्शों का स्केल ऐसा होना चाहिए कि समस्त फीचर स्पष्ट दिख सके । यदि ए–4 साईज में नक्शें नहीं आ पा रहे हो तो ए–3 साईज में नक्शों को बनाना चाहिए ।
- समिति ने संबंधित जिलों के खनिज अधिकारियों को निर्देशित करती है कि इस बात का भी ध्यान रखा जाये कि नदियों में किसी स्थान पर मछलियों / कछुआ /घड़ियाल / मगरमच्छ आदि जलचरों का ब्रीडिंग ग्राउण्ड तो नहीं है यदि ऐसा कोई स्थानीय संवेदनशीन क्षेत्र दृष्टिगत होता है तो खनन् क्षेत्र की सीमा को 60 प्रतिशत से कम कर 50 प्रतिशत तक भी सीमित किया जा सकता है ।
- समिति ने यह भी सुझाव दिया कि सभी खनिज अधिकारी अपनी साईट विजिट के दौरान खदान द्वारा किये जा रहे पर्यावरणीय एवं सामाजिक पहलुओं का भी अवलोकन करें एवं यदि कोई पर्यावरणीय संवेदनशीलता दृष्टिगत हो, जिस पर ध्यान दिया जाना आवश्यक हो तो संबंधित तथ्यों से राज्य स्तरीय पर्यावरण समाघॉत निर्धारिण प्राधिकरण को उचित कार्यवाही हेतु अवगत करायें ।

चर्चा उपरांत समिति की यह अनुशंसा है कि दमोह जिले की जिला सर्वेक्षण रिपोर्ट को समिति द्वारा सुझाई गई उपरोक्त अनुशांसाओ के तारतम्य में अद्यतन (अपडेट) किया जाये तथा संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 के अनुसार पुनः प्रस्तुत की जाये । ऑन लाईन उपस्थित प्रभारी खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गई तथा पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 के निर्धारित फार्मेट अनुसार जिला सर्वेक्षण रिपोर्ट को अद्यतन कर लें । तद्नुसार प्रकरण आगामी कार्यवाही राज्य स्तरीय पर्यावरण समाघॉत निर्धारण प्राधिकरण की ओर अग्रिम कार्यवाही हेतु प्रेषित है ।

राज्य स्तरीय मूल्यांकन समिति की 588वीं बैठक दिनांक 16/08/22 रेत खनिज, जिला दमोह. –

1. तालिका क0. 18 जिसमें प्री–मानसून के अन्तर्गत रेत की उपलब्ध मात्रा लंबाई, चौड़ाई एंव गहराई के साथ–साथ दर्शायी गयी है की गणना सही प्रतीत होती है, परन्तु तालिका 19 मे पोस्ट'मानसून के अन्तर्गत रेत की उपलब्धता की गणना की गयी है। इस तालिका के कॉलम (4) मे खदान की लंबाई किलोमीटर यूनिट में दर्शायी गयी है। सही प्रतीत नही होती क्योंकि प्री–मानसून मे जिस खदान की लंबाई पोस्ट मानसून मे 3 किलोमीटर दिखाई गयी है। यह कैसे संभव है? अत एव तालिका क0. 19 को पुनरिक्षित करें एंव पुनः सभी लीजों की लंबाई को चेक करें। इसी आधार पर तालिका क0. 20 को एंव अन्य भी संबंधित तालिकाओं को पुनरिक्षित करें।

2. पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 की अधिसूचना मे रेत खदानों की जिला सर्वेक्षण रिनोर्ट तैयार करने के लिये जो तालिका मे दी गयी है जिसमें अंतिम तालिका जिसमें नदी–वार एंव लीज–वार सभी को सम्मिलित की जाना है जिसमें प्रत्येक लीज की लंबाई, चौड़ाई एंव गहराई के साथ लीजों मे रेत की उपलब्ध मात्रा की गणना की जाना है तत्पश्चात् उपलब्ध मात्रा की 60% मिनरल पोटेंशियल ही दर्शाया जाना है। इस तालिका का जिला सर्वेक्षण रिपोर्ट में शामिल नही किया गया है। अत एंव इस महत्वपूर्ण तालिका को तैयार करें एंव इसका ध्यान रखें कि प्री–मानसून, पोस्ट मानसून एंव अन्य तालिकाओं में जहां भी लीजों की लंबाई– चौड़ाई का उल्लेख होता है वहां समरूपता रहे।
3. रेत खदानों के विवरणों मे तालिका क0. 3 में लीजों के मात्र (Coordinate) ही दर्शाये गये है। अतएव 04–.04 Coordinates दर्शाये। जिससे एक Polygon बन सके।
4. विगत 03 वर्षो में उत्खनित रेत की खदानवार मात्रा भी दर्शाई जाये, जिससे यह ज्ञात हो सके कि उस स्थल पर खदान का मिनरल पोटेंशियल विगत 03 वर्षो में कितना रहा है
5. इसी प्रकार जिले में स्वीकृत/प्रस्तावित खदानों के को–आर्डिनेट के अनुसार डिजिटाईज मेप (आर्क व्यू / गूगल अर्थ कम्पेटेवल – सी.डी.में) भी संलग्न किया जाये ताकि पर्यावरण अभिस्वीकृति के समय खदानों की

	सही स्थिति ज्ञात करने में तथा 500 मीटर के अंदर स्थित अन्य स्वीकृत खदानों की जानकारी प्राप्त करने में सुविधा हो। 6. मिनरल पोटेंशियल की गणना दर्शाने वाली टेबल में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में भी दर्शाये । चर्चा उपरांत समिति की यह अनुशंसा है कि दमोह जिले की जिला सर्वेक्षण रिपोर्ट जिला सर्वेक्षण रिपोर्ट, रेत खनिज (संशोधित) को समिति द्वारा सुझाई गई उपरोक्त अनुशंसाओ के तारतम्य में अद्यतन (अपडेट) किया जाये तथा संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 के अनुसार पुनः प्रस्तुत की जाये। उपस्थित श्री मेजर सिंग जमरा, खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गई तथा पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 के निर्धारित फार्मेट अनुसार जिला सर्वेक्षण रिपोर्ट को अद्यतन कर प्रस्तुत करें ।
Revised DSR received from District Collectorate (Mining)	Received soft copy vide District Collectorate (Mining) Office, Damoh , No. 564 dated 31.08.2022 (through E-mail)
Hard Copy Soft Copy or both	Soft copy.
SEAC meeting dated 06/09/22	• जिले की जिला सर्वेक्षण रिपोर्ट मे पेज क्र0. 68 से 70 (in PDF format) मे में दर्शित तालिका में माइनेबल मिनरल पोटेंशियल (घनमीटर में) 60: टोटल मिनरल पोटेंशियल, लीजवार, लंबाई, चौड़ाई एंव गहराई के साथ दर्शाया है एवं विगत 03 वर्षो के उत्खनित रेत की मात्रा का लीजवार पोटेंशियल दिया गया है। जिससे ज्ञात हो सके कि उस स्थल पर खदान का मिनरल पोटेंशियल विगत 03 वर्षो मे कितना रहा। • मिनरल पोटेंशियल की गणना दर्शाने वाली टेबल 18 , पेज क्र0. 71 से 72 (in PDF format) मे में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है मिनरल पोटेंशियल की गणना दर्शाने वाली टेबल में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है।

आज दिनांक 06/9/22 को जिला सर्वेक्षण रिर्पोटो के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय, एवं श्री मेजर सिंग जमरा, खनिज अधिकारी के साथ उपस्थित रहे ।

समिति ने पाया कि दमोह जिले की जिला सर्वेक्षण रिपोर्ट को समिति द्वारा सुझाई गई 03 वर्षो में उत्खनित रेत की खदानवार मात्रा भी दर्शाई गइ है, एंव विगत 03 वर्षो में उत्खनित रेत की खदानवार मात्रा भी पोटेंशियल विगत 03 वर्षो में कितना रहा है भी दर्शाया गया है। खनि. अधिकारी, कार्यालय कलेक्टर, (खनिज शाखा) जिला – दमोह ने पत्र क्रमांक 564 दिनांक 31/08/2022 के माध्यम से ''माइनेवल मिनरल पोटेंशियल'' (घनमीटर में) (60 प्रतिशत टोटल मिनरल पोटेंशियल) लीजवार विवरण की जानकारी भी प्रस्तुत कर दी गई है तथा मिनरल पोटेंशियल की गणना दर्शाने वाली टेबल में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है ।

समिति की अनुशंसा है कि जिला स्तर पर जिला सर्वेक्षण रिपोर्ट तैयार करने हेतु गठित जिला समिति की अनुशंसा तथा की गई रिप्लेनिशमेंट स्टडी की जानकारी (जिसके आधार पर जिला सर्वेक्षण रिपोर्ट

तैयार की गई हैं) संबंधित जिला खनिज अधिकारी कार्यालय में सुरक्षित रखी जाये । अतः समिति द्वारा सुझाई गई उपरोक्त अनुशांसाओ के साथ दमोह जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघॉत निर्धारण प्राधिकरण की ओर प्रेषित किया जाये।

10. जिला सर्वेक्षण रिपोर्ट, मुरैना–

अ. गौण खनिज (मिट्टी), जिला, मुरैना,

आज दिनांक 06/9/22 को जिला सर्वेक्षण रिर्पोटो के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय, एवं श्री विक्रांत वर्मा, खनिज अधिकारी के साथ उपस्थित रहे । जिले की संशोधित मंदसौर जिला सर्वेक्षण रिपोर्ट (गौण खनिज) मे पाया गया किः–

जिला सर्वेक्षण रिपोर्ट गौण खनिज (मिट्टी) कें पेज क्र0. 10 में प्रदाय की तालिका में 16 बिन्दुओं की जानकारी का समावेश नही किया गया है जैसेः–

- खनन प्रचालन के प्रारंभ होने की तारीख
- कार्यशील /गैर कार्यशील केप्टिव /नॉन – केप्टिव
- पर्यावरण स्वीकृति की स्थिति
- खनन की स्थिति

ब. गौण खनिज (मुरूम खनिज), जिला, मुरैना

जिला सर्वेक्षण रिपोर्ट गौण खनिज (मुरूम खनिज) कें पेज क्र0. 10 में प्रदाय की तालिका में 16 बिन्दुओं की जानकारी का समावेश नही किया गया है जैसेः–

- खनन प्रचालन के प्रारंभ होने की तारीख
- कार्यशील /गैर कार्यशील केप्टिव /नॉन – केप्टिव
- पर्यावरण स्वीकृति की स्थिति
- खनन की स्थिति

स. गौण खनिज (फ्लेग स्टोन खनिज), जिला, मुरैना

जिला सर्वेक्षण रिपोर्ट गौण खनिज (फ्लेग स्टोन खनिज) के पेज क्र0. 10 में प्रदाय की तालिका में 16 बिन्दुओं की जानकारी का समावेश नही किया गया है जैसेः–

- खनन प्रचालन के प्रारंभ होने की तारीख
- कार्यशील /गैर कार्यशील केप्टिव /नॉन – केप्टिव