



Government of Madhya Pradesh
DISTRICT SURVEY REPORT
(RIVER BED SAND MINING)
PANNA DISTRICT, MADHYA PRADESH

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



Prepared by
SUB DIVISIONAL COMMITTEES' PANNA (M.P.)

JUNE 2022


State Level Environment Impact
Assessment Authority, M.P.
(EPCO)
Parivahan Parisar
E-2, Arera Colony, Bhopal (M.P.)

कार्यालय कलेक्टर (खनिज शाखा) जिला पन्ना (म.प्र.)

क्रमांक १४३.../११/एम/३/६/२०२२

पन्ना दिनांक २९/०४/२०२२

प्रति,

सिएक (SEAC)

म.प्र. प्रदूषण नियंत्रण बोर्ड

ई-५ पर्यावरण परिसर, अरेरा कालोनी भोपाल म०प्र०

विषय:- सिएक (SEAC) द्वारा बैठक दिनांक २७.०८.२०२२ के कार्यवाही विवरण में पन्ना जिले की जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) में सुधार हेतु दिये गये निर्देशों के पालन में जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) में सुधार कर अनुमोदन पश्चात प्रेषित करने बावत।

संदर्भ:- सिएक (SEAC) द्वारा बैठक दिनांक २७.०८.२०२२।

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उपरोक्त विषयान्तर्गत लेख है, कि सिएक (SEAC) द्वारा आयोजित बैठक दिनांक २७.०८.२०२२ के निर्देशानुसार पन्ना जिले की जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) में सुधार कर प्रेषित करने हेतु निर्देशित किया गया था। प्राप्त निर्देशों के पालन में सुधार कर तैयार की गयी जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) की प्रति अनुमोदन हेतु आपकी ओर सादर सम्प्रेषित है।

संलग्न:- संशोधित जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) जिला पन्ना।

खनिज अधिकारी

जिला पन्ना (म.प्र.)

पन्ना दिनांक २९/०४/२०२२

पृ.क्रमांक १४४.../११/एम/३/६/२०२२

प्रतिलिपि:-

१. प्रमुख सचिव, म.प्र. शासन, खनिज साधन विभाग, बल्लभ भवन मंत्रालय भोपाल म०प्र० की ओर सूचनार्थ।
२. संचालक, भौमिकी तथा खनिकर्म २९-ए अरेरा हिल्स खनिज भवन म.प्र. भोपाल की ओर सूचनार्थ।
३. वन मडलाधिकारी दक्षिण/उत्तर वन मण्डल जिला पन्ना म.प्र. की ओर सूचनार्थ।
४. अनुविभागीय अधिकारी राज्य पन्ना/अयजगढ/पवई/गुनौर/शाहनगर/ जिला पन्ना म.प्र. की ओर सूचनार्थ।
५. क्षेत्रीय अधिकारी प्रदूषण नियंत्रण बोर्ड सागर संभाग म.प्र. की ओर सूचनार्थ।
६. कार्यपालन यंत्री जल संसाधन विभाग जिला पन्ना म.प्र. की ओर सूचनार्थ।

खनिज अधिकारी

जिला पन्ना (म.प्र.)

१

PREFACE

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

The need for District Survey Report (DSR) have been necessitated by Ministry of Environment, Forest and Climate Change (MoEF & CC) vide their Notification No. 125 (Extraordinary, Part II Section 3, Sub-section ii), S.O. 141 (E), dated 15th January 2016. The notification was addressed to bring certain amendments with respect to the EIA notification 2006 and in order to have a better control over the legislation. District level committees have been introduced in the system. As a part of this notification, preparation of District Survey Reports has been introduced. Subsequently, Ministry of Environment, Forest and Climate Change has published Notification No. 3611 (E), dt. 25th July, 2018 regarding inclusion of the — Minerals Other than Sand and format for preparation of the DSR has been specified. Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020, Issued by Ministry of Environment, Forest and Climate Change is prepared in consideration of various orders/directions issued by Hon'ble NGT in matters pertaining to illegal sand mining and also based on the reports submitted by expert committees and investigation teams. This DSR has been prepared in conformity with the S O 141 (E), S O 3611 (E) and other sand mining guidelines published by MOEF & CC time to time as well as the requirement specified in Madhya Pradesh Mineral (Prevention of Illegal Mining, Transportation, and Storage) Rules, 2022.

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

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


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DISCLAIMER

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



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

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

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DISTRICT SURVEY REPORT FOR PANNA DISTRICT (River bed/Sand mining)

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

1.1. Guidelines to Monitor Sand Mining

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

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

1.2. Enforcement and Monitoring Guidelines for Sand Mining 2020

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.

1.3. Surrounding Districts

Panna district is located at north central part of Madhya Pradesh, is bounded by Banda district of Uttar Pradesh in the north, Satna district in the

east, Chhatarpur in the west and Damoh and Jabalpur districts in the south west and southeast respectively. The district extends between the parallels of North latitude 23°48'55" and 25°05'00" and between the meridians of East longitude 79°44'00" and 80°40'00". The Panna district is entirely dependent on road transport. The district is well connected by state highways. The nearest railway station is Satna, which is directly connected to Bhopal, Jabalpur and Delhi and it is 70 km away from Panna town. The nearest Aerodrome is available for air service at Khajuraho, which is 46 km from Panna on way to Chhatarpur. The Panna is famous for its diamond mines, stylish and huge temples, spectacular seasonal waterfalls and national tiger park.

1.4. General Features

Table – 1. Administrative Setup of the District

District	Revenue Sub-Division	Development Blocks	Tehsil
Panna	Ajaygarh	Ajaygarh	Ajaygarh
	Panna	Panna	Amanganj
	Gunnor	Gunnor	Devendranagar
	Pawai	Pawai	Gunnor
	Shahnagar	Shahnagar	Panna
			Pawai
			Raipura
			Shahnagar
		Siamriya	

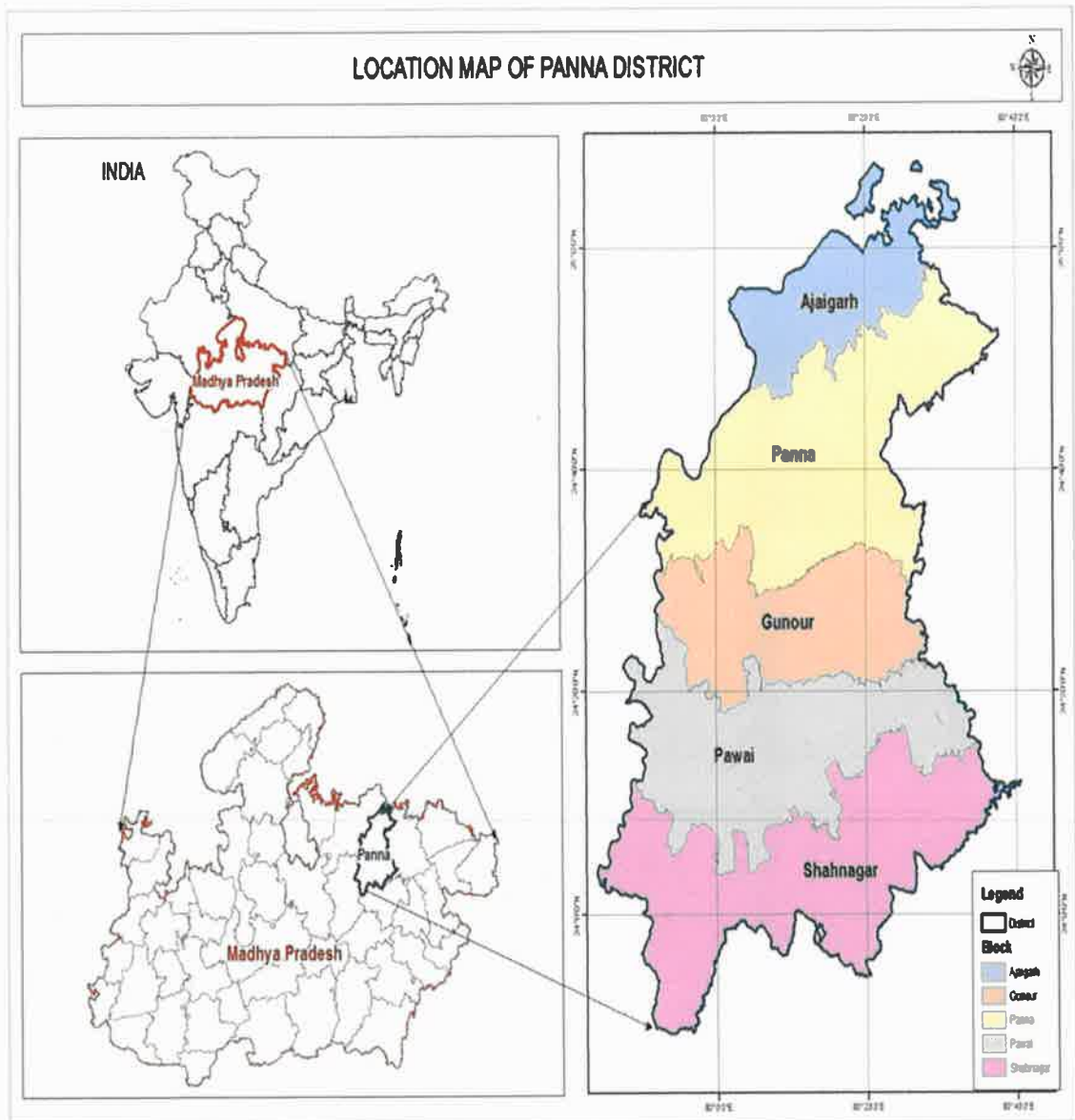
1.5. Location and Geographical Data of the District

Panna district is located at north central part of Madhya Pradesh, is bounded by Banda district of Uttar Pradesh in the north, Satna district in the east, Chhatarpur in the west and Damoh and Jabalpur districts in the south west and southeast respectively. The district extends between the parallels of North latitude 23° 48' 55" and 25° 05' 00" and between the meridians of East longitude 79° 44' 00" and 80° 40'. The Panna district is entirely dependent on road transport.

The district is well connected by state highways. The nearest railway station is Satna, which is directly connected to Bhopal, Jabalpur and Delhi and it is 70 km away from Panna town. The nearest Aerodrome is available for air service is at Khajuraho, which is 46 km from Panna on way to Chhatarpur.

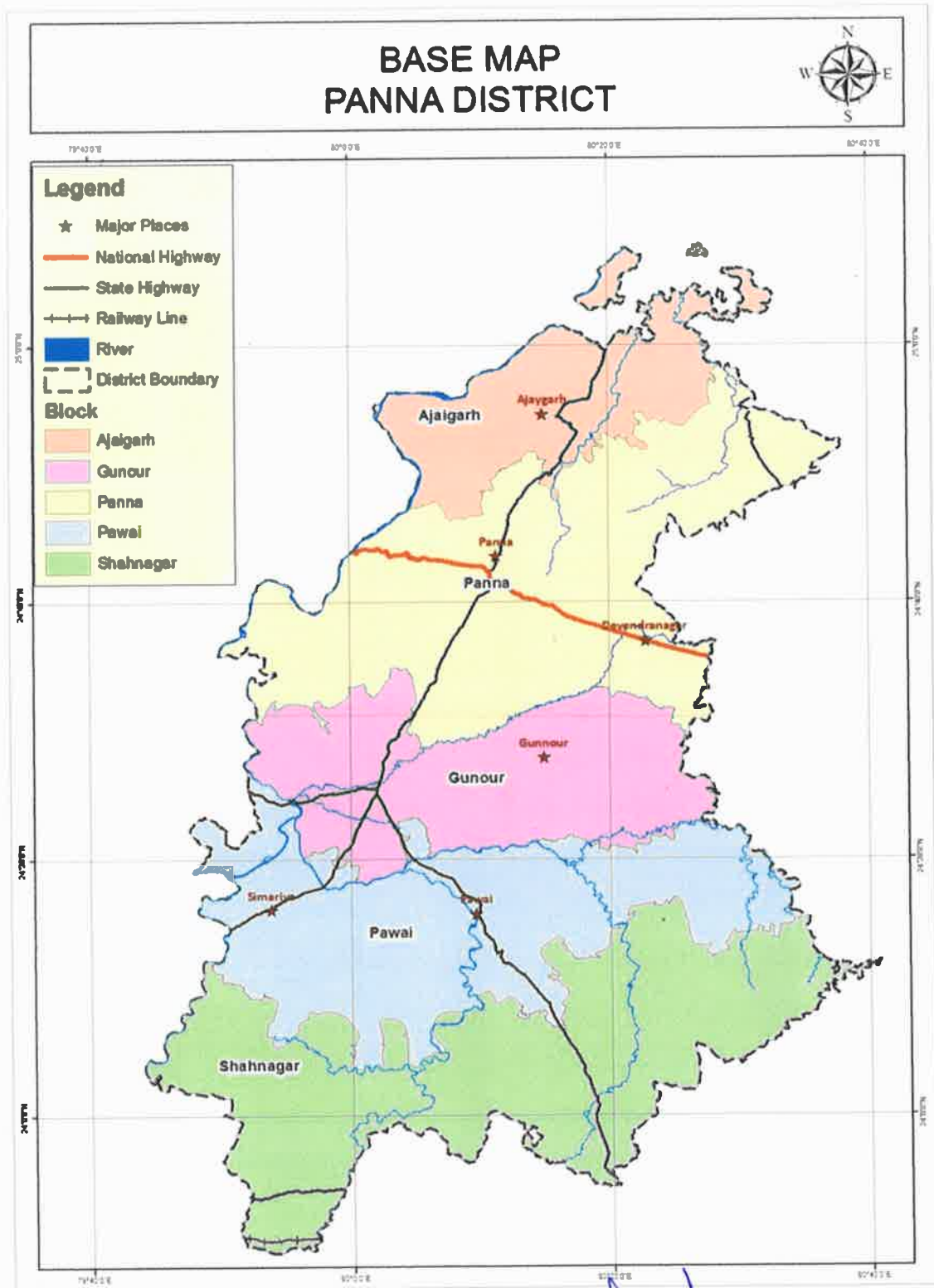
The Panna is famous for its diamond mines, stylish and huge temples, spectacular seasonal waterfalls and national tiger park. Originally a Gond settlement up to the 13th century, Panna was made the capital by Raja Chhatrasal Bundela. Panna was a part of the new Indian state of Vindhya Pradesh which was merged into Madhya Pradesh on 1st November 1956.

Figure-1. Location Map of the Panna district



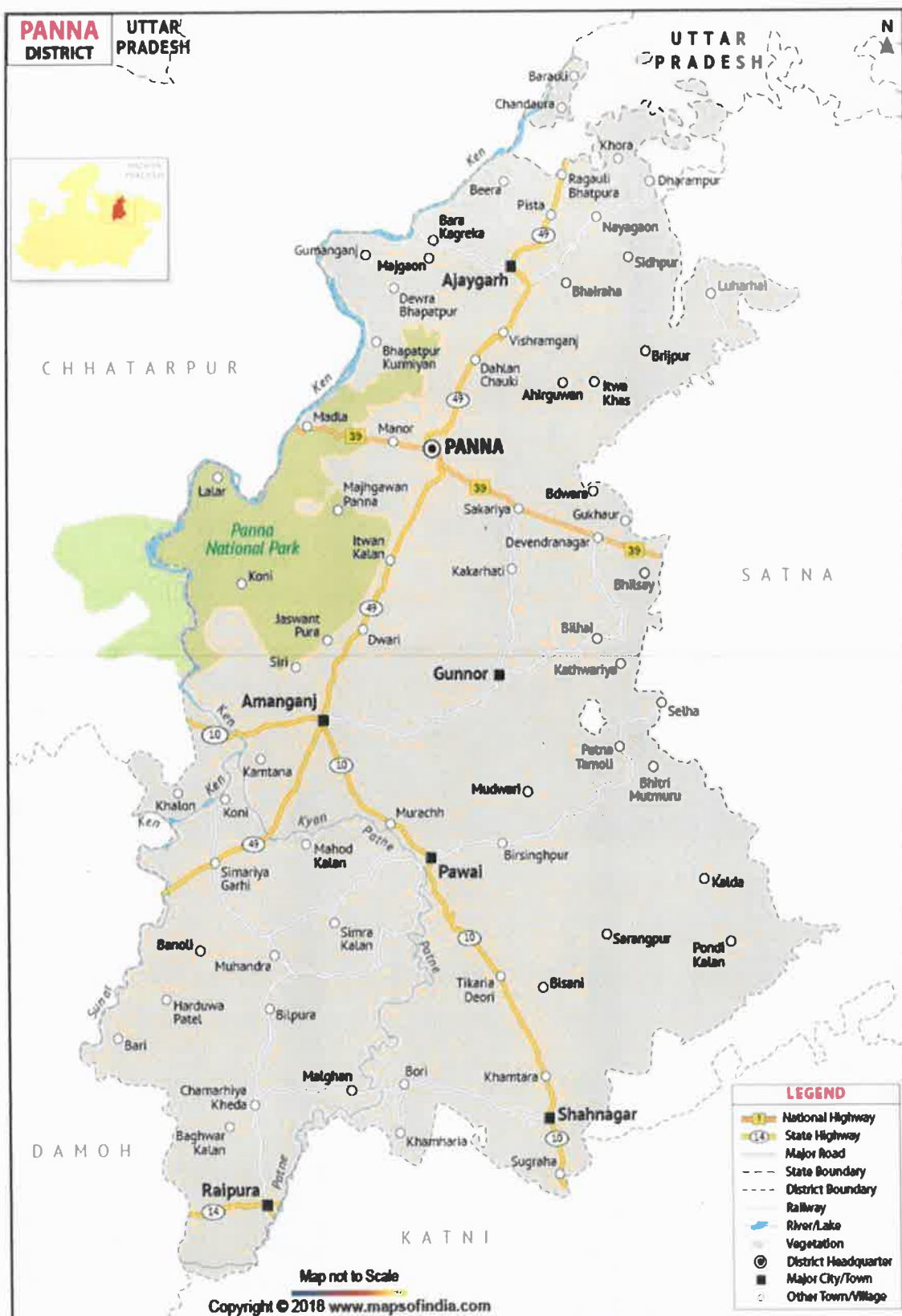
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Figure-2. Base Map of the Panna district



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Figure-2A Reference Map of Panna District Madhya Pradesh



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2. Overview of Mining Activity in the District

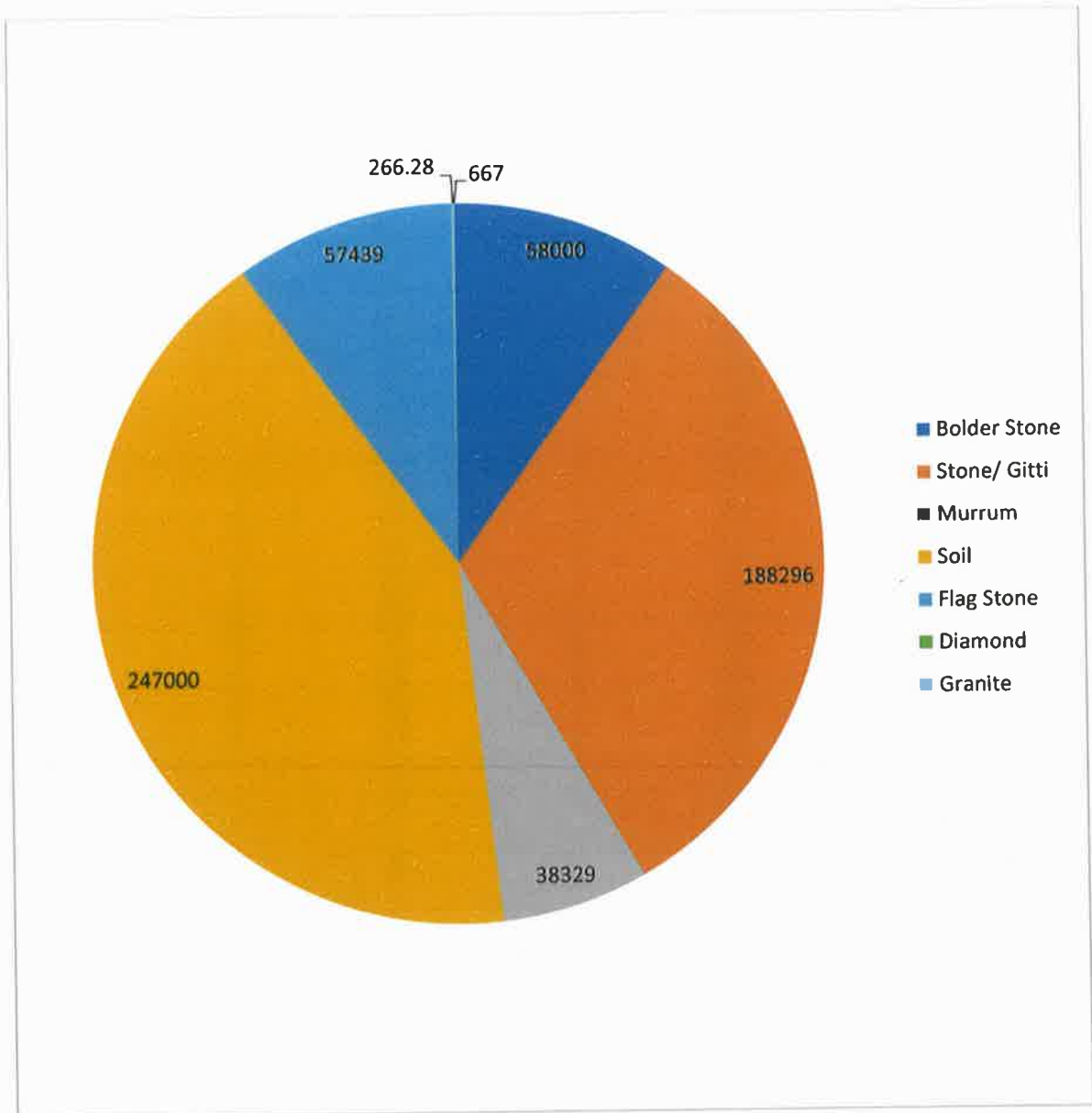
Panna district is famous for its diamond mines located in a belt of about 80 km across the Panna town. A large group of diamond deposits extends North-East on a branch of the Vindhya Range for 150 miles (240 km) and is known as the Panna group. They do not cover an area of more than 20 acres (81,000 m²). Great pits, 25 feet (7.6 m) in diameter and, perhaps, 30 feet (9.1 m) in depth, are dug for the sake of reaching the diamond conglomerate, which, in many cases, was only a very thin layer. No really large diamonds have come from this area. The most productive mines were in the 1860s and were found in Sakaria, around 20 miles (32 km) from Panna. The mines are situated in the interior of Panna district. Diamond mines in Panna are managed under the Diamond Mining Project of National Mineral Development Corporation (NMDC Ltd) of the Government of India. In other mines every year the land is leased to prospective miners by the government agency.

Table – 2. Mineral Production in the Panna district

Sr. No.	Mineral	Production (in Cu.M)
Major Mineral		
1.	Diamond	266.28 (Carat)
Minor Minerals		
2.	Bolder Stone	58000
3.	Stone/ Gitti	188296
4.	Murrum	38329
5.	Soil	247000
6.	Flag Stone	57439
7.	Granite	667


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

Figure-3. Major minerals and minor minerals mines in Panna district



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

3. List of sand Ghats in panna district with location, area and others details

Table – 3. List of existing sand mines and newly proposed sand mining area in panna district

S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
1.	Ken	Ajayghar Mohna 1	55	6.000	A (24°55'56.00N, 80° 7'52.30E) B (24°55'54.00N, 80° 8'13.20E) C (24°55'48.30N, 80° 8'13.80E) D (24°55'45.90N, 80° 7'55.10E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
2.	Ken	Mohna 2	1463	12.000	A (24°55'49.24N, 80° 7'45.92E) B (24°55'49.33N, 80° 7'54.23E) C (24°55'49.65N, 80° 8'03.85E) D (24°55'49.75N, 80° 8'11.93E) E (24°55'49.48N, 80° 8'14.13E) F (24°55'53.19N, 80° 8'14.65E) G (24°55'53.48N, 80° 8'12.42E) H (24°55'53.48N, 80° 8'11.81E) I (24°55'54.11N, 80° 8'01.05E) J (24°55'55.26N, 80° 7'51.53E) K (24°55'55.97N, 80° 7'46.04E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
3.	Ken	Majhgaon	2	8.000	A (24°56'35.26N, 80° 09' 07.8E) B(24°56'56.03N, 80° 09' 10.48E) C(24°56'54.54N, 80° 09' 13.53E) D(24°56'52.51N, 80° 09' 12.92E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/

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S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
					E(24°56'52.78N, 80°09'11.19E) F(24°56'45.75N, 80°09'11.38E) G(24°56'45.64N, 80°09'13.78E) H(24°56'35.06N, 80°09'13.78E)		date 01/09/21. Further process of re-auction is under process
4.	Ken	Barkola	1	6.000	A(24°57'57.96N, 80°10'59.21E) B(24°58'02.32N, 80°10'58.49E) C(24°58'03.97N, 80°11'14.25E) D(24°57'59.61N, 80°11'13.85E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
5.	Ken	Udaypur	1	10.000	A(24°58'05.87N, 80°11'30.31E) B(24°58'07.77N, 80°11'29.09E) C(24°58'13.87N, 80°11'43.55E) D(24°58'22.80N, 80°11'58.45E) E(24°58'19.76N, 80°11'00.96E) F(24°58'09.56N, 80°11'43.77E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
6.	Ken	Farswaha	1	7.500	A(24°59'04.79N, 80°12'44.26E) B(24°59'07.67N, 80°12'41.65E) C(24°59'20.87N, 80°12'01.48E) D(24°59'18.20N, 80°12'03.65E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
7.	Ken	Sunhara	1	7.500	A(24°59'14.66N, 80°12'54.61E) B(24°59'17.99N, 80°12'51.79E) C(24°59'29.38N, 80°13'07.67E) D(24°59'26.13N, 80°13'10.76E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/

S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
8.	Ken	Bira N. 1	1	7.000	A (25°1' 29.2N, 80° 15' 33.0E) B (25°1' 24.6N, 80° 15' 36.8E) C (25°1' 25.2N, 80° 15' 58.8E) D (25°1'26.8N, 80° 16' 01.4E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
9.	Ken	Bira N. 2	1	7.000	A (25°0'56.10N, 80° 15' 0.20E) B (25°0'57.80N, 80° 14' 59.00E) C (25°7'12.60N, 80° 15' 13.60E) D (25°1'9.30N, 80° 15' 16.70E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
10.	Ken	Bira N. 3	1	6.000	A(25°00'31.52N, 80° 14' 20.52E) B(25°00'43.57N, 80° 14' 36.62E) C(25°00'46.19N, 80° 14' 34.31E) D(25°00'34.31N, 80° 14' 17.75E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
11.	Ken	Bhina	1	10.750	A(25°03'40.57N, 80° 17' 41.01E) B(25°03'44.52N, 80° 17' 38.10E) C(25°03'55.52N, 80° 17' 02.59E) D(25°03'51.15N, 80° 17' 04.45E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
12.	Ken	Jigna	1	4.900	A(25°04'03.87N, 80° 18' 38.63E) B(25°04'10.22N, 80° 18' 46.41E)	From Date 22/01/2020	The auction quarry was surrendered by lessee (accepted

S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
13.	Ken	Jigna (Naveen)	1	4.750	A(25°04'34.53N, 80°19'03.64E) B(25°04'44.46N, 80°19'09.44E) C(25°04'42.71N, 80°19'13.72E) D(25°04'32.40N, 80°19'08.00E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
14.	Ken	Chandora	1	8.000	A(25°4'14.05N, 80°18'43.37E) B(25°4'12.08N, 80°18'48.68E) C(25°4'36.29N, 80°19'8.51E) D(25°4'40.63N, 80°19'3.80E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
15.	Ken	Ramnai	1	7.000	A(25°07'23.12N, 80°21'02.26E) B(25°07'19.29N, 80°21'06.34E) C(25°07'32.37N, 80°21'15.35E) D(25°07'35.45N, 80°21'10.51E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
16.	Runjh	Katra	1	3.900	A(25°07'39.31N, 80°26'47.35E) B(25°07'40.54N, 80°26'42.89E) C(25°07'37.47N, 80°26'39.71E) D(25°07'34.07N, 80°26'39.55E) E(25°07'22.06N, 80°26'38.41E) F(25°07'22.51N, 80°26'26.66E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process

S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
17.	Runjh	Amarchi	1	4.750	G(25°07'15.76N,80°26'21.71E) H(25°07'06.13N,80°26'22.41E) I(25°07'06.28N,80°26'21.15E) J(25°07'15.88N,80°26'20.37E) K(25°07'23.43N,80°26'26.01E) L(25°07'22.93N,80°26'37.59E) M(25°07'34.06N,80°26'39.13E) N(25°07'37.55N,80°26'39.11E) O(25°07'41.27N,80°26'42.86E) P(25°07'39.92N,80°26'47.53E) A(25°03'21.98N,80°23'23.26E) B(25°03'27.85N,80°23'30.67E) C(25°03'50.51N,80°23'32.97E) D(25°03'51.86N,80°23'37.58E) E(25°03'50.72N,80°23'37.80E) F(25°03'49.09N,80°23'33.87E) G(25°03'27.67N,80°23'32.38E) H(25°03'20.98N,80°23'23.81E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
18.	Runjh	Harnampur (Naveen)	501	3.400	A(25°03'34.46N,80°25'39.50E) B(25°03'41.40N,80°25'37.80E) C(25°03'55.05N,80°25'43.23E) D(25°03'54.54N,80°25'45.34E) E(25°03'46.51N,80°25'44.41E) F(25°03'35.48N,80°25'41.04E)	Newly proposed sand mining area	New proposed sand mining area

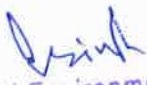
S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
19	Ken	Pipriya	96	5.200	A (24°21'45.59N, 80°21'34.18E) B (24°21'28.53N, 80°22'15.95E) C (24°21'29.72N, 80°22'16.74E) D (24°21'46.33N, 80°21'36.04E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
20	Ken	Sunvani Khurd	155	5.300	A (24°22'5.79N, 79°54'49.93E) B (24°22'7.85N, 79°54'51.32E) C (24°21'35.85N, 79°55'5.61E) D (24°21'35.95N, 79°55'3.61E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
21	Ken	Udala	605	5.500	A(24°24'24.12N, 79°55'28.01E) B(24°24'17.12N, 79°55'42.56E) C(24°24'14.45N, 79°55'55.12E) D(24°24'12.11N, 79°55'54.36E) E(24°24'15.74N, 79°55'41.09E) F(24°24'22.02N, 79°55'26.83E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
22	Ken	Purena	468	6.000	A(24°17'57.47N, 79°57'50.49E) B(24°18'59.15N, 79°57'52.48E) C(24°18'11.09N, 79°57'41.96E) D(24°18'13.19N, 79°57'42.98E) E(24°18'16.35N, 79°57'40.63E) F(24°18'16.98N, 79°57'39.62E) G(24°18'21.09N, 79°57'36.85E) H(24°18'21.96N, 79°57'35.55E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process

S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
23	Ken	Badkheda Kala	1	5.500	I(24°18'30.02N, 79°57'30.40E) J(24°18'29.52N, 79°57'29.49E) K(24°18'13.92N, 79°57'39.62E) L(24°18'09.56N, 79°57'41.02E) A(24°18'22.16N, 80°1'39.30E) B(24°18'27.55N, 80°2'0.08E) C(24°18'30.34N, 80°2'0.26E) D(24°18'23.94N, 80°1'37.72E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
24	Ken	Kol Karhiya	582	5.300	A(24°17'57.47N, 79°48'19.18E) B(24°15'48.61N, 79°48'24.02E) C(24°15'41.77N, 79°48'34.19E) D(24°15'37.10N, 79°48'47.75E) E(24°15'38.85N, 79°48'47.87E) F(24°15'39.47N, 79°48'43.26E) G(24°15'44.17N, 79°48'33.60E) H(24°15'51.15N, 79°48'24.42E) I(24°15'55.22N, 79°48'21.23E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
25	Ken	Kethi	2	5.000	A(24°21'13.66N, 80°13'47.73E) B(24°21'15.83N, 80°14'7.18E) C(24°21'17.64N, 80°14'7.18E) D(24°21'11.55N, 80°13'49.12E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process

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S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
26	Ken	Gudha	24	5.100	A(24°19'52.05N, 79° 53' 18.54E) B(24°20'00.23N, 79° 53' 38.41E) C(24°19'57.87N, 79° 53' 39.41E) D (24°19'49.07N, 79° 53' 18.81E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
27	Ken	Sighasar	1, 96	5.400	A(24°21'11.55N, 80° 13' 49.12E) B(24°21'13.66N, 80° 13' 47.73E) C(24°21'17.12N, 80° 13' 16.42E) D(24°21'15.13N, 80° 13' 15.60E) E(24°21'16.82N, 80° 13' 04.78E) F(24°21'17.82N, 80° 13' 04.66E) G(24°21'16.70N, 80°13' 57.04E) H(24°21'15.64N, 80° 13' 57.43E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
28	Ken	Chandraval N. 2	562, 549	6.000	A(24°12'04.12N, 79° 48' 50.25E) B(24°12'06.45N, 79° 48' 48.99E) C(24°12'09.88N, 79° 49' 00.84E) D(24°12'08.21N, 79° 49' 15.14E) E(24°12'06.24N, 79° 49' 14.61E) F(24°12'06.93N, 79° 49' 00.70E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
29	Ken	Mohar Kakra	1	5.200	A(24°06'15.79N, 79° 45' 45.94E) B(24°06'28.20N, 79° 45' 54.76E) C(24°06'39.16N, 79° 46' 21.91E) D(24°06'38.10N, 79° 46' 21.93E) E(24°06'26.75N, 79° 45' 56.12E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted) by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process

S. No.	Name of River	Tehsil/ Village	Kh. No.	Area (Hect.)	Co-ordinates	Period	Remark
30	Ken	Chandraval	1	6.000	F(24°06'15.08N, 79° 45' 47.10E) A(24°12'5.15N, 79° 48' 51.76E) B(24°12'5.45N, 79° 49' 16.80E) C(24°12'7.87N, 79° 49' 16.83E) D(24°12'7.40N, 79° 48' 50.15E)	From Date 22/01/2020 to date 30/06/2023	The auction quarry was surrendered by lessee (accepted by govt order no. 8613/1286/ date 01/09/21. Further process of re-auction is under process
31	Ken	Pipriya Don (Naveen)	485	3.170	A(24°15'14.00N, 80° 19' 38.03E) B(24°15'20.18N, 80° 19' 48.20E) C(24°15'17.75N, 80° 19' 49.32E) D(24°15'13.25N, 80° 19' 42.29E)	Newly proposed sand mining area	New proposed sand mining area
32	Ken	Simra Bahadur (Naveen)	127	4.750	A(24°16'25.00N, 80° 19' 16.92E) B(24°16'35.63N, 80° 19' 00.37E) C(24°16'38.16N, 80° 19' 02.00E) D(24°16'26.63N, 80° 19' 18.48E)	Newly proposed sand mining area	New proposed sand mining area


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

4. Details of Royalty and Revenue received in last three years for Sand Mine

Table – 4. Revenue received in last 03 years for Sand Mining

Year	Revenue (In Rs.)
2019 – 20	3,77,01,268
2020 – 21	21,15,20,826
2021 – 22	40,75,21,956

5. Details of Sand Production in last three years

Table – 5. Sand Production in last 3 years

Year	Production (In Cum)			
	Sand	Bajri	Boulder	Total
2019 – 20	2,41,675	0	0	2,41,675
2020 – 21	8,04,262	0	0	8,04,262
2021 – 22	6,01,901	0	0	6,01,901


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

Details of Sand Production in last three years (mines wise)
Table – 5-A. Sand Production in last 3 years

S. No	Name of the River	Portion of the River or Stream Recommended for Mineral Concession Tehsil/Village/Kh. No./ Rakba(Hect.)	Length of area recommended for mineral concession (in meter)	Average width of area recommended for mineral concession (in meters)	Average Depth	Total mineral potential (in Cubic meter)	Mineable mineral (in Cubic meter) (60% of total mineral potential)	Mineable mineral (in Mt) (60% of total mineral potential)	Production (In Cu. M.) 2019-20	Production (In Cu. M.) 2020-21	Production (In Cu. M.) 2021-22
1	Ken	Mohna-1/kh. No. 55/Area 6.00 hect	500	110	3	165000	99000	138600	0	0	0
2	Ken	Mohna-2/kh. No.1463/Area 12.00	1050	110	2.5	288750	173250	242550	97160	323336	241981
3	Ken	Majhgaon/ Kh. No. 2/Area 8.00	600	100	1.5	90000	54000	75600	0	0	0
4	Ken	Barkola/Kh No. 1/Area 6.00	600	95	1.5	85500	51300	71820	0	0	0
5	Ken	Udaypur/Kh. No. 1/ Area 10.00	1000	95	1.5	142500	85500	119700	0	0	0
6	Ken	Farswaha 1/ Kh. No 1 /Area 7.50	750	90	1.5	101250	60750	85050	0	0	0
7	Ken	Sunhara/ Kh. No.1 /Area 7.50	750	90	1.5	101250	60750	85050	0	0	0
8	Ken	Bira N.- 1/Kh No.1/Area 7.00	600	105	1.5	94500	56700	79380	0	0	0
9	Ken	Bira N.- 2/Kh No.1/Area 7.00	600	105	1.5	94500	56700	79380	0	0	0
10	Ken	Bira N.- 3/Kh No.1/Area 6.00	500	110	1.5	82500	49500	69300	36193	120446	90140
11	Ken	Bira /Kh No.1/Area 10.75	950	110	1.5	156750	94050	131670	0	0	0
12	Ken	Jigna /Kh. No. 1/ Area 4.90	400	100	1.5	60000	36000	50400	53501	178046	133248
13	Ken	Jigna (Naveen)/ Kh. No. 1/Area 4.75	450	85	1.5	57375	34425	48195	0	0	0
14	Ken	Chandora/ Kh. No.1/ Area 8.00	900	80	1.5	108000	64800	90720	0	0	0
15	Ken	Ramnai/ Kh. No.1/Area 7.00	650	95	1.5	92625	55575	77805	31421	104565	78255
16	Runjh	Katral/ Kh. No.1/Area 3.90	1050	30	1.5	47250	28350	39690	23398	77866	58274
17	Runjh	Amarchi/ Kh. No. 1/Area 4.75	1350	34	1.5	68850	41310	57834	0	0	0
18	Runjh	Harnampur (Naveen)/ Kh. No. 501/Area 3.40	950	33	1.5	47025	28215	39501	Newly proposed mine		
19	Ken	Pipriya / Kh. No. 96/ Area 5.20	490	80	1.5	58800	35280	49392	0	0	0

S. No	Name of the River	Portion of the River or Stream Recommended for Mineral Concession Tehsil/Village/Kh. No./ Rakba(Hect.)	Length of area recommended for mineral concession (in meter)	Average width of area recommended for mineral concession (in meters)	Average Dept	Total mineral potential (in Cubic meter)	Mineable mineral (in Cubic meter) (60% of total mineral potential)	Mineable mineral (in Mt) (60% of total mineral potential)	Production (In Cu. M.) 2019-20	Production (In Cu. M.) 2020-21	Production (In Cu. M.) 2021-22
20	Ken	Sunvani Khurd/ Kh. No 155/ Area 5.30	550	80	1	44000	26400	36960	0	0	0
21	Ken	Udala/ Kh. No. 605/ Area 5.50	550	80	1	44000	26400	36960	0	0	0
22	Ken	Purena/ Kh. No 468/ Area 6.00	600	80	1	48000	28800	40320	0	0	0
23	Ken	Badkheda Kala /Kh. No. 1/Area 5.50	500	90	1	45000	27000	37800	0	0	0
24	Ken	Kol Karhiya/ Kh. No. 582/Area 5.30	600	75	1	45000	27000	37800	0	0	0
25	Ken	Kethi/ Kh.No. 2/ Area 5.00	520	95	1	49400	29640	41496	0	0	0
26	Ken	Gudha/ Kh. No. 24/ Area 5.10	500	100	1	50000	30000	42000	0	0	0
27	Ken	Sighasar/ Kh. No. 1, 96/ Area 5.40	550	90	1	49500	29700	41580	0	0	0
28	Ken	Chandraval N 2/ K N. 562,549 Area 6	650	85	1	55250	33150	46410	0	0	0
29	Ken	Moharakra/Kh. No. 1/Area 5.20	550	90	1	49500	29700	41580	0	0	0
30	Ken	Chandraval/Kh.No. 1/Area 6.00	600	90	1	54000	32400	45360	0	0	0
31	Ken	Pipriya Don (Naveen)/Kh. No 485/Area 3.17	300	95	1	28500	17100	23940	Newly proposed mine		
32	Ken	Simra Bahadur (Naveen)/ Kh. No 127/Area 4.75	550	80	2.5	110000	66000	92400	Newly proposed mine		
Total						2614575	1568745	2196243	241675	804262	601901

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

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

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).

6.1. 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.

6.1.1. 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 classified as:

Following are the natural types of the sand:

I. 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.

II. 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.

III. 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

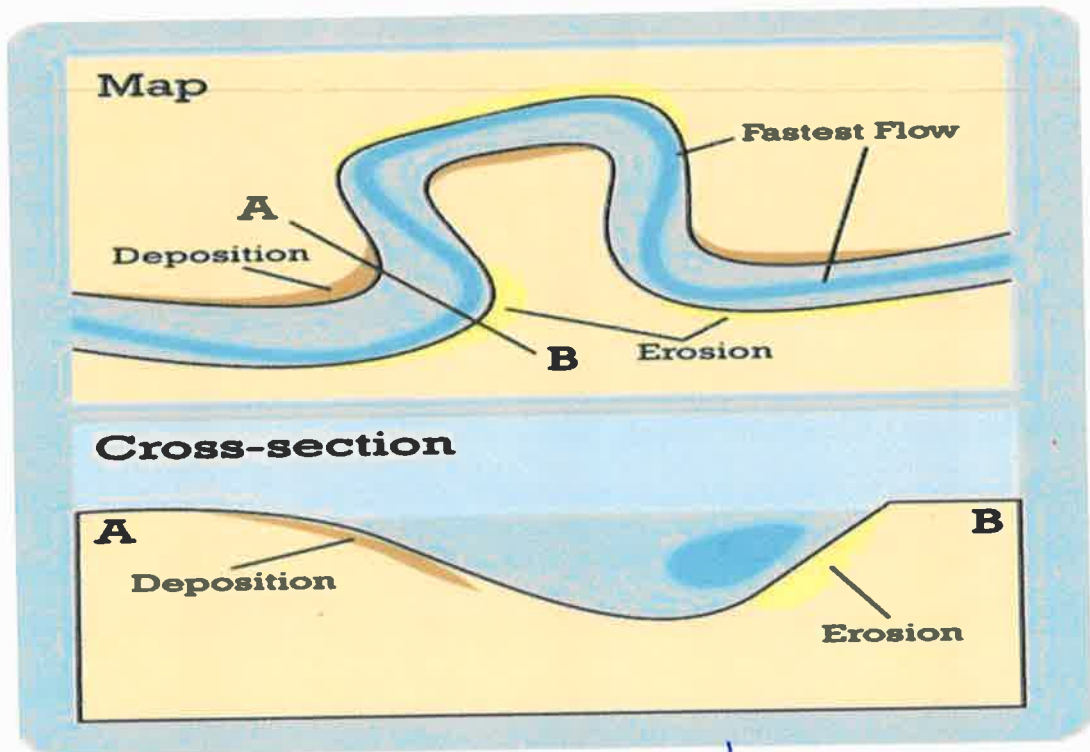
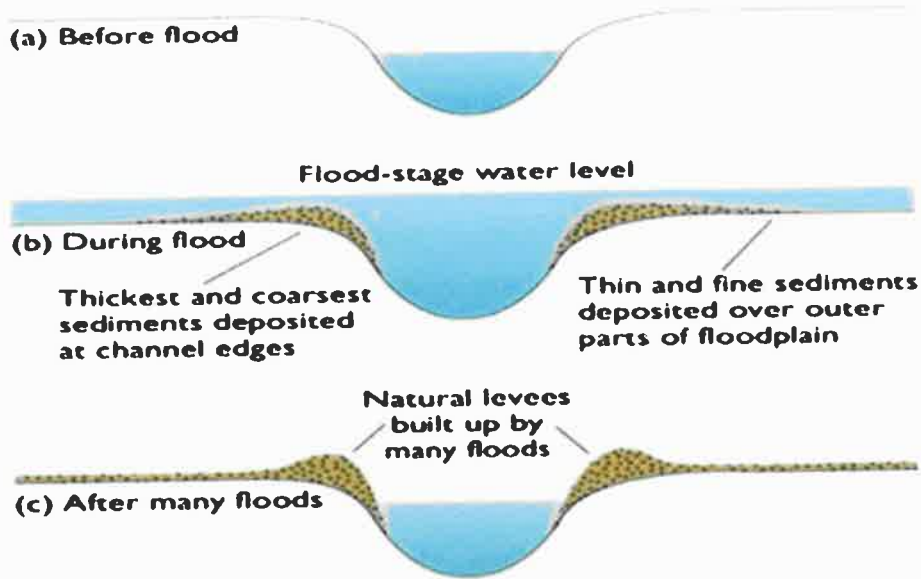
reasons, it is the general rule to avoid the use of sea sand for engineering purposes except for filling of basement, etc. It can however be used as a local material after being thoroughly washed to remove the salt.

6.1.2. 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, ethylene blue value (MB), crushing value index, mica content, light-matter content, etc.

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Figure-4. Formations of natural levees and conducive Areas for sand deposition



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6.2. Sand Mining

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

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

- These guidelines focus on the effective monitoring of the sand mining.

Following considerations shall be kept in mind for sand mining:

- Parts of the river reach that experience deposition or aggradations shall be identified. The Leaseholder/ Environmental Clearance holder may be allowed to extract the sand and gravel deposit in these locations to manage aggradations problem.
- Sand and gravel may be extracted across the entire active channel during the dry season.
- Abandoned stream channels on the terrace and inactive floodplains are to be preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form the inactive channel.
- Layers of sand which could be removed from the river bed shall depend on the width of the river and replenishment rate of the river.
- Sand shall not be allowed to be extracted where erosion may occur, such as at the concave bank.
- Segments of the braided river system should be used preferably falling within the lateral migration area of the river regime that enhances the feasibility of sediment replenishment.
- Sand and gravel shall not be extracted up to a distance of 1 kilometre (1 km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a minimum of 250 meters on the upstream side and 500 meters on the downstream side.
- Sand and gravel could be extracted from the downstream of the sand bar at river bends. Retaining the upstream one to two-thirds of the bar and riparian vegetation is accepted as a method to promote channel stability.
- The flood discharge capacity of the river could be maintained in areas where there is a significant flood hazard to existing structures or infrastructure. Sand and gravel mining may be allowed to maintain the natural flow capacity based on surveyed cross-section history.

Alternatively, off-channel or floodplain extraction is recommended to allow rivers to replenish the quantity taken out during mining.

- The Piedmont Zone (Bhabhar area) particularly in the Himalayan foothills, where riverbed material is mined, and this sandy-gravelly track constitute excellent conduits and hold the greater potential for groundwater recharge. Mining in such areas should be preferred in locations selected away from the channel bank stretches.
- Mining depth should be restricted to 3 meters and distance from the bank should be $\frac{1}{4}$ th or river width and should not be less than 7.5 meters.
- Demarcation of mining area with pillars and geo-referencing should be done prior to the start of mining.
- A buffer distance /un-mined block of 50 meters after every block of 1000 meters over which mining is undertaken or at such distance as may be the directed/prescribed by the regulatory authority shall be maintained.
- River bed sand mining shall be restricted within the central $\frac{3}{4}$ th 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.


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7. General Profile of the District

7.1. Geographical Location: The district extends between the parallels of North latitude 23°48'55" and 25°05'00" and between the meridians of East longitude 79°44'00" and 80°40'00"

7.2. Major Physiographic Units:

- Plateaus on Vindhyan rocks
- Denudational slope on Vindhyan rocks
- Pedi plain
- Flood plain
- Older flood plain

7.3. Major Drainage: Ken River & its tributaries like Bearma, Sonar, Patne, Baghain, Mirhasan, Simardha and Ranj Nadi.

7.4. Land Use:

- Forest area- : 299.7 Hect.
- Cultivable area : 270.2 Hect.
- Net Area sown : 234.1 Hect.
- Gross cropped area : 268.9

7.5. Major soil type : Yellow and sandy soil

7.6. Principal Crops : Gram, Wheat, Rice, Lentil

7.7. Predominant Geological formations

- Alluvium,
- Vindhyan Shales,
- Sandstone and
- Limestone.

7.8. Revenue administrative Divisions/ Local Bodies

- Number of Sub Divisions : 5
- Number of Tehsils : 8
- Number of Blocks : 5
- Number of Villages : 1023
- Number of Corporations : 0
- Number of Municipalities : 7
- Number of Panchayats : 395


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7.9. Area and Population

7.9.1. Geographical Area: - 7135 Km²

7.9.2. Population (Census 2011): -

- Male : 533,480
- Female : 483,040
- Total : 1,016,520

7.9.3. Literates (Census 2011)

- Male : 332,140
- Female : 220,419
- Total : 552,559

7.9.4. Main Workers (Census 2011)

- Male : 275,375
- Female : 156,623
- Cultivators : 135,445
- Agricultural : 198,847
- Other : 85,505
- Total Workers : 431,998

7.10. Temperature

- Mean – Maximum: 42.4°C
- Mean – Minimum: 8.1°C

7.11. Rainfall (In mm)

- Normal – South West Monsoon: 1069.6 mm
- Annual Rainfall: 1182.9 mm

7.12. Agriculture

- Total Cultivable Area : 270.2 Hect.
- Net Area Sown : 234.1 Hect.
- Area Sown more than once : 34.8 Hect.


7.13. Languages Spoken in the District

Among Panna's languages is Bundeli, which has similarity with Hindi and Bharia, a Dravidian language spoken by at least 200,000 members of the Bharia tribe and written in the Devanagari script

7.14. Census Data 2011

Table – 6. Census Data for year 2011

Description	: 2011
Actual Population	: 1,016,520
Male	: 533,480
Female	: 483,040
Population Growth	: 18.67%
Area Sq. km.	: 7,135
Density/KM ²	: 142
Proportion to population of MP	: 1.40%
Sex Ratio (Per 1000)	: 905
Child Sex Ratio (0-6 Age)	: 914
Average Literacy	: 64.79
Male Literacy	: 74.14
Female Literacy	: 54.44
Total Child Population (0-6 Age)	: 163,620
Male Population (0-6 Age)	: 85,494
Female Population (0-6 Age)	: 78,126
Literates	: 552,559
Male Literates	: 332,140
Female Literates	: 220,419
Child Proportion (0-6 Age)	: 16.10%
Boys Proportion (0-6 Age)	: 16.03%
Girls Proportion (0-6 Age)	: 16.17%


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8. Land utilization pattern- forest, agricultural, mining, etc.

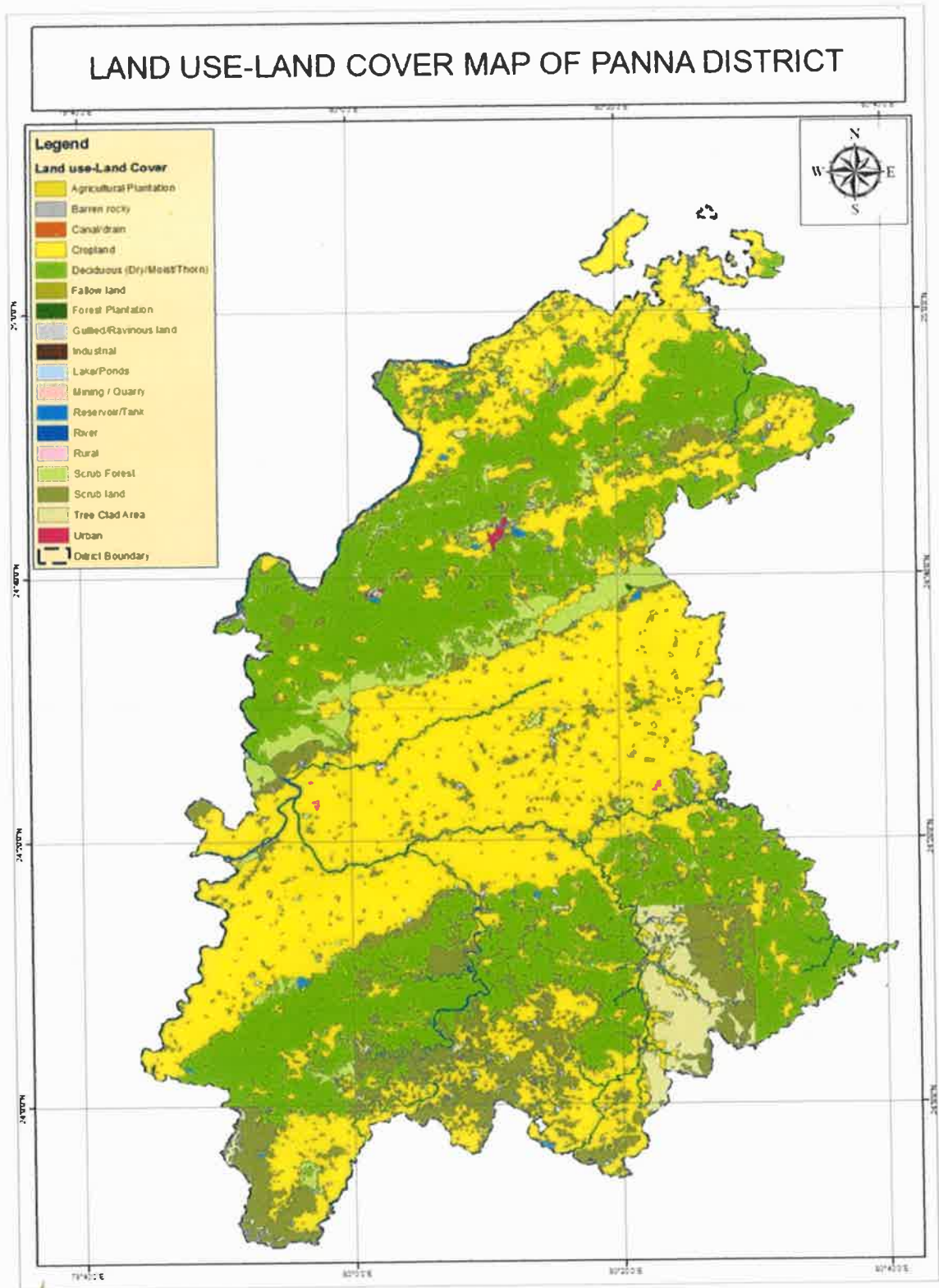
Land use/land cover (LULC) changes are main issues of universal environment change. The Satellite remote sensing data with their monotonous nature have proved to be rather useful in mapping land use/land cover decorations and changes with time. Quantification of such changes is conceivable through GIS 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 – 7. Land Use Pattern of the Study Area

S. No.	Class	Area in Ha.	% of coverage
1	Agricultural Plantation	270.247797	0.04 %
2	Canal/drain	262.786203	0.04 %
3	Cropland	3,36,825.7862	47.20 %
4	Deciduous (Dry/Moist/Thorn)	2,33,865.4197	32.77 %
5	Fallow land	3,333.392713	0.47 %
6	Forest Plantation	57.434169	0.01 %
7	Gullied/Ravinous land	432.237273	0.06 %
8	Industrial	73.858271	0.01 %
9	Lake/Ponds	3,138.310109	0.44 %
10	Mining / Quarry	517.261736	0.07 %
11	Reservoir/Tank	1,521.173633	0.21 %
12	River	6,380.607589	0.89 %
13	Rural	3,921.938752	0.55 %
14	Scrub Forest	31,723.08041	4.45 %
15	Scrub land	73,185.51989	10.26 %
16	Tree Clad Area	17,600.58468	2.47 %
17	Urban	452.086719	0.06 %
	Total	7,13,561.7259	100 %

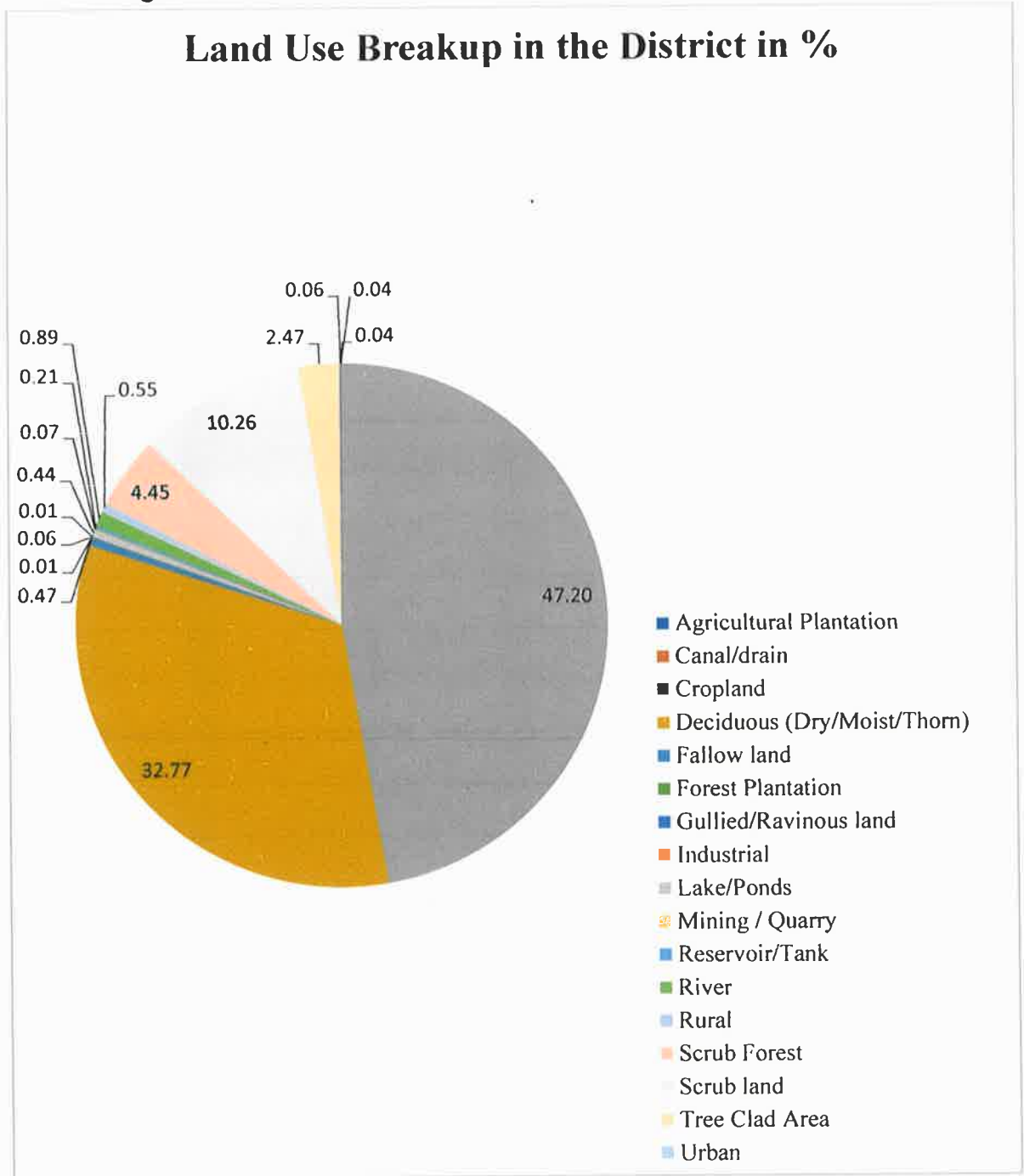

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Figure-5. Land Use and Land Cover Map of the District



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Figure-6. Land Use and Land Cover Breakup of the District




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9. Physiography of the District

Panna district is located at north central part of Madhya Pradesh, is bounded by Banda district of Uttar Pradesh in the north, Satna district in the east, Chhatarpur in the west and Damoh and Jabalpur districts in the south west and southeast respectively. The district extends between the parallels of North latitude 23°48'55" and 25°05'00" and between the meridians of East longitude 79°44'00" and 80°40'00".

The Panna district is entirely dependent on road transport. The district is well connected by state highways. The nearest railway station is Satna, which is directly connected to Bhopal, Jabalpur and Delhi and it is 70 km away from Panna town. The nearest Aerodrome is available for air service is at Khajuraho, which is 46 km from Panna on way to Chhatarpur. The Panna is famous for its diamond mines, stylish and huge temples, spectacular seasonal waterfalls and national tiger park.

The total geographical area of the District is 7,135 SqKm, with a population of 10,16,028 according to census 2011. The details of administrative units are given in table-1.

10. Details of Month wise Rainfall Data of 1 Year

Normal rainfall in panna district is 1069.6 mm and average annual rainfall is about 1182.9 mm. the details of the month-wise rainfall data recorded by district administration are given in the table.

**Table – 8. Details of Month wise Rainfall Data
(April-2021 to march2022)**

Sr. No.	Month	Actual Rail
01	April 2021	3.7
02	May -2021	110.9
03	June-2021	75.1
04	July-2021	263.1
05	August-2021	196.4
06	September-2021	206.6
07	October-2021	14.7
08	November-2021	0.0
09	December-2021	5.4
10	January-2022	54.4
11	February-2022	0.1
12	March-2022	0.0


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11. Rainfall of the District and Climate Conditions

11.1. Rainfall

The normal annual rainfall of Panna district is 1182.9 mm. Panna district receive maximum rainfall during southwest monsoon period i.e., June to November. About 89.5% of annual rainfall is received during monsoon season.

11.2. Climatic Conditions

The climate in Panna is warm and temperate. The winter months are much rainier than the summer months in Panna. May is the warmest month of the year. The temperature in May averages 33.5 °C. January is the coldest month, with temperatures averaging 15.7 °C.

12. Geology of the District

The applied area forms a part of stream bed covered with boulders, cobbles, pebbles, river/Nala born bajari, sand and clay deposit of channel alluvium. The general geology of the area is described below.

The applied area comprises sand, small pebbles. On the other hand, in the River it is overlain by Quaternary to recent alluvial deposit up to 3 m. thick in the area. whereas, Mining will be concentrated up to 2.50 m depth for extraction of Nala/river born bajri and sand only which is confined on top most layer of recent alluvial deposit. Concerned River, being the primary with dendritic drainage pattern. Hence, the effective catchment has been considered for zone of active erosion during high flood time otherwise it is a zone of deposition along the bank on both the flanks. There is no waste generation. It is also expected that this pit will be automatically fill by sand flow in the rainy season depending on the amount of rain fall received by the area and the rate of river flow.

The general geological successions in the district are given in table.

Table – 9. General geological succession of Panna district.

System	Lithostratigraphic Unit	Lithological Description
Recent to Pleistocene	-	Alluvium
Rewa Group	Bhander Shale	Bhander Shale
	Sandstone and Limestone	Sandstone and Limestone
-----Diamond Bearing Conglomerates-----		
Kaimur Gro	Baghain Sandstone and Conglomerates	Sandstone and Conglomerates
Semri Group	Porcellanite Stage and Basal Stage	Shales, Quartzite and conglomerates
Archaean	Bundelkhand Granites	Granites


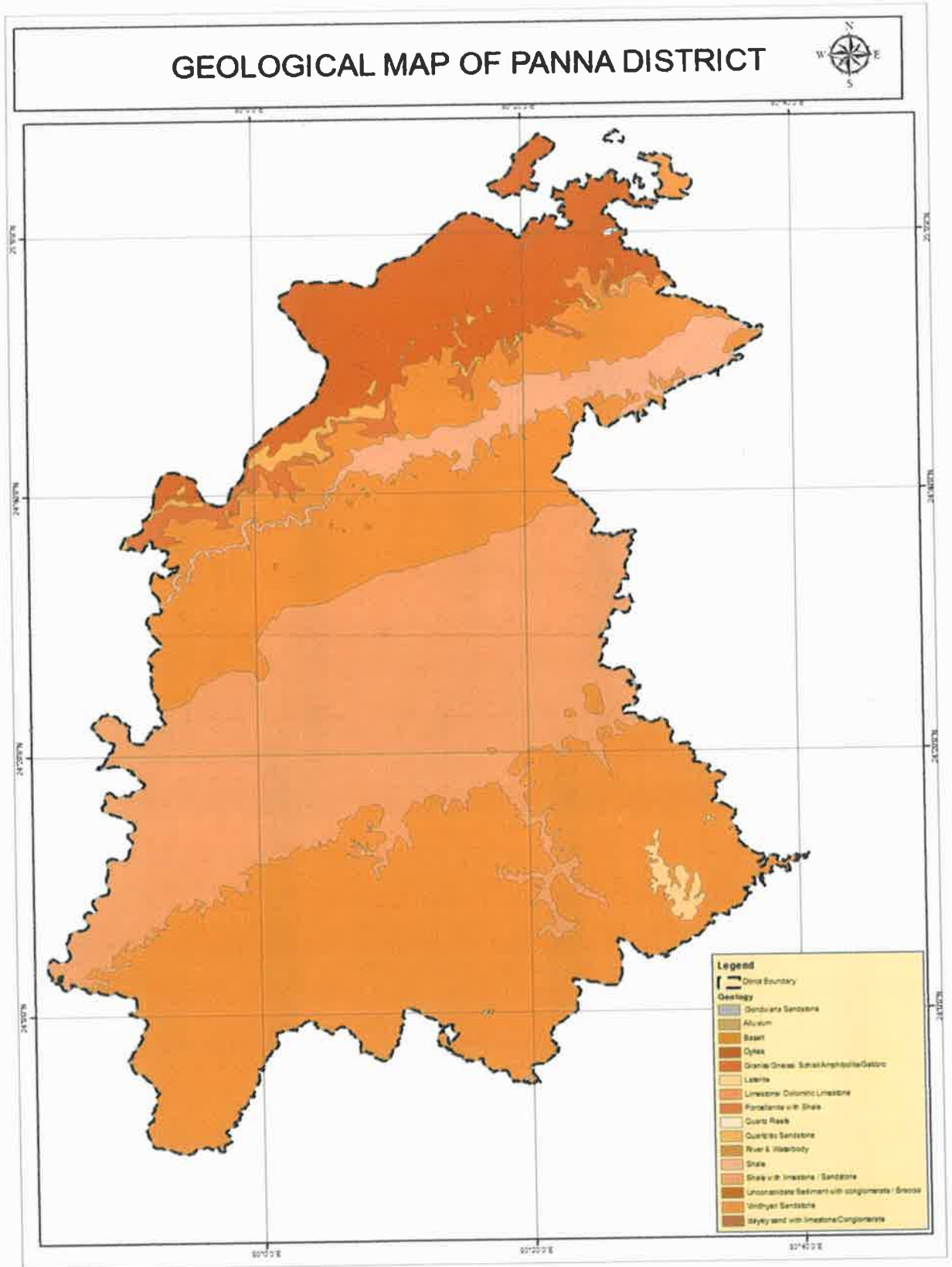
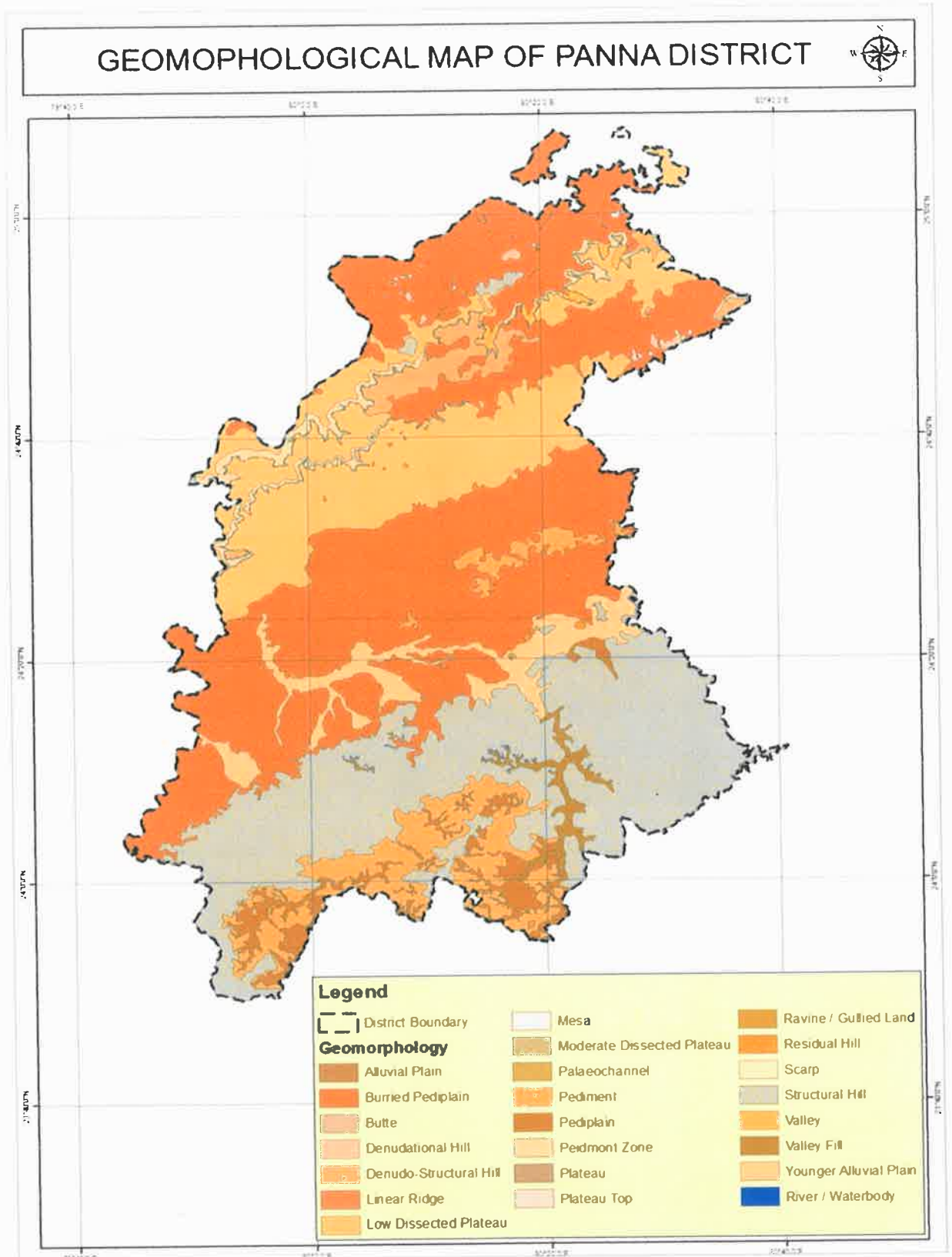

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Figure-7. Geological Map of the District



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Figure-8. Geomorphologic Map of the District



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13. Drainage and Irrigation Pattern

13.1. Drainage Pattern

Ken River is the major river in Panna District. Its basin lies between north latitudes 23°20' and 25°20' and east longitudes of 78°30' and 80°32'. The river originates near the Village Ahirgawan in Katni District of M.P. at an altitude of 550m above mean sea level and joins the Yamuna River, near Chilla Village in U.P., at an elevation of about 95 m. It forms the common boundary between Panna and Chhattarpur Districts of M.P. and state boundary between Chhattarpur District (M.P.) and Banda District (U.P.). The river has a total length of 427 km, out of which 292 km lies in M.P., 84 km in U.P., and 51 km forms the common boundary. The total catchment area of the Ken River basin is 28,058 sq. km, out of which 24,472 sq. km lies in Madhya Pradesh and the balance 3,586 sq. km in Uttar Pradesh.

13.2. Irrigation Practices

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


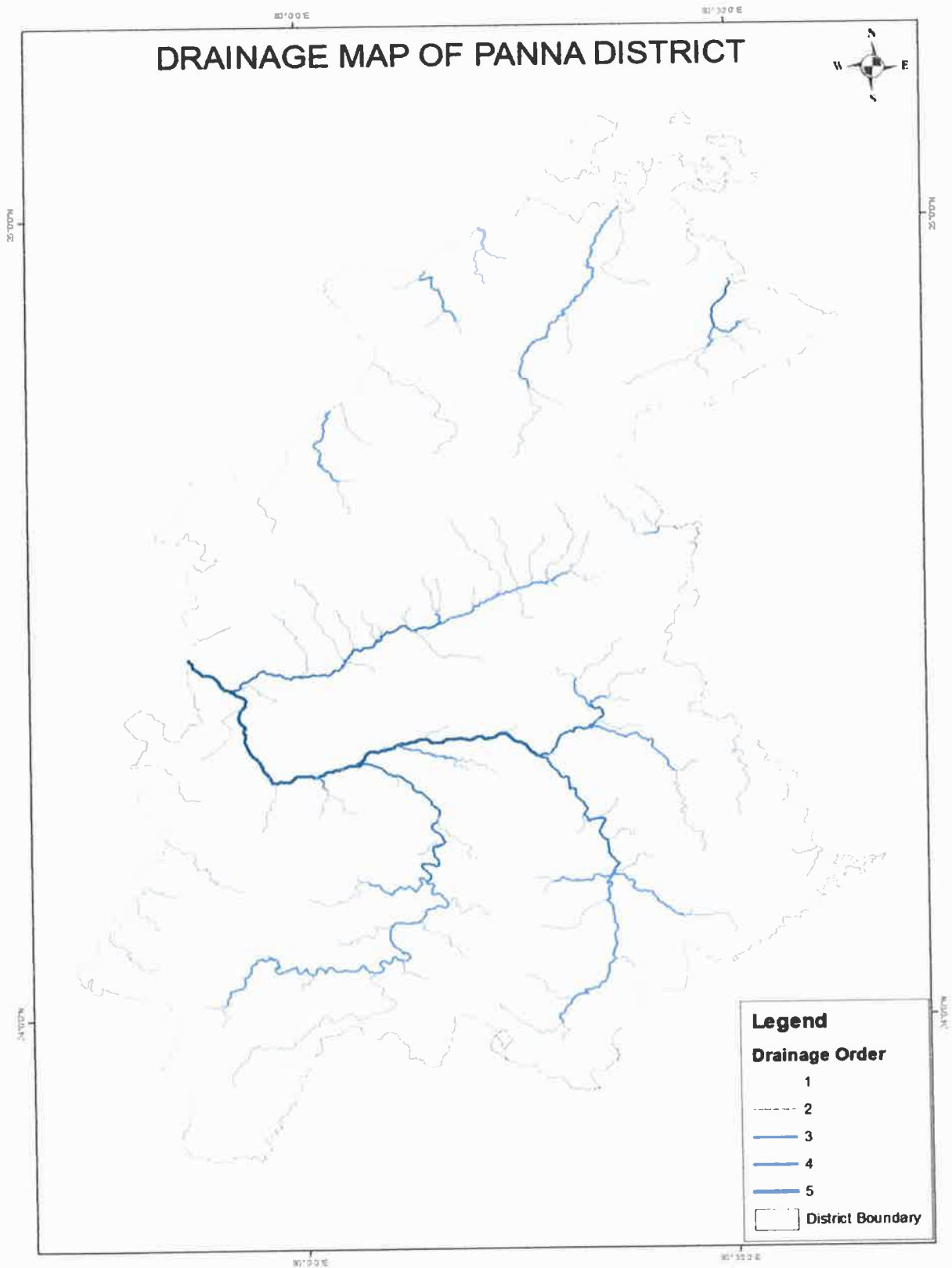

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Figure-9. Drainage Map of the District



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14. Surface Water and Ground water scenario of the district

14.1. 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.

Panna district is underlain by Vindhyan Shale, Limestone, Sandstone and Alluvium. Dynamic ground water resources of the district have been estimated for base year - 2008/09 on block-wise basis. There are five assessment units (block) in the district which fall under non-command (99%) and command (1% Panna) sub units. All the blocks, except Ajaygarh, of the district are categorized as safe blocks. Ajaygarh is categorized as semi critical.

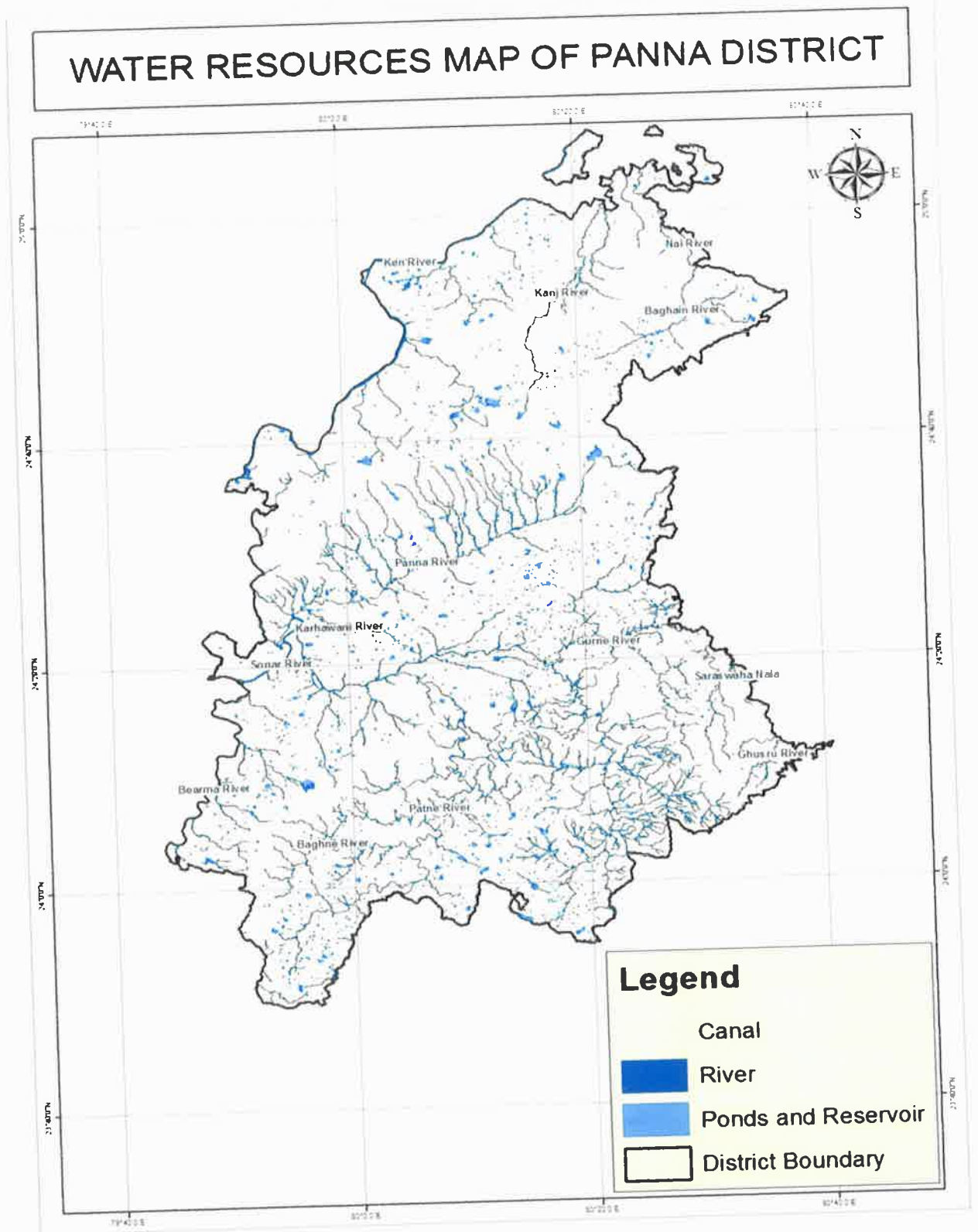
The highest stage of ground water development is computed as 80 % in Ajaygarh block. The net ground water availability in the district 47,108 ham and ground water draft for all uses is 12938 ham, making stage of ground water development 27 % (24 % in 2003/04) as a whole for district. After making allocation for future domestic and industrial supply for next 25 years, balance available ground water for future irrigation would be 33,295 ham.

14.2. Surface Water

Ken River and its tributaries drain almost entire Panna district. The Runj River drains the northeast parts of the Panna district. All the tributaries of Ken River are almost westerly flowing, while Runj River flows in north direction.

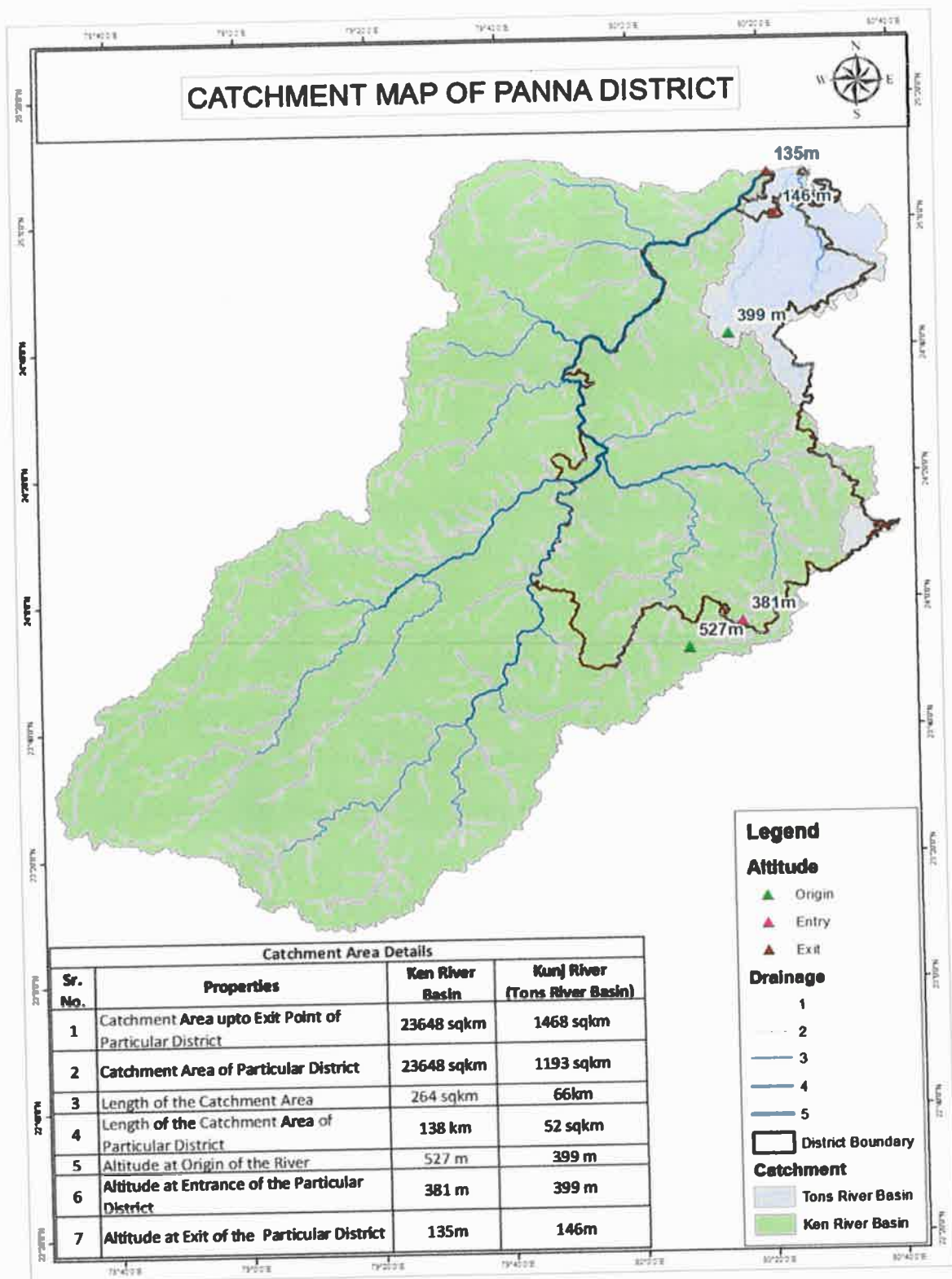
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Figure-10. Water Resources of the District



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Figure-11. Catchment Map of District Panna



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Table – 10. Details of Catchment Area

Sr. No	Properties	Ken River	Runj River
1	Origin of River	Ahircawan village (Kaimur Hills, Katni)	Katra Village (Forest Area Panna)
2	Elevation at the origin	550 m above MSL	399
3	Total length of the river (up to confluence with Yamuna)	427 Km	226.17 Km
4	Total length of the river in MP	292 Km	226.17 Km
5	Total Catchment Area of basin	28058 sqkm	1468 sqkm
6	Total basin area in M.P.	24472 sqkm	1468 sqkm
7	Important tributaries	Bearma, Sonar, Patne, Baghain, Mirhasan, Simardha and Runj Nadi	Runj is tributary to Bhagain river which ultimately confluence with Yamuna)
8	Catchment Area up to exit point of the Particular District	23648 sqkm	1468 sqkm
9	Catchment Area of the Particular District	23648 sqkm	1193 sqkm
10	Length of the Catchment Area	264 km	66 km
11	Length of Catchment Area of the Particular District	138 km	52 km
12	Altitude at Entrance of the Particular District	381 m	399 m
13	Altitude at Exit of the Particular District	135m	146m


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15. Details of Eco – Sensitive Area, if any, in the district

15.1. Panna Tiger Reserve Panna

National Park is a national park located in Panna and Chhatarpur districts of Madhya Pradesh in India. It has an area of 542.67 km². It was declared in 1994 as the twenty second Tiger reserve of India and the fifth in Madhya Pradesh, Panna was given the Award of Excellence in 2007 as the best maintained national park of India by the Ministry of Tourism of India. It is notable that by 2009, the entire tiger population had been eliminated by poaching with the collusion of forest department officials. Panna National Park was declared as one of the Tiger reserves of India in 1994/95 and placed under the protection of Project Tiger. The decline of tiger population in Panna has been reported several times. Two female tigers were relocated there from Bandhavgarh National Park and Kanha National Park in March 2009. However, the last male tiger had already disappeared. A committee to look into the disappearance of the tigers was formed.

In June 2009, it was officially announced that the Reserve, which had over 40 tigers six years earlier, had no tigers left and only two tigresses, which were brought in a little earlier. In February 2012, only three years later, the entire tiger population of the reserve was considered eliminated. Presently, there are around 50 tigers in Panna National Park.

Via notified No 360 Dated 09.08.2012 Government of Madhya Pradesh had declared an area of 1002.42 Sq.km as "Buffer Zone of Panna Tiger Reserve"

"No area of notified Buffer Zone of Panna Tiger Reserve is coming under or within 10 km of the proposed Mining areas (as per the notification no. 360 dated 09.08.2012).


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Figure-12. Panna National Park Core Zone, Buffer Zone, etc.

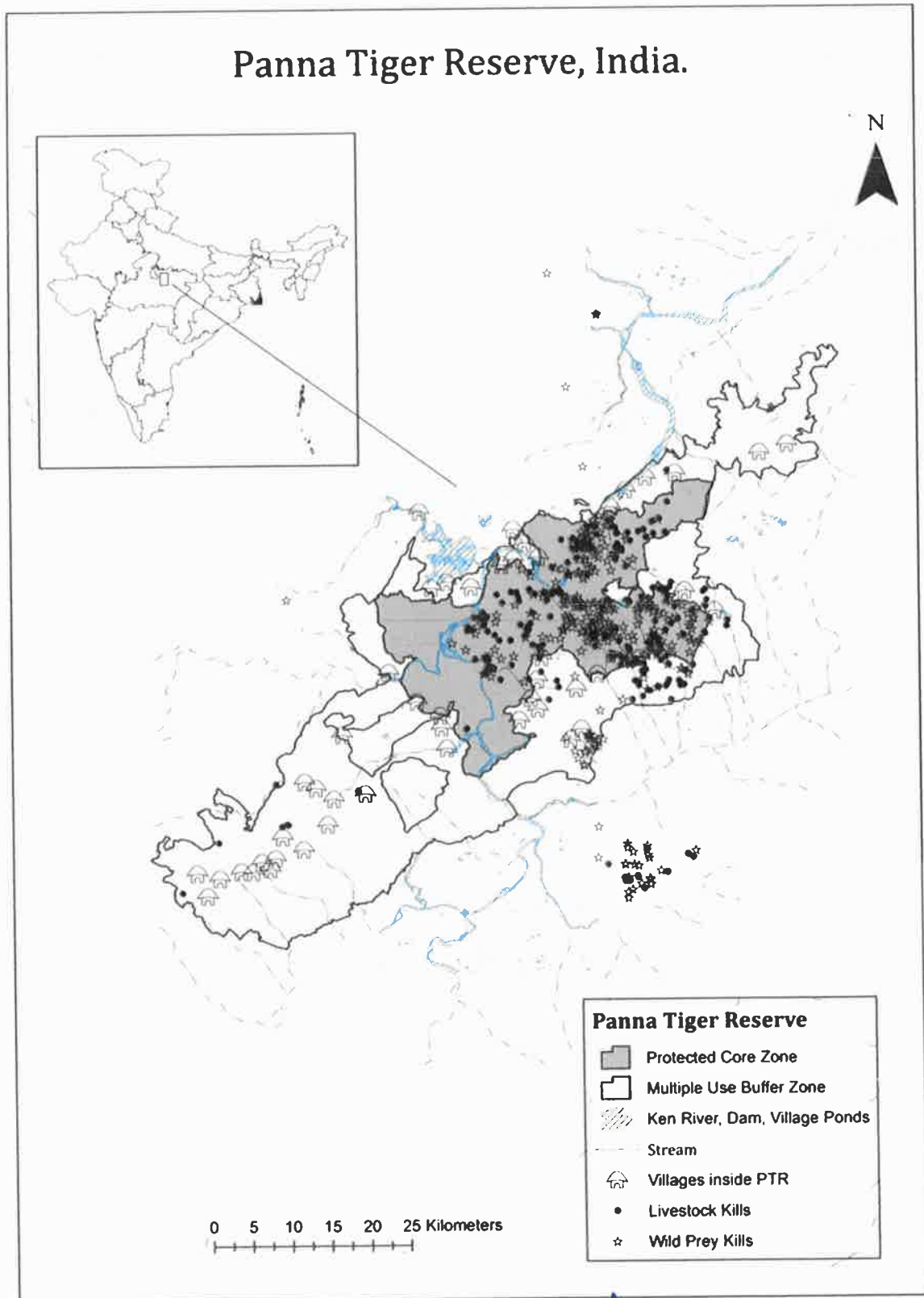
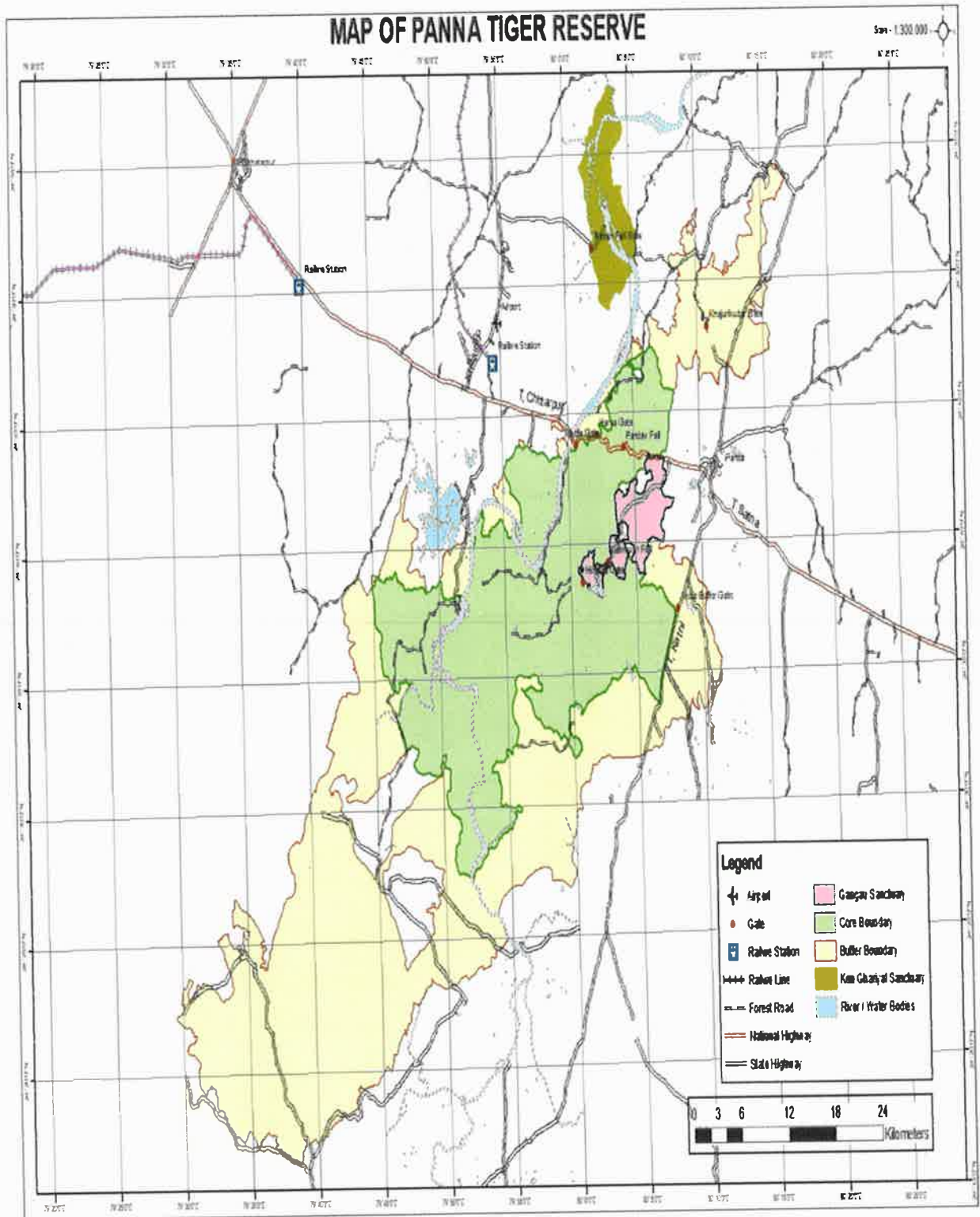


Figure-13. Panna Tiger Reserve with Ken Gharial Sanctuary



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15.2. Ken Gharial Sanctuary

It is located at the confluence of the Ken River and Khudar River and spread over an area of 45,201 sq. km. It is located northeast of the Khajuraho temples and north of Panna National Park

Initially Ken Gharial Sanctuary was gazette in 1981 along a 45 km (28 mi) long stretch of the Ken River. Again, via notification dated 19 September 2017 eco sensitive zone has been notified by ministry of environment, forest and climate change. The eco sensitive is spread over an area of 9.34 sq km with an extent of 200 meters from the boundary of ken Gharial wildlife Sanctuary. The sanctuary is protected under India's Wildlife Protection Act of 1972. The sanctuary is administered by the Department of Forest.

Though the Ken sanctuary was founded in 1985, gharials could never breed in large numbers in the river like their cousins in Chambal. After their population dwindled, they were reintroduced in 2007. But soon the numbers started declining again.

On 21st December 2019, 20 females and 5 male gharials were released at the Mohari Ghat of Ken River near the international tourist destination of Khajuraho. The ghat is situated close to the famous Raneh falls of Chhatarpur. The sanctuary lies at the confluence of the Ken and the Khudar rivers of the Chhatarpur district. As soon as the reptiles were released on the muddy sands of the river bank, they soon vanished into the river. The gharials were brought to Chhatarpur from Deori breeding center in Morena, more than 325 kilometres away from the Ken

"No area of notified sensitive zone of Ken Gharial Sanctuary is coming under or within 10 km of the proposed Mining areas. And also, the whole Ken Gharial wildlife sanctuary breeding area lies in Chhatarpur district.


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**Table – 11. Ken Gharial Sanctuary, Khajuraho, M.P.
Eco- sensitive Zone Global Positioning System Coordinates**

Name of Sanctuary	Boundary	Longitude	Latitude
Ken Ghariyal Sanctuary Co-ordinates	North	80003'38.269"E	24057'36.206"N
	East	80005'32.55"E	24051'59.512"N
	South	80003'24.185"E	24049'04.498"N
	West	80001'18.043"E	24054'27.787"N
Eco-sensitive Zone Co-ordinates	North	80003'38.594"E	24057'43.149"N
	East	80005'39.861"E	24051'59.838"N
	South	80003'23.842"E	24048'56.511"N
	West	80001'11.774"E	24054'22.203"N

Table – 12. Villages with Geographical Coordinates within the Ken Gharial Eco-Sensitive Zone

S.No.	Name of forest Division	Name of Village	District	Longitude	Latitude
1	Chhatarpur	Pahari	Chhatarpur	80003'43.2014"	24049'30.208"

Table – 13. Extent of Area within the Ken Gharial Eco-sensitive Zone Area (Reserved Forest and protected Forest)

Division	Forest Area (hac.)	Revenue (hac.)	Total
Territorial Div.	59.98	874.93	934.91

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Figure-14. Eco-sensitive map of the district

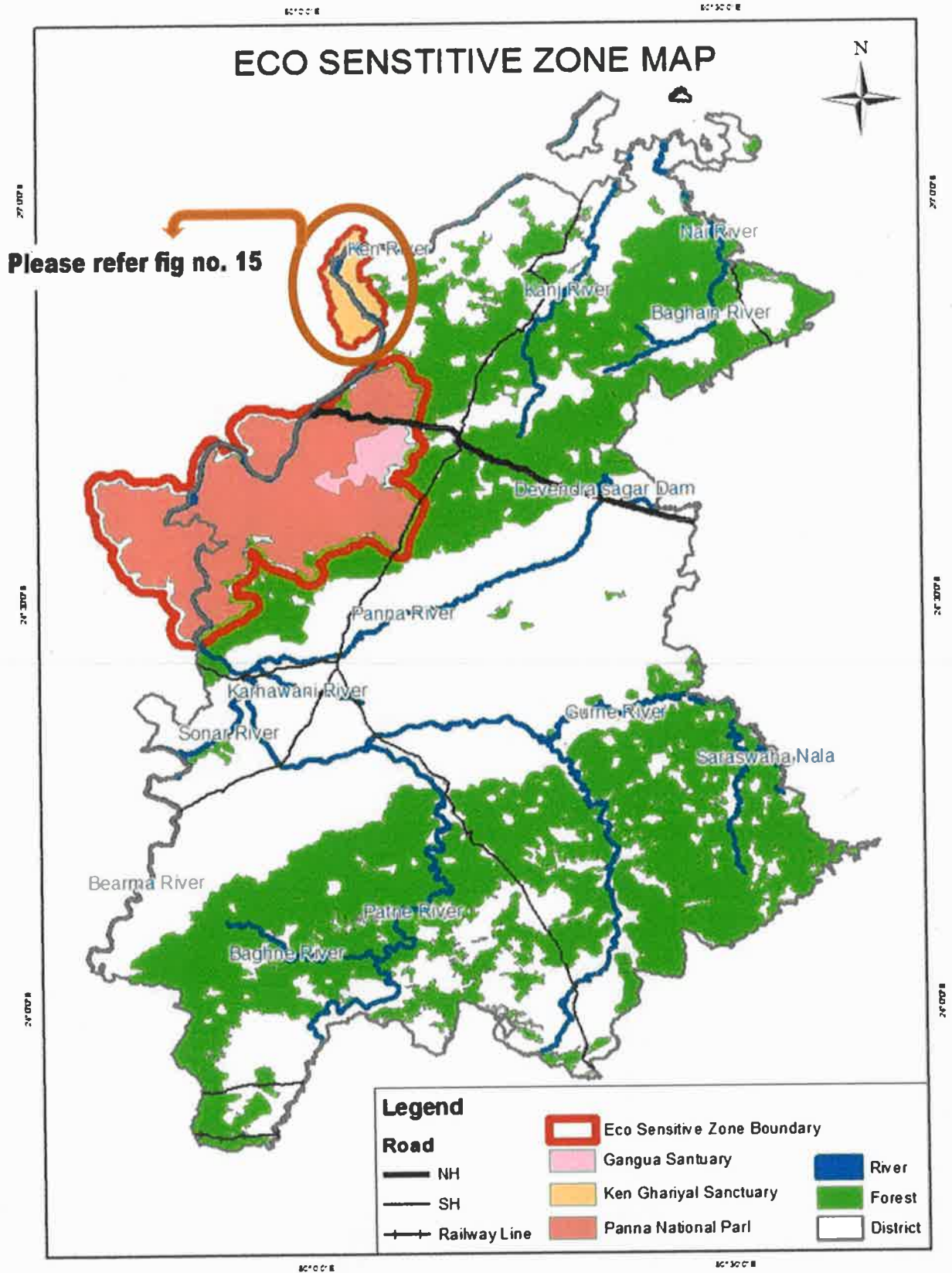
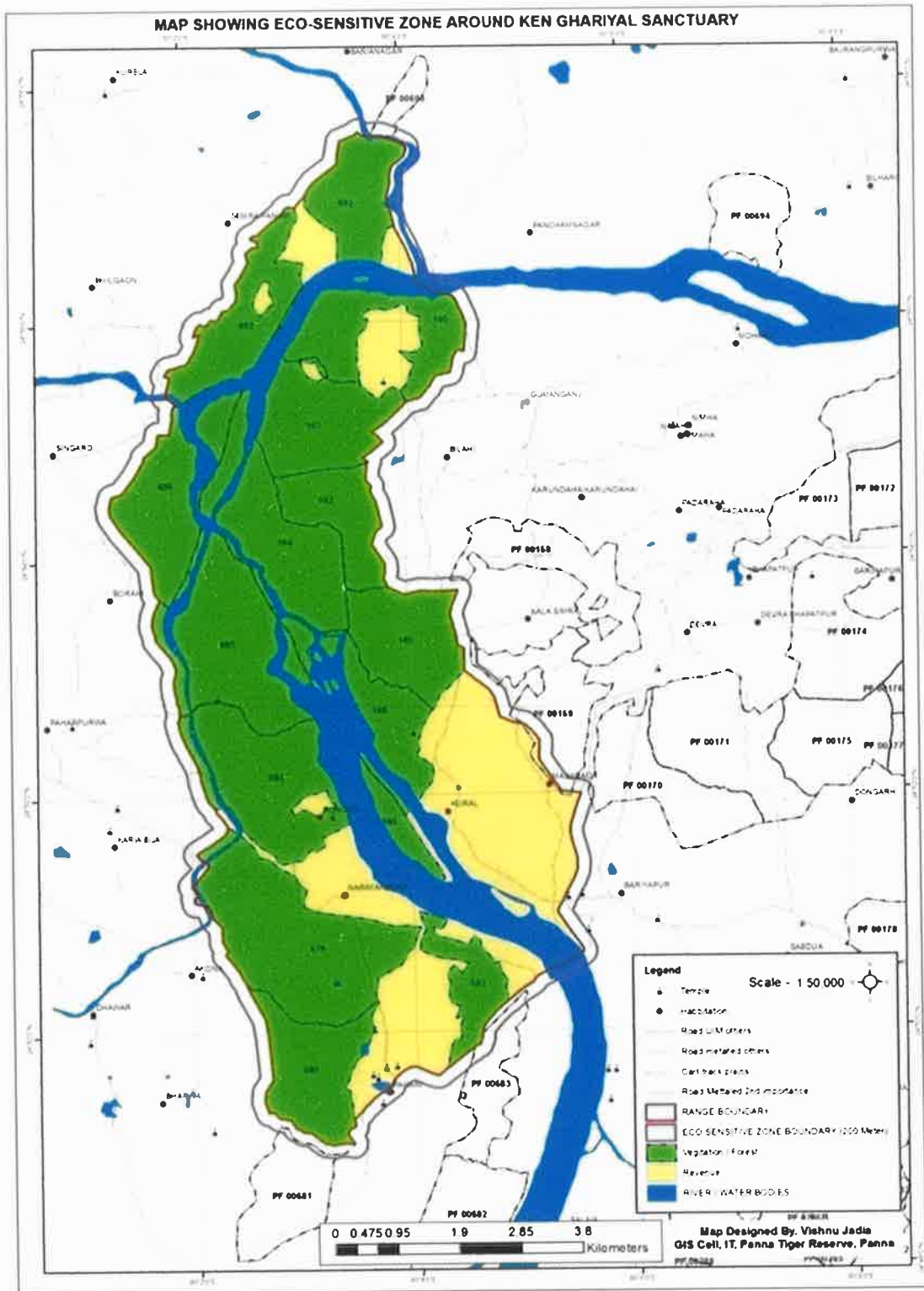


Figure-15. Ken Gharial wildlife sanctuary breeding area



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16. 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.

16.1. 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.

16.2. 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.

16.3. 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.

16.4. Land Environment

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


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16.5. 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.

17. Remedial Measure to mitigate the impact of Mining on the Environment:

17.1. 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 mines 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.

17.2. 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.


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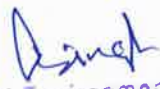
- ✓ The mined-out pits shall be converted into the water reservoir at the end of mines life. This will help in recharging ground water table by acting as a water harvesting structure.
- ✓ Periodic analysis of mine pit water and ground water quality in nearby villages.
- ✓ Domestic sewage from site office & urinals/latrines provided in ML is discharged in septic tank followed by soak pits.

17.3. 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.

17.4. 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.


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17.5. 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.

18. Reclamation of Mined out area


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


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C.A. Area, Jabalpur, M.P.

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

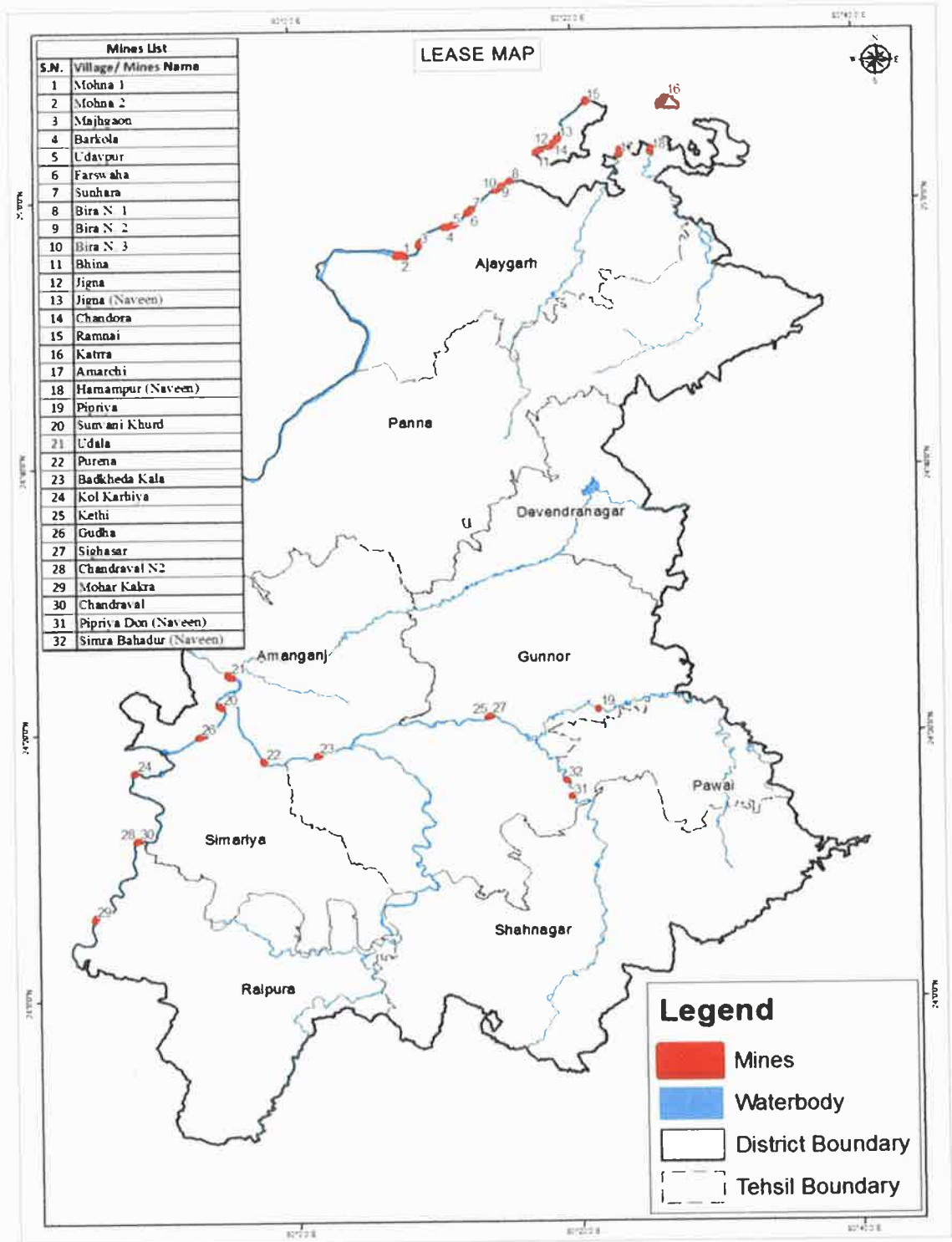
Table – 14. Details of the cluster of Mining Lease

S.No	Village	Khasra	Hectare	Coordinates
1.	Mohna 1	55	6.000	Cluster
2.	Mohna 2	1463	12.000	
3.	Majhgaon	2	8.000	Non-Cluster
4.	Barkola	1	6.000	Non-Cluster
5.	Udaypur	1	10.000	Non-Cluster
6.	Farswaha	1	7.500	Non-Cluster
7.	Sunhara	1	7.500	Cluster
8.	Bira N. 1	1	7.000	
9.	Bira N. 2	1	7.000	
10.	Bira N. 3	1	6.000	
11.	Bhina	1	10.750	Non-Cluster
12.	Jigna	1	4.900	Cluster
13.	Jigna (Naveen)	1	4.750	
14.	Chandora	1	8.000	Non-Cluster
15.	Ramnai	1	7.000	Non-Cluster
16.	Kattra	1	3.900	Non-Cluster
17.	Amarchi	1	4.750	Non-Cluster
18.	Harnampur (Naveen)	501	3.400	Non-Cluster
19	Pipriya	96	5.200	Non-Cluster
20	Sunvani Khurd	155	5.300	Non-Cluster
21	Udala	605	5.500	Non-Cluster
22	Purena	468	6.000	Non-Cluster
23	Badkheda Kala	1	5.500	Non-Cluster
24	Kol Karhiya	582	5.300	Non-Cluster
25	Kethi	2	5.000	Non-Cluster
26	Gudha	24	5.100	Non-Cluster
27	Sighasar	1, 96	5.400	Non-Cluster
28	Chandraval N. 2	562, 549	6.000	Non-Cluster
29	Mohar Kakra	1	5.200	Cluster
30	Chandraval	1	6.000	
31	Pipriya Don (Naveen)	485	3.170	Non-Cluster
32	Simra Bahadur (Naveen)	127	4.750	Non-Cluster


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20. Mineral Lease Marked on the District Map

Figure-16. Mineral Lease Marked on the District Map



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21. Sand Replenishment Plan and Projections

21.1. Sand Replenishment Assessment

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

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

21.2. Impacts of Sand quarrying from the river bed.

21.2.1. 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.

21.2.2. 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.

22. 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:

Formation of sand comprises of the following:

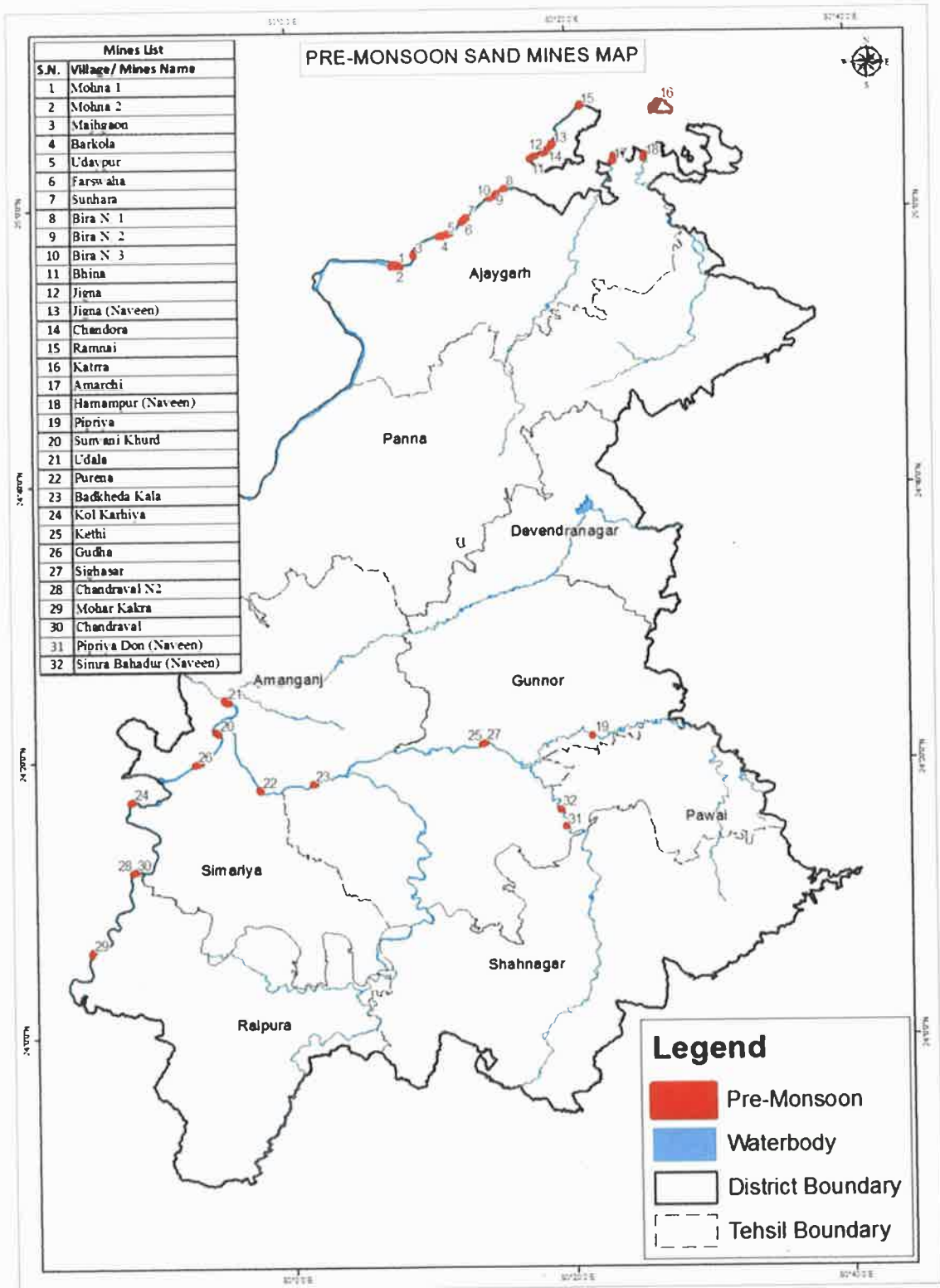
- Catchment area and geographical strata
- Erosion, weathering and transportation of load
- Climatic conditions, precipitation
- Geomorphology, physiographic manmade structures and activity details

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

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

Figure-17. Sand Mining Map of the District – Pre monsoon



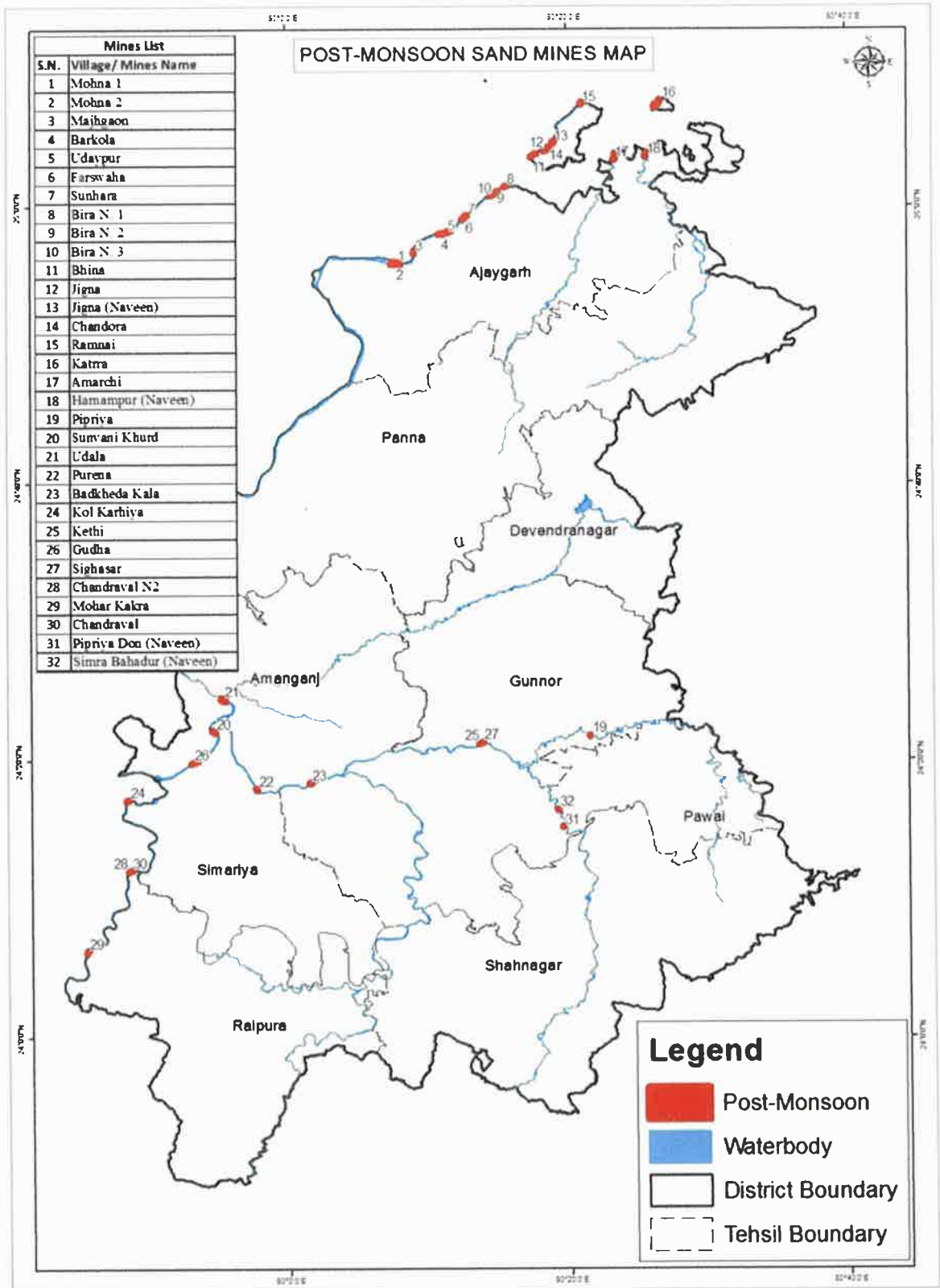
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 (ERCO)
 Paryavaran Bhawan
 E-5, Arera Colony, Bhopal

Table – 15. Sand Mining Area based on Pre-Monsoon Map

Sr. No.	Name of Mines	Total Area in sqm	Area recommended for mineral concession (in square meter)	Pre-Monsoon		
				Av. Thickness of Sand Bed (in meter)	Estimated reserve (in Cum)	Estimated reserve (in Mt)
1	Mohna 1	60000	55000	1.00	55000	77000
2	Mohna 2	120000	115500	1.00	115500	161700
3	Majhgaon	80000	60000	0.50	30000	42000
4	Barkola	60000	57000	1.00	57000	79800
5	Udaypur	100000	95000	0.50	47500	66500
6	Farswaha	75000	67500	0.50	33750	47250
7	Sunhara	75000	67500	0.50	33750	47250
8	Bira N. 1	70000	63000	0.50	31500	44100
9	Bira N. 2	70000	63000	0.50	31500	44100
10	Bira N. 3	60000	55000	0.50	27500	38500
11	Bhina	107500	104500	0.50	52250	73150
12	Jigna	49000	40000	0.50	20000	28000
13	Jigna (Naveen)	47500	38250	0.50	19125	26775
14	Chandora	80000	72000	1.00	72000	100800
15	Ramnai	70000	61750	0.50	30875	43225
16	Kattra	39000	31500	0.50	15750	22050
17	Amarchi	47500	45900	0.50	22950	32130
18	Harnampur (Naveen)	34000	31350	0.50	15675	21945
19	Pipriya	52000	39200	0.50	19600	27440
20	Sunvani Khurd	53000	44000	0.50	22000	30800
21	Udala	55000	44000	0.50	22000	30800
22	Purena	60000	48000	0.50	24000	33600
23	Badkheda Kala	55000	45000	0.50	22500	31500
24	Kol Karhiya	53000	45000	0.50	22500	31500
25	Kethi	50000	49400	0.50	24700	34580
26	Gudha	51000	50000	0.50	25000	35000
27	Sighasar	54000	49500	0.50	24750	34650
28	Chandraval N2	60000	55250	0.50	27625	38675
29	Mohar Kakra	52000	49500	0.50	24750	34650
30	Chandraval	60000	54000	0.50	27000	37800
31	Pipriya Don (Naveen)	31700	28500	1.50	42750	59850
32	Simra Bahadur (Naveen)	47500	44000	1.50	66000	92400
	Total	1978700	1769100		1106800	1549520

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Figure-18. Sand Mining Map of the District – post monsoon



Devi
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 Assessment Authority, M.P.
 (EPCO)
 Paryayatan Bazar
 E-5, Areta Colony, Bhopal (M.P.)

Table – 16. Sand Mining Area based on Post-Monsoon Map

Sr. No.	Name of Mines	Total Area in sqm	Area recommended for mineral concession (in square meter)	Post Monsoon		
				Av. Thickness of Sand Bed (in meter)	Total mineral potential (in Cubic meter)	Estimated reserve (in Mt)
1	Mohna 1	60000	55000	3	165000	231000
2	Mohna 2	120000	115500	3	346500	485100
3	Majhgaon	80000	60000	1.5	90000	126000
4	Barkola	60000	57000	1.5	85500	119700
5	Udaypur	100000	95000	1.5	142500	199500
6	Farswaha	75000	67500	1.5	101250	141750
7	Sunhara	75000	67500	1.5	101250	141750
8	Bira N. 1	70000	63000	1.5	94500	132300
9	Bira N. 2	70000	63000	1.5	94500	132300
10	Bira N. 3	60000	55000	1.5	82500	115500
11	Bhina	107500	104500	1.5	156750	219450
12	Jigna	49000	40000	1.5	60000	84000
13	Jigna (Naveen)	47500	38250	1.5	57375	80325
14	Chandora	80000	72000	2	144000	201600
15	Ramnai	70000	61750	1.5	92625	129675
16	Katrra	39000	31500	1.5	47250	66150
17	Amarchi	47500	45900	1.5	68850	96390
18	Harnampur (Naveen)	34000	31350	1.5	47025	65835
19	Pipriya	52000	39200	1.5	58800	82320
20	Sunvani Khurd	53000	44000	1	44000	61600
21	Udala	55000	44000	1	44000	61600
22	Purena	60000	48000	1	48000	67200
23	Badkheda Kala	55000	45000	1	45000	63000
24	Kol Karhiya	53000	45000	1	45000	63000
25	Kethi	50000	49400	1	49400	69160
26	Gudha	51000	50000	1	50000	70000
27	Sighasar	54000	49500	1	49500	69300
28	Chandraval N2	60000	55250	1	55250	77350
29	Mohar Kakra	52000	49500	1	49500	69300
30	Chandraval	60000	54000	1	54000	75600
31	Pipriya Don (Naveen)	31700	28500	3	85500	119700
32	Simra Bahadur (Naveen)	47500	44000	3	132000	184800
	Total	1978700	1769100		2787325	3902255

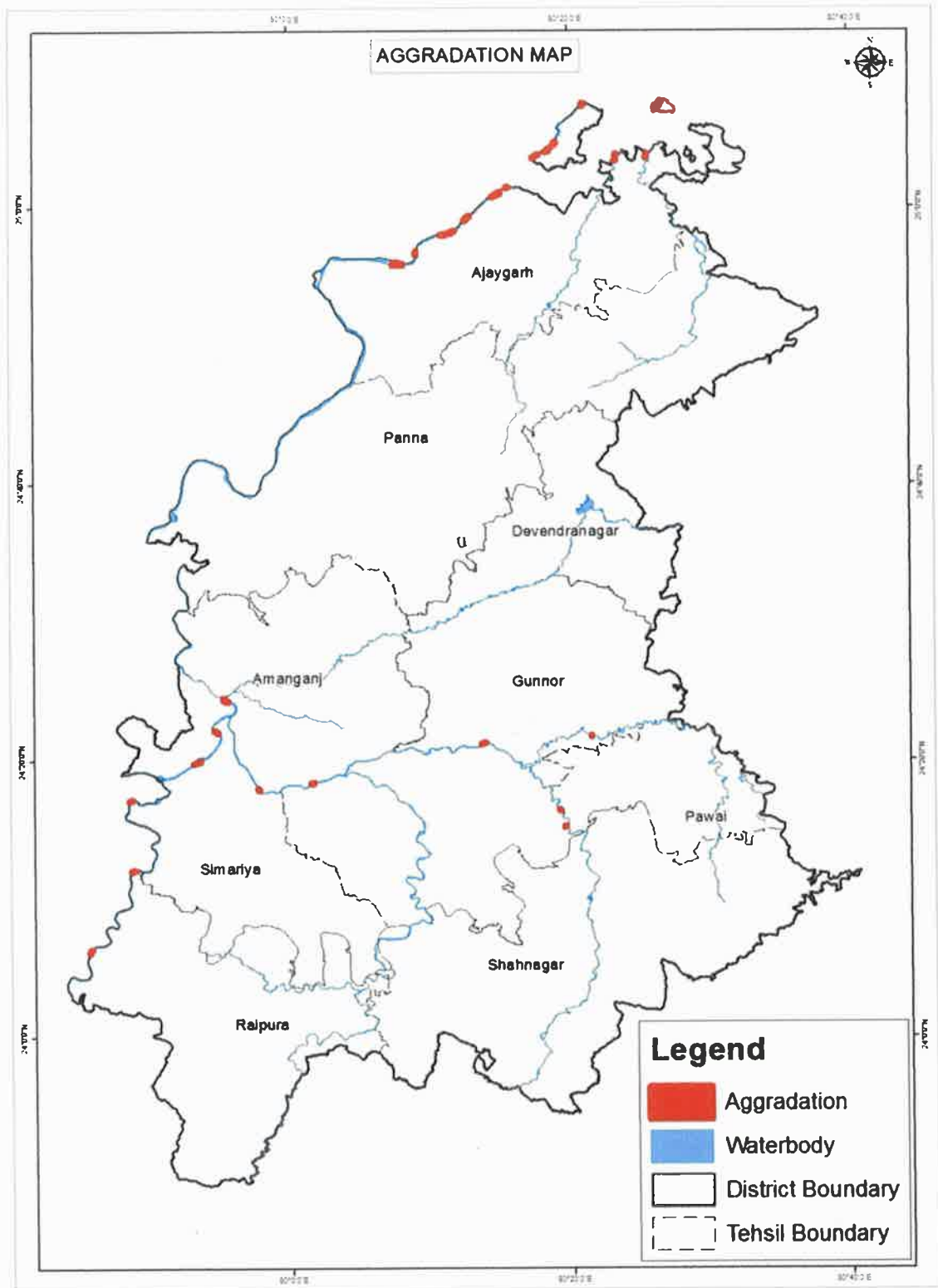
Table – 17. Comparative Study: Pre and Post Monsoon Scenarios

Sr. No.	Name of Mines	Total Area in sqm	Area recommended for mineral concession (in square meter)	Pre-Monsoon		Post Monsoon			Difference		Quantity (in %)	
				Av. Thickness of Bed (in meter)	Estimated reserve (in Cum)	Estimated reserve (in Mt)	Av. Thickness of Bed (in meter)	Total mineral potential (in Cubic meter)	Estimated reserve (in Mt)	Quantity (in Cum)		Estimated reserve (in Mt)
1	Mohna 1	60000	55000	1.00	55000	77000	3	165000	231000	154000	110000	66.67
2	Mohna 2	120000	115500	1.00	115500	161700	3	346500	485100	323400	231000	66.67
3	Majhgaon	80000	60000	0.50	30000	42000	1.5	90000	126000	84000	60000	66.67
4	Barkola	60000	57000	1.00	57000	79800	1.5	85500	119700	39900	28500	33.33
5	Udaypur	100000	95000	0.50	47500	66500	1.5	142500	199500	133000	95000	66.67
6	Farswaha	75000	67500	0.50	33750	47250	1.5	101250	141750	94500	67500	66.67
7	Sunhara	75000	67500	0.50	33750	47250	1.5	101250	141750	94500	67500	66.67
8	Bira N. 1	70000	63000	0.50	31500	44100	1.5	94500	132300	88200	63000	66.67
9	Bira N. 2	70000	63000	0.50	31500	44100	1.5	94500	132300	88200	63000	66.67
10	Bira N. 3	60000	55000	0.50	27500	38500	1.5	82500	115500	77000	55000	66.67
11	Bhina	107500	104500	0.50	52250	73150	1.5	156750	219450	146300	104500	66.67
12	Jigna	49000	40000	0.50	20000	28000	1.5	60000	84000	56000	40000	66.67
13	Jigna (Naveen)	47500	38250	0.50	19125	26775	1.5	57375	80325	53550	38250	66.67
14	Chandora	80000	72000	1.00	72000	100800	2	144000	201600	100800	72000	50.00
15	Ramnai	70000	61750	0.50	30875	43225	1.5	92625	129675	86450	61750	66.67
16	Katra	39000	31500	0.50	15750	22050	1.5	47250	66150	44100	31500	66.67
17	Amarchi	47500	45900	0.50	22950	32130	1.5	68850	96390	64260	45900	66.67
18	Harnampur (Naveen)	34000	31350	0.50	15675	21945	1.5	47025	65835	43890	31350	66.67
19	Pipriya	52000	39200	0.50	19600	27440	1.5	58800	82320	54880	39200	66.67

Sr. No.	Name of Mines	Total Area in sqm	Area recommended for mineral concession (in square meter)	Pre-Monsoon			Post Monsoon			Difference		Quantity (in %)
				Avg. Thickness of Bed (in meter)	Estimated reserve (in Cum)	Estimated reserve (in Mt)	Avg. Thickness of Bed (in meter)	Total mineral potential (in Cubic meter)	Estimated reserve (in Mt)	Quantity (in Cum)	Estimated reserve (in Mt)	
20	Sunvani Khurd	53000	44000	0.50	22000	30800	1	44000	61600	22000	30800	50.00
21	Udala	55000	44000	0.50	22000	30800	1	44000	61600	22000	30800	50.00
22	Purena	60000	48000	0.50	24000	33600	1	48000	67200	24000	33600	50.00
23	Badkheda Kala	55000	45000	0.50	22500	31500	1	45000	63000	22500	31500	50.00
24	Kol Karhiya	53000	45000	0.50	22500	31500	1	45000	63000	22500	31500	50.00
25	Kethi	50000	49400	0.50	24700	34580	1	49400	69160	24700	34580	50.00
26	Gudha	51000	50000	0.50	25000	35000	1	50000	70000	25000	35000	50.00
27	Sighasar	54000	49500	0.50	24750	34650	1	49500	69300	24750	34650	50.00
28	Chandraval N2	60000	55250	0.50	27625	38675	1	55250	77350	27625	38675	50.00
29	Mohar Kakra	52000	49500	0.50	24750	34650	1	49500	69300	24750	34650	50.00
30	Chandraval	60000	54000	0.50	27000	37800	1	54000	75600	27000	37800	50.00
31	Pipriya Don (Naveen)	31700	28500	1.50	42750	59850	3	85500	119700	42750	59850	50.00
32	Simra Bahadur (Naveen)	47500	44000	1.50	66000	92400	3	132000	184800	66000	92400	50.00
	Total	1978700	1769100		1106800	1549520		2787325	3902255	1680525	2352735	

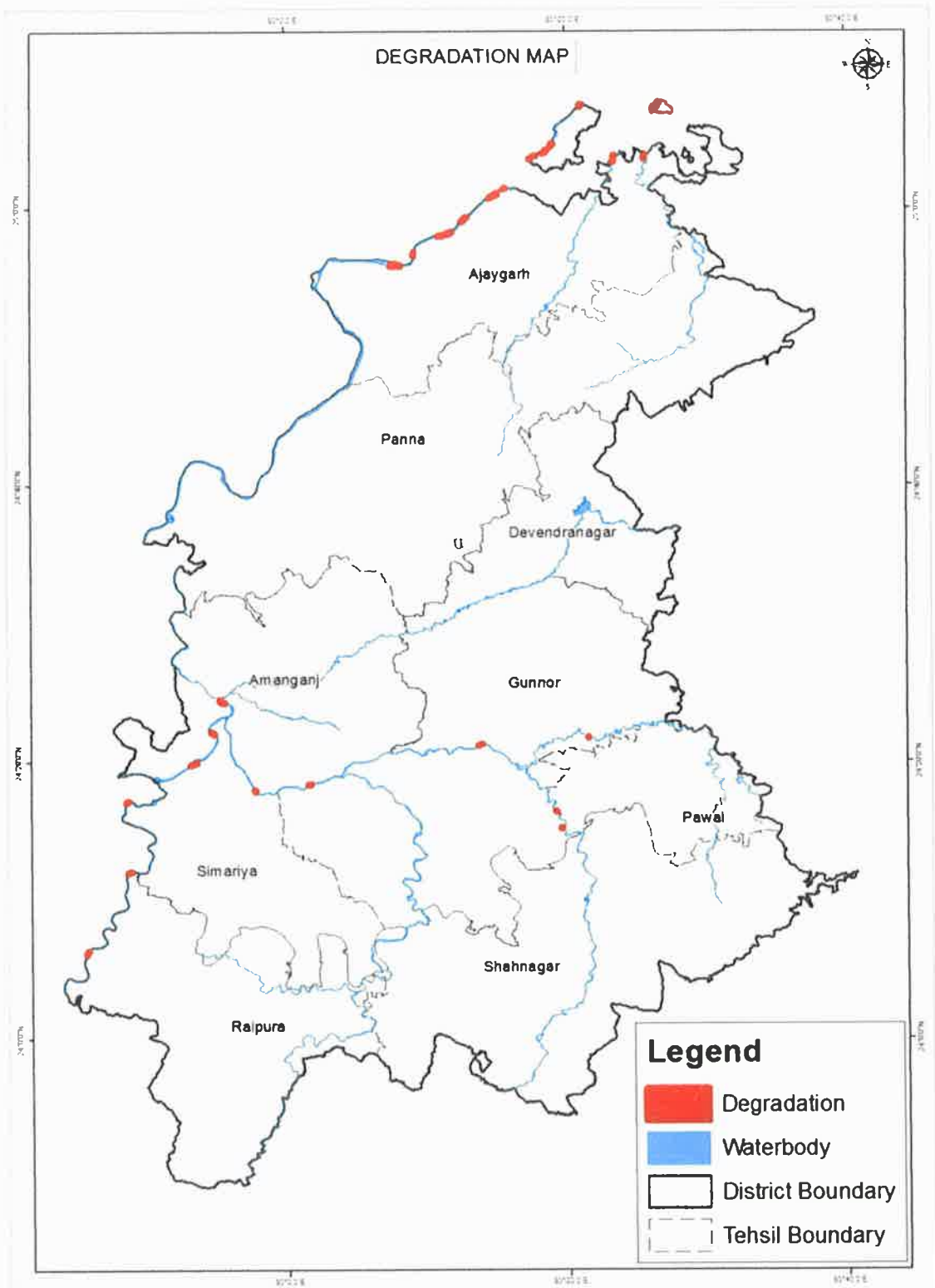
23. Aggradations and Degradation Study

Figure-19. Aggradations Map of the District



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Figure-20. Degradation Map of the District



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

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.

The findings have been tabulated as below:

Table – 18. Drainage System with description of the main rivers

S. No	Name of River	Area drained (Sq.Km)	% Area drained in the district
1	Ken River	28058	84% (23648 sq.km)
2	Runj River	1468	81% (1193 sq.km)

Table – 19. Salient Features of Important Rivers and Streams

S. No	Name of River/stream	Total length in the district	Place of origin	Altitude at origin
1	Ken River	138 Km	Village Ahirgawan (Kaimur Hills, Katni)	550 m (above MSL)
2	Runj River	57 Km	Village Katra (Forest Area Panna)	399 m (above MSL)

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Table – 20. Details of the Concession area in the district

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in Km)	Av. width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in Cum)	Total mineral potential (in Cubic meter)	Mineable mineral potential (in Cum (60 % of total mineral potential)	Mineable mineral (in Mt) (60% of total mineral potential)
Mohna-1, Mohna-2, Majhgaon, Barkola, Udaypur, Farswaha, Sunhara, Bira N.-1, Bira N.-2, Bira N.-3, Bhina, Jigna, Jigna (Naveen), Chandora, Pipriya, Sunvani Khurd, Udala, Purena, Badkheda Kala, Kol Karhiya, Kethi, Gudha, Sighasar, Chandraval N2, Mohar Kakra, Chandraval, Pipriya Don (Naveen), Simra Bahadur (Naveen)	17.810	93	1660350	2451450	1470870	2059218
Kattra, Amarchi, Harnampur (Naveen),	3.350	32	108750	163125	97875	137025
Total	21.160		1769100	2614575	1568745	2196243

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 Patna (EPCO)
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Table - 21. Details of Mineable mineral (in Cubic meter)

S. No	Name of the River	Place of origin	Altitude at origin	Portion of the River or Stream Recommended for Mineral Concession Tehsil/Village/Kh. No./Rakba(Hect.)	Length of area recommended for mineral concession (in meter)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Average Depth	Total mineral potential (in Cubic meter)	Total mineral potential (in Mt)	Mineable mineral (in Cubic meter) (60% of total mineral potential)	Mineable mineral (in Mt) (60% of total mineral potential)
1	Ken	Ahrgan	550 m	Mohna-1/kh. No. .55/Area 6.00 hect	500	110	55000	3	165000	231000	99000	138600
2	Ken			Mohna-2/kh. No.1463/Area 12.00	1050	110	115500	2.5	288750	404250	173250	242550
3	Ken	village (Kaimur Hills, Katni)		Majhgaon/ Kh. No. 2/ Area 8.00	600	100	60000	1.5	90000	126000	54000	75600
4	Ken			Barkola/Kh No. 1/Area 6.00	600	95	57000	1.5	85500	119700	51300	71820
5	Ken			Udaypur/Kh. No. 1/ Area 10.00	1000	95	95000	1.5	142500	199500	85500	119700
6	Ken			Farswaha 1/ Kh. No 1 /Area 7.50	750	90	67500	1.5	101250	141750	60750	85050
7	Ken			Sunhara/ Kh. No. 1/ Area 7.50	750	90	67500	1.5	101250	141750	60750	85050
8	Ken			Bira N.- 1/Kh No.1/Area 7.00	600	105	63000	1.5	94500	132300	56700	79380
9	Ken			Bira N.- 2/Kh No.1/Area 7.00	600	105	63000	1.5	94500	132300	56700	79380
10	Ken			Bira N.- 3/Kh No.1/Area 6.00	500	110	55000	1.5	82500	115500	49500	69300
11	Ken			Bira /Kh No.1/Area 10.75	950	110	104500	1.5	156750	219450	94050	131670
12	Ken			Jigna /Kh. No. 1/ Area 4.90	400	100	40000	1.5	60000	84000	36000	50400
13	Ken			Jigna (Naveen)/ Kh. No. 1/Area 4.75	450	85	38250	1.5	57375	80325	34425	48195
14	Ken			Chandora/ Kh. No.1/ Area 8.00	900	80	72000	1.5	108000	151200	64800	90720
15	Ken			Ramnai/ Kh. No.1/Area 7.00	650	95	61750	1.5	92625	129675	55575	77805
16	Runjh	Katra (Forest Area Panna)	399 m	Katra/ Kh. No.1/Area 3.90	1050	30	31500	1.5	47250	66150	28350	39690
17	Runjh			Amarchi/ Kh. No. 1/Area 4.75	1350	34	45900	1.5	68850	96390	41310	57834
18	Runjh			Harnampur (Naveen)/ Kh. No. 501/Area 3.40	950	33	31350	1.5	47025	65835	28215	39501
19	Ken			Pipriya / Kh. No. 96/ Area 5.20	490	80	39200	1.5	58800	82320	35280	49392

S. No	Name of the River	Place of origin	Altitude at origin	Portion of the River or Stream Recommended for Mineral Concession Tehsil/Village/Kh. No./ Rakba(Hect.)	Length of area recommended for mineral concession (in meter)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Average Dept	Total mineral potential (in Cubic meter)	Total mineral potential (in Mt)	Mineable mineral Cubic meter (60% of total mineral potential)	Mineable mineral (in Mt) (60% of total mineral potential)
20	Ken	Ahrgawan village (Kaimur Hills, Katni)	550 m	Sunvani Khurd/ Kh. No 155/ Area 5.30	550	80	44000	1	44000	61600	26400	36960
21	Ken			Udala/ Kh. No. 605/ Area 5.50	550	80	44000	1	44000	61600	26400	36960
22	Ken			Purena/ Kh. No 468/ Area 6.00	600	80	48000	1	48000	67200	28800	40320
23	Ken			Badkheda Kala /Kh. No. 1/Area 5.50	500	90	45000	1	45000	63000	27000	37800
24	Ken			Kol Karhiya/ Kh. No. 582/Area 5.30	600	75	45000	1	45000	63000	27000	37800
25	Ken			Kethi/ Kh.No. 2/ Area 5.00	520	95	49400	1	49400	69160	29640	41496
26	Ken			Gudha/ Kh. No. 24/ Area 5.10	500	100	50000	1	50000	70000	30000	42000
27	Ken			Sighasar/ Kh. No. 1, 96/ Area 5.40	550	90	49500	1	49500	69300	29700	41580
28	Ken			Chandraval N 2/ K N. 562,549 Area 6	650	85	55250	1	55250	77350	33150	46410
29	Ken			Mohar Kakra/Kh. No. 1/Area 5.20	550	90	49500	1	49500	69300	29700	41580
30	Ken			Chandraval/Kh.No. 1/Area 6.00	600	90	54000	1	54000	75600	32400	45360
31	Ken			Pipriya Don (Naveen)/Kh. No 485/Area 3.17	300	95	28500	1	28500	39900	17100	23940
32	Ken			Simra Bahadur (Naveen)/ Kh. No 127/Area 4.75	550	80	44000	2.5	110000	154000	66000	92400
Total					21160	2787	1769100		2614575	3660405	1568745	2196243


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 (F.No. 7)
 Panna, M.P.

Table – 22. Details of mineral Potential and Mineable mineral (in Cubic meter)

Boulder (MT)	Bajari (MT)	Total mineral potential (in Cum)	Total Mineable mineral (60% of total mineral potential) (in Cum)	Total Mineable mineral (60% of total mineral potential) (in MT)
0	0	2614575	1568745	2196243

Table – 23. Details of Annual Deposition of mineral and Total Mineable mineral (in Cubic meter)

Boulder (MT)	Bajari (MT)	Sand (Cu.m.)	Total Mineable Mineral Potential (Cu.m.)	Total Mineable Mineral Potential (in MT)
NIL	NIL	1227431	1227431	1718403


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Prakash
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(EPCO)
Baryavarán Pariser
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.)

वेबसाइट- <http://www.mpseiaa.nic.in>

दूरभाष नं. - 0755-2466970, 2466859

फैक्स नं. - 0755-2462136

No: 1634 / SEIAA/2022

Date: 23/9/22

प्रति,

कलेक्टर

जिला - पन्ना (म.प्र.)

विषय: नवीन जिला सर्वेक्षण रिपोर्ट - पन्ना - रेत खनिज

संदर्भ: आपका पत्र क्र. 983, दिनांक 29.08.2022।

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वीं 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 पन्ना की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

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

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

30. जिला सर्वेक्षण रिपोर्ट, जिला - सीधी, (अन्य खनिज रेत छोडकर)

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 सीधी की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

"..... समिति द्वारा सुझाव गई उपरोक्त अनुशंसाओं के साथ सीधी जिले की जिला सर्वेक्षण रिपोर्ट (गौण खनिज) अनुमोदन हेतु विचारार्थ एवं 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 सीधी जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट अन्य खनिज (रेत छोडकर) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

31. जिला सर्वेक्षण रिपोर्ट, जिला - खरगौन -रेत खनिज

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 खरगौन की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

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

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


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

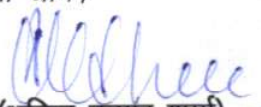
32. जिला सर्वेक्षण रिपोर्ट, जिला - पन्ना -रेत खनिज

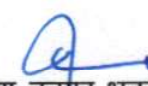
राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :-

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

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


(श्रीमन् शुक्ला)
सदस्य सचिव


(अनिल कुमार शर्मा)
सदस्य


(अरुण कुमार भट्ट)
अध्यक्ष

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 पन्ना जिला की अद्यतन जिला सर्वेक्षण रिपोर्ट (रेत खनिज) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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

33. जिला सर्वेक्षण रिपोर्ट, जिला - टीकमगढ़- -रेत खनिज

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 टीकमगढ़ की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

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

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

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

34. जिला सर्वेक्षण रिपोर्ट, जिला - आगर मालवा -(गौण एवं रेत खनिज)


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 आगर मालवा की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

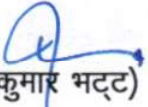
".....समिति द्वारा सुझाव गई उपरोक्त अनुशंसाओं के साथ आगर मालवा जिले की जिला सर्वेक्षण रिपोर्ट (गौण एवं रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।"

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 आगर मालवा जिले की अद्यतन जिला सर्वेक्षण रिपोर्ट -(गौण एवं रेत खनिज) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

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


(श्रीमन् शुक्ला)
सदस्य सचिव


(अनिल कुमार शर्मा)
सदस्य


(अरुण कुमार भट्ट)
अध्यक्ष

592वीं राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 06 सितम्बर 2022

समिति की यह भी अनुशांसा है कि जिला स्तर पर जिला सर्वेक्षण रिपोर्ट तैयार करने हेतु गठित जिला समिति की अनुशांसा 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 खरगौन जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित किया जायें

निम्नानुसार उल्लेखित नवीन जिला सर्वेक्षण रिपोर्ट खनिज अधिकारियों द्वारा आज की बैठक के दौरान प्रस्तुत की गयी। यह प्रकरण एजेण्डा में सूचीबद्ध नहीं था किंतु संबंधित खनिज निरीक्षक के अनुरोध पर माननीय अध्यक्ष महोदय द्वारा प्रस्तुतीकरण की अनुमति प्रदान की गई ।

16. जिला सर्वेक्षण रिपोर्ट, पन्ना –

अ. रेत खनिज

Mineral	Sand
Earlier DSR Discussed	SEAC 584 th & 591 th Meeting dated 05.07.22 & 27.08.2022
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (Sand Mineral)
Deliberation in the SEAC 576th, & 591th Meeting dated 10.06.22 & 16.08.2022	<p>राज्य स्तरीय मूल्यांकन समिति की 584 वीं बैठक दिनांक 05/07/22 जिला सर्वेक्षण रिपोर्ट, जिला पन्ना (म.प्र.) जिला सर्वेक्षण रिपोर्ट, जिला – पन्ना (म.प्र.).</p> <p>राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (सिया) ने पत्र क्रमांक 864 दिनांक 28/06/22 के माध्यम से पन्ना जिले की जिला सर्वेक्षण रिपोर्ट, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के परीक्षण हेतु भेजी गई है। कलेक्टर (खनिज शाखा) जिला-पन्ना, म.प्र. के पत्र क्र. 733 दिनांक 15/06/2022 के जिला सर्वेक्षण रिपोर्ट को सिया कार्यालय में ऑनलाईन जमा कराई गई। उक्त जिला सर्वेक्षण रिपोर्ट समिति के सदस्यों को दिनांक 28/06/22 को सॉफ्ट कॉपी प्रेषित की गई तथा उस पर चर्चा हेतु राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की 584 बैठक दिनांक 05/07/2022 में प्रस्तावित है।</p> <p>राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की 584 बैठक दिनांक 05/07/2022 में पन्ना जिले की रिपोर्ट पर चर्चा की गयी । चर्चा के दौरान खनिज विभाग की ओर से श्री रवि कुमार पटेल, खनिज अधिकारी उपस्थित हुये । चर्चा के दौरान समिति ने खनिज अधिकारी को बताया कि प्रस्तुत जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जल वायु परिवर्तन, मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/18 में वर्णित प्रपत्र के अनुरूप नहीं है, जैसे :-</p> <ol style="list-style-type: none"> 1. तालिका क्र. 3 (पेज न0. 8-14) जो कि रेत खनन से संबंधित है यह जानकारी पर्यावरण, वन एवं जल वायु परिवर्तन, मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना के अनुरूप नहीं है, क्योंकि स्वीकृत खदानों की वैधता की अवधि नहीं दी गई है। 2. तालिका क्र. 4 फ्लेग स्टोन (पेज न0. 15-30), तालिका क्र. 5 स्टोन गिट्टी (पेज न0. 31-38) एवं तालिका

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- क्र०. 6 (पेज न०. 38) में भी प्रदाय की गयी जानकारी पूर्ण नहीं है। संबंधित अधिसूचना में उपरोक्त जानकारी 16 कॉलमों में समाहित की गयी है। अतएव तदनुसार गौण खनिजों की जानकारी का उन्नयन करें।
3. जिला सर्वेक्षण रिपोर्ट में जितने भी नक्शे संलग्न किये गये हैं, उन्हें रंगीन प्रिंट में लगायें जिससे की लीजेण्ड में दी गई जानकारी को नक्शे में दर्शाये गये फीचर्स से सामंजस्य हो सके। जिला सर्वेक्षण रिपोर्ट में प्रदर्शित नक्शों में जो भी फीचर्स दिखाया जाता है उसको संबंधित नक्शों 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 नक्शे नहीं आ पा रहे हो तो ए-3 साईज में नक्शों को बनाना चाहिए।
 4. पेज न०. 53 में दर्शायी गयी पाई डायग्राम की जानकारी भी कलर्ड प्रिंट करके लगाये।
 5. तालिका क्र०. 15 (पेज न०. 63) में नदियों के कैचमेंट की जो जानकारी दी गयी है उसके दुबारा पुनरिक्षित करने की आवश्यकता प्रतीत होती है।
 6. बिन्दु क्र०. 19 (पेज -67) में ESZ में अधिसूचित केन घड़ियाल अभ्यारण की जानकारी का भी समावेश किया जाये। चूंकि पारिस्थितिक संवेदी जोन जिले का एक बहुत ही महत्वपूर्ण घटक है, अतएव इसका वर्णन जिसमें नोटिफिकेशन का नम्बर, दिनांक एवं विस्तार और सीमाओं का समावेश होना अपरिहार्य है।
 7. जिला सर्वेक्षण रिपोर्ट के बिंदु क्रमांक- 20, 21 एवं 22 जिसमें पोस्ट और प्री मानसून में रेत की उपलब्धता दर्शाई गई है, संबंधित दोनों तालिका में जो रेत की उपलब्धता की गणना, स्वीकृत के परिप्रेक्ष्य में की जाना चाहिए। यदि किसी वजह से रेत की उपलब्धता/आंकलन कम हो रही है तो रिमार्क में उचित टिप्पणी के साथ, इसका स्पष्टीकरण दिया जाना चाहिए तथा प्री-मानसून एवं पोस्ट-मानसून में प्रदाय की गई अनुमानित रेत की मात्रा में लीजवार (60 प्रतिशत टोटल मिनरल पोर्टेशियल) (लम्बाई एवं चौड़ाई के साथ) नहीं दी गई है।
 8. बिंदु क्रमांक-26 की जानकारी जो माईनर मिनरल (रेत छोड़कर) से संबंधित है 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 विरुद्ध कितना वृक्षारोपण किस वर्ष किया है, उसको भी अंकित किया जाना चाहिए।
 9. तालिका क्रमांक-25 में जानकारी अपूर्ण है, क्योंकि जिले में प्रतिशत निष्कापित क्षेत्र की जानकारी नहीं दी गई है।
 10. तालिका क्रमांक-27 एवं 28 में जानकारी खदानवार लीजवार (60 प्रतिशत टोटल मिनरल पोर्टेशियल) (लम्बाई एवं चौड़ाई के साथ) पर्यावरण, वन एवं जल वायु परिवर्तन, मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/18 में वर्णित प्रपत्र के अनुरूप प्रस्तुत की जाये।
 11. इसी प्रकार जिले में स्वीकृत/प्रस्तावित खदानों को को-आर्डिनेट के अनुसार डिजिटलाईज 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।
 12. 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 रिपोर्टों में एक जैसी ही है जिसके स्थान पर जिले में मिलने वाली नदी के अपस्ट्रीम क्षेत्र में मिलने वाली चट्टानों का (रॉक फार्मेशन) का समावेश होना चाहिए।
 13. 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 संवेदनशील क्षेत्र दृष्टिगत होता है तो खनन क्षेत्र की सीमा को 60 प्रतिशत से कम कर 50 प्रतिशत तक भी सीमित किया जा सकता है।
 14. 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 समाघात निर्धारण प्राधिकरण को उचित कार्यवाही हेतु अवगत करायें।

चर्चा उपरांत समिति की यह अनुशंसा है कि पन्ना 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। ऑन लाईन उपस्थित श्री रवि कुमार पटेल, खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गई कि वे अधिसूचना दिनांक 25/07/2018 में निर्धारित फार्मेट के अनुसार जिला सर्वेक्षण रिपोर्ट को अद्यतन कर लें। तदनुसार प्रकरण आगामी कार्यवाही राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर अग्रिम कार्यवाही हेतु प्रेषित है।

राज्य स्तरीय मूल्यांकन समिति की 591 वीं बैठक दिनांक 27/08/22

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दिनांक 06 सितम्बर 2022**

	<p>जिला सर्वेक्षण रिपोर्ट, पन्ना (रेत खनिज) –</p> <p>आज दिनांक 27/8/22 को जिला सर्वेक्षण रिपोर्टों के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एवं खनिकर्म, विभाग भोपाल से श्री पी.पी. राय एवं श्री रवि पटेल, खनिज अधिकारी उपस्थित रहे । पन्ना जिले की नवीन जिला सर्वेक्षण रिपोर्ट रेत खनिज हेतु प्रस्तुत की गई, जिसमें पाया :-</p> <ol style="list-style-type: none"> 1. तालिका क्रमांक 16 एवं तालिका क्रमांक 17 (पेज न0. 64-65) में रेत की मात्रा का आंकलन करने में खदान की गहराई कितनी रखी है उसका उल्लेख नहीं है। 2. इसी प्रकार तालिका क्रमांक 21 पेज क्र0. 70 में मिनरल पोटेन्शियल की गणना करने में तालिका पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 में निर्धारित फार्मेट अनुसार नहीं बनाई गई है। इसमें खदानवार लंबाई, चौड़ाई एवं गहराई का उल्लेख नहीं किया गया है। 3. रिपोर्ट में 03 वर्षों के उत्खनित रेत की मात्रा का लीजवार पोटेन्शियल भी नहीं दिया गया है। <p>चर्चा उपरांत समिति की यह अनुशंसा है कि पन्ना जिले की जिला सर्वेक्षण रिपोर्ट रेत खनिज को समिति की सुझाई गयी उपरोक्त अनुशंसाओं के तारतम्य में अद्यतन (अपडेट) किया जाये तथा संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय की अधिसूचना दिनांक 25/07/18 के अनुसार पुनः प्रस्तुत की जाये तत्संबंध में उपस्थित खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गयी । समिति का यह भी सुझाव है कि केन नदी में घडियाल ब्रीडिंग क्षेत्रों का विशेष ध्यान दिया जाये ।</p>
<p>Revised DSR received from District Collectorate (Mining)</p>	<p>Received soft copy vide District Collectorate (Mining) Office, Khargone, No. 983 dated 29.08.2022</p>
<p>Hard Copy Soft Copy or both</p>	<p>Hard copy</p>
<p>SEAC meeting dated 06/09/22</p>	<p>जिले की जिला सर्वेक्षण रिपोर्ट में तालिका क्र0 5-A पेज न0. पेज क्र0. 26 में माइनेबल मिनरल पोटेन्शियल (घनमीटर में) 60% टोटल मिनरल पोटेन्शियल, लीजवार, लंबाई, चौड़ाई एवं गहराई के साथ दर्शाया है एवं विगत 03 वर्षों के उत्खनित रेत की मात्रा का लीजवार पोटेन्शियल दिया गया है। जिससे ज्ञात हो सके कि उस स्थल पर खदान का मिनरल पोटेन्शियल विगत 03 वर्षों में कितना रहा ।</p>

आज दिनांक 27/8/22 को जिला सर्वेक्षण रिपोर्टों के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एवं खनिकर्म, विभाग भोपाल से श्री पी.पी. राय, एवं श्री रवि पटेल, खनिज अधिकारी, के साथ उपस्थित रहे ।

समिति ने पाया कि पन्ना जिले की जिला सर्वेक्षण रिपोर्ट को समिति द्वारा सुझाई गई 03 वर्षों में उत्खनित रेत की खदानवार मात्रा भी दर्शाई गई है, एवं विगत 03 वर्षों में उत्खनित रेत की खदानवार मात्रा भी पोटेन्शियल विगत 03 वर्षों में कितना रहा है भी दर्शाया गया है। खनिज अधिकारी, कार्यालय कलेक्टर, (खनिज शाखा) जिला – पन्ना ने पत्र क्रमांक 983 दिनांक 29/08/2022 के माध्यम से “माइनेबल मिनरल पोटेन्शियल” (घनमीटर में) (60 प्रतिशत टोटल मिनरल पोटेन्शियल) लीजवार विवरण की जानकारी भी प्रस्तुत कर दी गई है। तथा मिनरल पोटेन्शियल की गणना दर्शाने वाली टेबल में

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आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोर्टेशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है ।

समिति ने जिला सर्वेक्षण रिपोर्टों के प्रस्तुतीकरण एवं परीक्षण में पाया कि रेत की कई स्वीकृत खदानों में 60 प्रतिशत माइनेबल पोर्टेशियल तथा विगत् 03 से 05 वर्षों के उत्पादन की मात्रा में 10 गुना से भी अधिक का अंतर है जिसके संदर्भ में उपस्थित खनन अधिकारियों द्वारा बताया गया कि विगत् 02 से 03 वर्षों में कोविड महामारी, मांग कम होने इत्यादि के कारण कुछ खदानों से रेत की निकासी काफी कम हुई है जिस कारण यह अंतर परिलक्षित हो रहा है। समिति ने चर्चा उपरांत निर्णय लिया कि रेत खनन के ऐसे प्रकरण जहां 60 प्रतिशत माइनेबल पोर्टेशियल तथा विगत् 03 से 05 वर्षों के उत्पादन की मात्रा में 05 गुना या उससे से भी अधिक का अंतर है ऐसे सभी प्रकरणों में पर्यावरणीय अभिस्वीकृती हेतु प्रकरण ऑन लाईन प्रस्तुत करते समय उनकी अनुमोदित खनन योजना में उस स्थल की सारगर्भित रिप्लेनिशमेंट स्टडी प्रस्तुत की जाये तथा 60 प्रतिशत माइनेबल पोर्टेशियल के विरुद्ध 05 गुना या उससे से भी अधिक रेत की मात्रा के अंतर का औचित्य दर्शाया जाये ।

समिति की यह भी अनुशांसा है कि जिला स्तर पर जिला सर्वेक्षण रिपोर्ट तैयार करने हेतु गठित जिला समिति की अनुशांसा 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 पन्ना जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित किया जाये ।

18. जिला सर्वेक्षण रिपोर्ट, टीकमगढ़-रेत खनिज

Mineral	Sand
Earlier DSR Discussed	SEAC 591 th , Meeting dated 27.08.2022
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (Sand Mineral)
Deliberation in the SEAC SEAC 591th, Meeting dated 27.08.2022	राज्य स्तरीय मूल्यांकन समिति की 573 वीं बैठक दिनांक 28/05/22 रेत खनिज, जिला टीकमगढ़ – राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (सिया) ने पत्र क्रमांक 523 दिनांक 23/05/22 के माध्यम से टीकमगढ़ जिले की जिला सर्वेक्षण रिपोर्ट राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के परीक्षण हेतु भेजी गई है । उक्त जिला सर्वेक्षण रिपोर्ट, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के सदस्यों को दिनांक 23/05/22 (सॉफ्टकापी) को प्रेषित की गई थी तथा उस पर चर्चा राज्य स्तरीय मूल्यांकन समिति की 573वीं बैठक दिनांक 28/05/22 में प्रस्तावित की गई । कार्यालय कलेक्टर (खनिज शाखा) जिला टीकमगढ़ म.प्र. ने पत्र क्रमांक-11/खनिज/तीन-06/ 3490, दिनांक