DISTRICT SURVEY REPORT
SAND
DISTRICT - HARDA (M.P)

AS PER NOTIFICATION NO. S.O. 141(E) NEW DELHI, THE 15TH JANUARY, 2016 & 25TH JULY 2018 OF MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

PREPARED BY SUB-DIVISIONAL COMMITTEE COMPRISING OF SUB-DIVISIONAL MAGISTRATE, OFFICERS FROM IRRIGATION DEPARTMENT, STATE POLLUTION CONTROL BOARD, FOREST DEPARTMENT, DISTRICT MINING OFFICE

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

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

क्रमांक / 334 / खनिज / 2022–23 हरदा, दिनांक 12 / 09 / 2022

प्रति,

सदस्य सचिव,
SEAC (सेक), प्रदूषण नियंत्रण बोर्ड,
पर्यावरण परिसर, ई–5, अरेरा कालोनी,
भोपाल (म0प्र0)

विषयः– रेत खनिज की जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) में संशोधन बावत्।

संदर्भः– 1. इस कार्यालय का पत्र क्रमांक / 260 / खनिज / 2022–23 हरदा, दिनांक 24.08.2022 एवं
2- SEAC की 592 वी बैठक दिनांक 06 / 09 / 2022 में दिये गये निर्देश।

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उपरोक्त विषयांतर्गत संदर्भित पत्र (1) से हरदा जिले की रेत खनिज की जिला सर्वेक्षण रिपोर्ट (डी.एस.आर.) समिति के अनुमोदन हेतु संलग्न प्रेषित की गई थी। समिति द्वारा आयोजित 592 वी बैठक में उक्त जिला सर्वेक्षण रिपोर्ट के प्रारूप के अवलोकन उपरांत कुछ आवश्यक संशोधन किये जाने हेतु निर्देश प्रदान किये गये थे। उपलब्ध रेत खनिज की मात्रा का आंकलन उप संभाग स्तरीय समिति के सदस्यों द्वारा मौका स्थल निरीक्षण के आधार पर किया गया है।

समिति द्वारा बैठक में दिये गये निर्देशो के पालन में डी.एस.आर. में आवश्यक संशोधन किये जाकर अग्रिम कार्यवाही हेतु डी.एस.आर. की मूल प्रति एवं के.एम.एल फाईल की सी.डी.पुनः संलग्न प्रेषित हैं।

संलग्न– उपरोक्तानुसार

प्रभारी अधिकारी,
(खनि शाखा)
जिला–हरदा(म.प्र.)

पृ.क्रमांक / 335 / खनिज / 2022–23 हरदा, दिनांक 12 / 09 / 2022
प्रतिलिपि–

1. सदस्य सचिव, सिया, सचिवालय पर्यावास भवन, भोपाल की ओर सूचनार्थ प्रेषित।
2. संचालक,भौमिकी तथा खनिकर्म, भोपाल की ओर संदर्भित पत्र के तारतम्य में सूचनार्थ प्रेषित।

प्रभारी अधिकारी,
(खनि शाखा)
जिला–हरदा(म.प्र.)

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

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प्रभारी अधिकारी,
(खनि शाखा)
जिला–हरदा(म.प्र.)

D:/ Gen-letter 2022-23

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना क्र. 3611 (अ) नई दिल्ली दिनांक 25 जुलाई 2018 में किये गये प्रावधानानुसार कलेक्टर हरदा के आदेश क्र. 67 / खनिज / 2022-23 हरदा दिनांक 28.04.2022 द्वारा गठित उपप्रभागीय समिति के समक्ष अनुमोदनार्थ प्रस्तुत –

क्र.	अधिकारी का नाम	पदनाम	हस्ताक्षर
1	सुश्री श्रुति अग्रवाल	अनुविभागीय अधिकारी राजस्व (हरदा)	28/07/2022
2	श्री एल.एस. जादौन	कार्यपालन यंत्री जल संसाधन विभाग हरदा	
3	श्री अभय सराफ	म.प्र. प्रदूषण नियंत्रण बोर्ड, मंडीदीप जिला रायसेन	28/07/2022
4	श्री संजय जैन	उप वनमण्डला अधिकारी (उत्तर) सामान्य वनमण्डल हरदा	SDO(N) 28/7/22
5	श्री डी.के. सिंह	प्रभारी अधिकारी, (खनिज शाखा जिला हरदा)	डी. के. सिंह संयुक्त कलेक्टर

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

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

1. INTRODUCTION

The present District Survey Report is updated in the light of notification no. S.O. 141(E) New Delhi, the 15th January, 2016 of MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE. The District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years. The earlier DSR was prepared in the year 2017 and as per above notification, earlier DSR is being updated in the year 2022.This will be a model and guiding document, which is a compendium of available mineral resources, geographical, environmental and ecological set up of the district. River channels and their floodplains are important sources of construction grade aggregate materials like sand and gravel. The durability of river- borne coarser clastics (e.g. sand and gravel) and their sorting by fluvial action make them best suitable raw materials/ingredients for building constructions.

Most of the rivers in the world are overexploited for living and non-living resources and today the challenge posed to the society is to restore its natural ecology. As transportation and construction infrastructure expanded since the mid-twentieth century, the demand for construction grade sand also increased exponentially. The market demand of river sand is high throughout the world and Madhya Pradesh is not an exception. Harda district is situated in the south-western part of Madhya Pradesh. It lies between the parallels of 21°55′ and 22°32′ North and the meridians of 76°46′ and 77°35′ East. In shape it resembles an irregular pentagon. Harda district is bounded by the district Sehore from North, Hoshangabad from North-East, Betul from South-East, Khandwa from South &West and Dewas from North-West. Harda lies in the Narmada River valley, and the Narmada forms the district's northern boundary. The land rises towards the Satpura Range to the south.

The area of the district is 3334 sq.km. Harda is a district of Madhya Pradesh state lies in Central India. The town of Harda is the district headquarter. The district is a part of Narmadapuram Division. Harda district was formed on 6th July 1998, when it was divided from Hoshangabad District.

Harda is freely connected by road and rail from the state capital Bhopal and it is about 168 kms. away from it. It is connected by rail with all major cities of the state. All Three Blocks Headquarters namely Harda, Khirkiya and Timarni are well connected by road and rail.

The district extends over three physiographic divisions. They are the Satpura hill ranges in the south, the Aravalli equivalent range in the north- western part. The north eastern part of the district lies in the catchment area of the Narmada which forms the northern and eastern boundary. In Harda district, there are three main rivers namely the Narmada, Ganjaal & the Maachak. An average height from the sea level is 302 mts. The district feels maximum temperature up to 480C in summer and minimum up to 060C during winters. The district has an average rainfall of 916 mm.

Guidelines to Monitor Sand Mining

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

Sustainable Sand Management Guidelines (SSMG), 2016 focuses on the management of sand mining, but there was a need to have guidelines for effective enforcement of regulatory provisions and their monitoring.

The 2020 guidelines are to be enforced simultaneously with the SSMG, 2016, in case of conflict; the new set will hold legal precedence. The Mines and Minerals (Development and Regulation) Act, 1957 has empowered state governments to make rules to prevent illegal mining, transportation, and storage of minerals.

However, there were a large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties to curb illegal mining.

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

Enforcement & 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 river bed 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.

Table No. 1 Administrative setup of the District

DISTRICT	TEHSIL
HARDA	Handiya
	Timarni
	Harda
	Khirkiya
	Rehatgaon
	Sirali

2. OVERVIEW OF MINING ACTIVITIES IN THE DISTRICT

Land and water are the basic aspects of development of any economy. Economic development is the output of development of these natural resources in a sustainable manner. District is well endowed with fabulous amount of building material like sand, gitty, dolomite and murum. Overall in Harda district their are 49 quarry leases including 16 sanctioned sand quarries covering an area of 295.20 hectare, which is 0.088%of the area of the district, and fetches 54.223 crores of revenue in five years during 2017-18 to 2021-22.

Table No. 2 Minor Mineral Leases in the District

S.No.	Mineral	No. of Leases	Total Area (In Ha.)	Production of Minerals in last year (In cu.m)
1.	Stone(Gitti)	25	70.31	226115
2.	Murram	08	21.04	52908
3.	Sand	16	203.81	500240
Total		**49**	**295.158**	**779263**

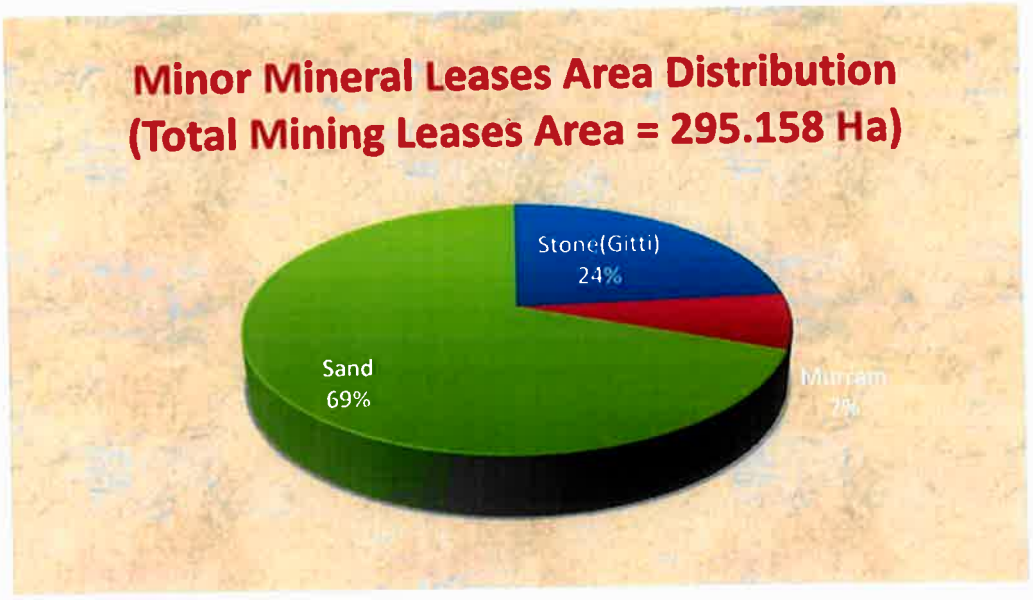

Figure No. 1 Minor Mineral Leases Area Distribution

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

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

Table No. 3 Sand Deposits in the District

S.No.	Name of River	Tehsil	Village	Khasra No.	Area (In Ha.)	Coordinates	Period of Validity
1.	Narmada	Timarni	Chhipaner	1/1	15.00	A. 22°34'39.12"N 77°09'28.09"E B. 22°34'40.26"N 77°09'49.30"E C. 22°34'34.14"N 77°09'50.48"E D. 22°34'29.09"N 77°09'30.50"E	Auctioned upto 30-06-2023
2.	Narmada	Handiya	Handiya	1/1	20.00	A.22°29'22.91"N 76°58'48.19"E B.22°29'28.21"N 76°59'22.76"E C.22°29'21.67"N 76°59'22.95"E D.22°29'17.35"N 76°58'49.24"E	Auctioned upto 30-06-2023
3.	Narmada	Handiya	Golamalgujari-A	1/1 to 6-47	8.00	A 22°29'10.73"N 76°54'58.55"E B 22°29'15.13"N 76°55'22.18"E C 22°29'11.90"N 76°55'23.47"E D 22°29'06.52"N 76°55'00.21"E	Auctioned upto 30-06-2023
4.	Narmada	Handiya	Golamalgujari-B	1/1 to 6-47	6.00	A 22°29'28.84"N 76°56'24.79"E B 22°29'29.39"N 76°56'35.55"E C 22°29'23.67"N 76°56'35.69"E D 22°29'21.98"N 76°56'25.11"E	Auctioned upto 30-06-2023
5.	Narmada	Handiya	Malpone	1/1	6.00	A 22°29'24.08"N 76°56'37.85"E B 22°29'24.22"N 76°56'51.72"E C 22°29'19.16"N 76°56'51.70"E D 22°29'19.16"N 76°57'38.07"E	Auctioned upto 30-06-2023
6.	Narmada	Timarni	Lachora	1/1	10.00	A 22°33'12.11"N 77°07'45.02"E B 22°33'22.32"N 77°08'05.78"E C 22°33'17.95"N 77°08'08.29"E D 22°33'07.85"N 77°07'47.20"E	Auctioned upto 30-06-2023
7.	Narmada	Handiya	Sigon	70/1, 70/4	21.00	A 22°28'55.20"N 76°54'15.28"E B 22°29'09.83"N 76°54'57.75"E C 22°29'05.63"N 76°54'59.54"E D 22°28'50.40"N 76°54'17.20"E	Auctioned upto 30-06-2023
8.	Narmada	Handiya	Uchan	1/1	22.00	A 22°27'25.10"N 76°51'46.97"E B 22°27'42.94"N 76°52'11.54"E C 22°27'38.51"N 76°52'16.42"E D 22°27'18.43"N 76°51'52.31"E	Auctioned upto 30-06-2023
9.	Narmada	Handiya	Khedineema-A	1	13.00	A 22°29'39.40"N 77°01'43.80"E B 22°29'40.35"N 77°02'04.01"E C 22°29'33.21"N 77°02'06.92"E D 22°29'32.26"N 77°01'44.88"E	Auctioned upto 30-06-2023
10.	Narmada	Handiya	Khedineema-B	1	14.00	A 22°29'40.35"N 77°02'04.01"E B 22°29'40.72"N 77°02'25.60"E C 22°29'35.58"N 77°02'28.11"E D 22°29'33.21"N 77°02'06.92"E	Auctioned upto 30-06-2023
11.	Narmada	Handiya	Mohanpura	1/1	10.00	A 22°29'39.65"N 77°02'26.63"E B 22°29'48.82"N 77°02'52.17"E C 22°29'45.33"N 77°02'53.53"E D 22°29'35.16"N 77°02'27.94"E	Auctioned upto 30-06-2023
12.	Narmada	Timarni	Pachora	1/1	15.00	A 22°33'41.08"N 77°08'26.91"E B 22°34'07.62"N 77°08'49.70"E C 22°34'02.90"N 77°08'53.55"E D 22°33'37.99"N 77°08'30.74"E	Auctioned upto 30-06-2023
13.	Ganjal	Timarni	Chidgoanmail	62	7.81	A 22°24'44.19"N 77°18'02.22"E B 22°24'46.12"N 77°18'04.72"E C 22°24'23.01"N 77°18'30.53"E D 22°24'21.31"N 77°19'29.17"E	Auctioned upto 30-06-2023
14.	Narmada	Handiya	Surjana	1/1	20.00	A 22°30'00.43" N 77°03'28.93" E B 22°30'06.63" N 77°03'26.62" E C 22°30'17.35" N 77°04'00.08" E D 22°30'11.14" N 77°04'01.87" E	Auctioned upto 30-06-2023

15.	Narmada	Handiya	Aajnai	1/1	8.00	A 22°30'17.12" N 77°04'29.66" E B 22°30'20.35" N 77°04'28.25" E C 22°30'26.99" N 77°04'47.53" E D 22°30'23.44" N 77°04'49.20" E E 22°30'18.72" N 77°04'40.89" E F 22°30'17.33" N 77°04'36.38" E	Auctioned upto 30-06-2023
16.	Narmada	Handiya	Goyat	1/1	8.00	A 22°30'43.63" N 77°05'21.24" E B 22°30'46.65" N 77°05'18.87" E C 22°31'01.05" N 77°05'35.80" E D 22°30'57.30" N 77°05'38.20" E	Auctioned upto 30-06-2023

4. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST FIVE YEARS FROM SAND MINING LEASES

Table No. 4 Revenue received in last 5 years from Sand

Year	Revenue from Sand (In Crore)
2017-18	1.98
2018-19	1.92
2019-20	8.26
2020-21	14.77
2021-22	27.29
Total	**54.22**

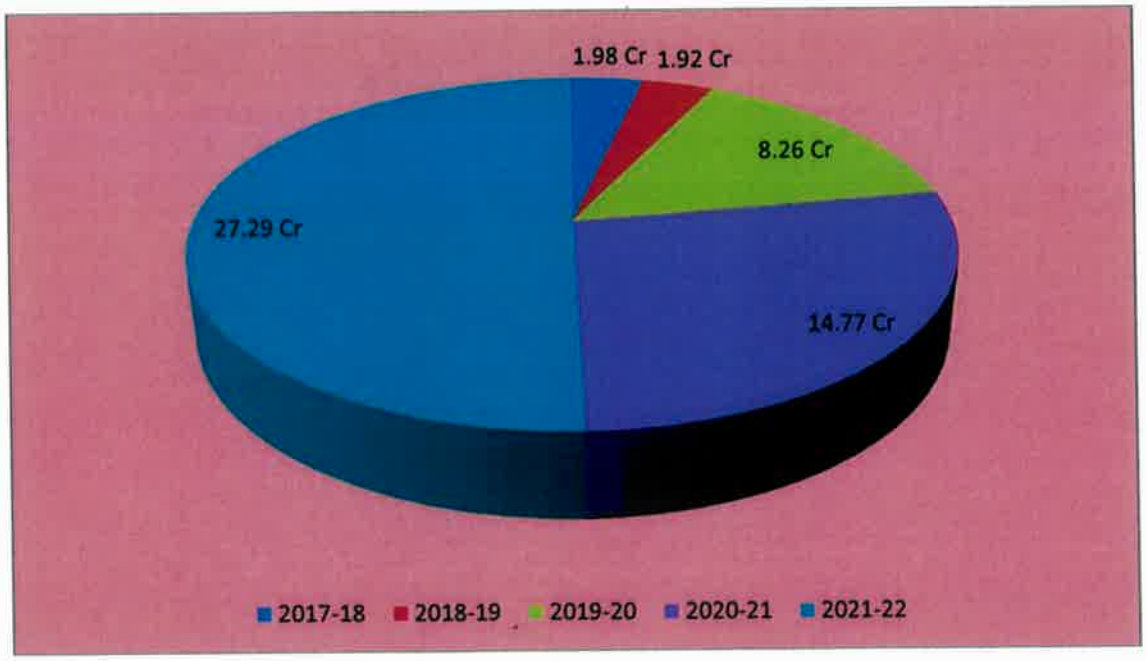

Figure No. 2 Revenue from Sand in 5 years (In Crore)

5. DETAILS OF PRODUCTION OF SAND OR BAJRI IN LAST FIVE YEARS

Table No. 5 Sand Production in last 5 years

Mineral	Year	Production
Sand	2017-18	198494
	2018-19	191590
	2019-20	144515
	2020-21	391518
	2021-22	500240
Total		**1426358**

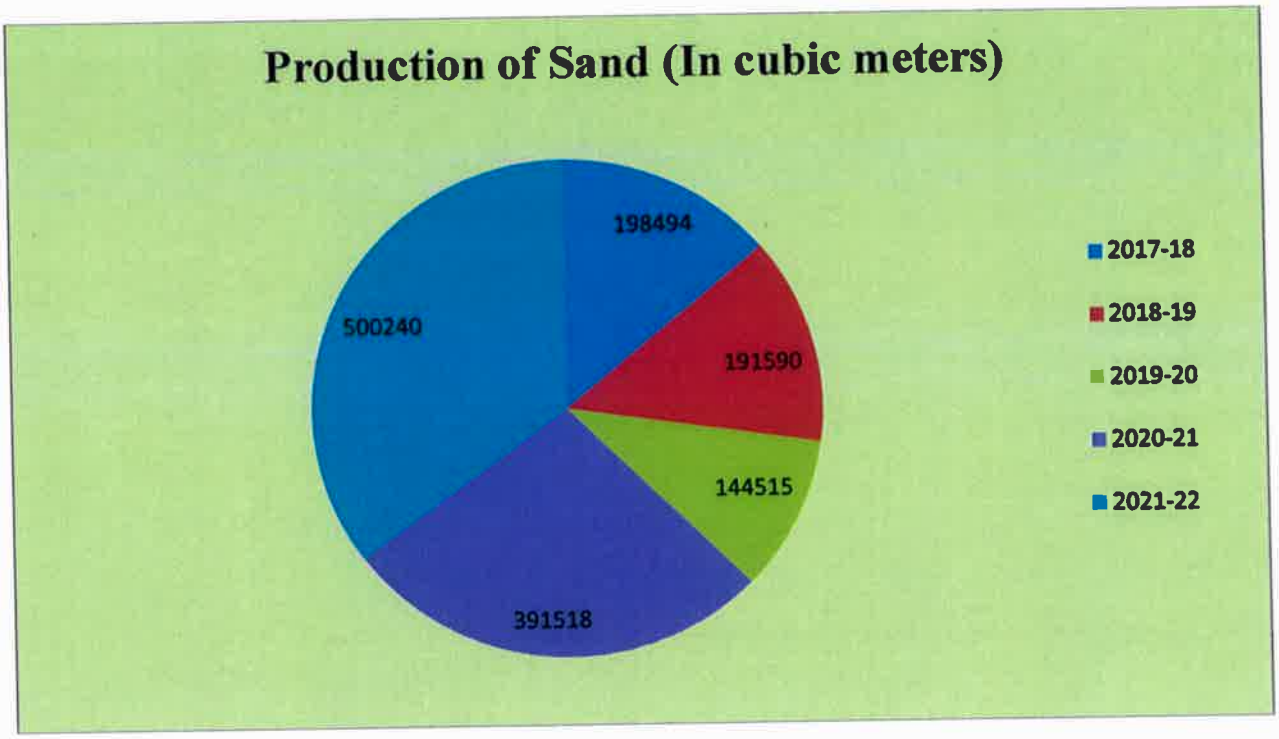

Figure No. 3 Production of Sand in last 5 years (In cu.m)

6. PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF DISTRICT

Rivers have a lot of energy and because they have energy, they do stuff. The obvious things rivers do with their energy is flow but, besides this, they also transport load, erode load and erode the channel through which they flow.

Erosion

Erosion is the breaking down of material by an agent. In the case of a river, the agent is water. The water can erode the river's channel and the river's load. A river's load is bits of eroded material, generally rocks, which the river transports until it deposits its load.

A river's channel is eroded laterally and vertically making the channel wider and deeper. The intensity of lateral and vertical erosion is dictated by the stage in the river's course, discussed in more detail here but essentially, in the upper stage of the river's course (close to the source of the river) there is little horizontal erosion and lots of vertical erosion. In the middle and lower stages vertical erosion is reduced and more horizontal erosion takes place. There are several different ways that a river erodes its bed and banks. The first is hydraulic action, where the force of the water removes rock particles from the bed and banks. This type of erosion is strongest at rapids and waterfalls where the water has a high velocity. The next type of erosion is corrasion. This is where the river's load acts almost like sandpaper, removing pieces of rock as the load rubs against the bed & banks. This sort of erosion is strongest when the river is transporting large chunks of rock or after heavy rainfall when the river's flow is turbulent. Corrosion is a special type of erosion that only affects certain types of rocks. Water, being ever so slightly acidic, will react with certain rocks and dissolve them. Corrosion is highly effective if the rock type of the channel is chalk or limestone (anything containing calcium carbonate) otherwise, it doesn't have much of an effect. Cavitation is an interesting method of erosion. Air bubbles trapped in the water get compressed into small spaces like cracks in the river's banks. These bubbles eventually implode creating a small shockwave that weakens the rocks. The shockwaves are very weak but over time the rock will be weakened to the point at which it falls apart. The final type of erosion is attrition. Attrition is a way of eroding the river's load, not the bed and banks. Attrition is where pieces of rock in the river's load knock together, breaking chunks of rock off of one another and gradually rounding and shrinking the load.

Transportation

When a river erodes the eroded material becomes the river's load and the river will then transport this load through its course until it deposits the load. There are a few different ways that a river will transport load depending on how much energy the river has and how big the load is. The largest of particles such as boulders are transported by traction. These particles are rolled along the bed of the river, eroding the bed and the particles in the process, because the river doesn't have enough energy to move these large particles in any other way. Slightly smaller particles, such as pebbles and gravel, are transported by saltation. This is where the load bounces along the bed of the river because the river has enough energy to lift the particles off the bed but the particles are too heavy to travel by suspension. Fine particles like clay and silt are transported in suspension; they are suspended in the water. Most of a river's load is transported by suspension. Solution is a special method of transportation. This is where particles are dissolved

into the water so only rocks that are soluble, such as limestone or chalk, can be transported in solution.

Capacity & Competence

Rivers can only carry so much load depending on their energy. The maximum volume of load that a river can carry at a specific point in its course is called the river's capacity. The biggest sized particle that a river could carry at a specific point is called the river's competence.

Deposition

To transport load a river needs to have energy so when a river loses energy it is forced to deposit its load. There's several reasons why a river could lose energy. If the river's discharge is reduced then the river will lose energy because it isn't flowing as quickly anymore. This could happen because of a lack of precipitation or an increase in evaporation. Increased human use (abstraction) of a river could also reduce its discharge forcing it deposit its load. If the gradient of the river's course flattens out, the river will deposit its load because it will be travelling a lot slower. When a river meets the sea a river will deposit its load because the gradient is generally reduced at sea level and the sea will absorb a lot of energy.

As rivers get nearer to their mouths they flow in increasingly wide, gentle sided valleys. The channel increases in size to hold the extra water which the river has to receive from its tributaries. As the river gets bigger it can carry larger amounts of material. This material will be small in size, as larger rocks will have broken up on their way from the mountains. Much of the material will be carried in suspension and will erode the river banks by abrasion. When rivers flow over flatter land, they develop large bends called meanders. As a river goes around a bend most of the water is pushed towards the outside causing increased erosion. The river is now eroding sideways into its banks rather than downwards into its bed, a process called lateral erosion. On the inside of the bend, in contrast, there is much less water. The river will therefore be shallow and slow-flowing. It cannot carry as much material and so sand and shingle will be deposited. This is called a point bar or slip off slope.

Due to erosion on the outside of a bend and deposition on the inside, the shape of a meander will change over a period of time. Notice how erosion narrows the neck of the land within the meander. In time, and usually during a flood, the river will cut right through the neck. The river will then take the new, shorter route. The fastest current, called the thalweg, will now tend to be in the center of the river, and so deposition is likely to occur in gentler water next to the banks. Eventually deposition will block off the old meander to leave an oxbow lake. The oxbow lake will slowly dry up, only refilling after heavy rain or during a flood. Streams lose velocity and make deposits when their gradient decreases, when the volume of water decreases, when there is an increase in cross section, when they encounter obstructions, or when they enter still water. They deposit alluvial fans, alluvial cones, piedmont alluvial plains, channel fill, bars, flood plains and deltas.

Most of the rivers/streams flowing in the district are originated within the district and produced black sand, because whole district of Harda is comprised of deccan trap basalt. However, the river Narmada originate from Amarkantak and have very huge catchment area. Its catchment area is comprised of various litho units belonging to basement granite, gneisses, Sausar

group, Mahakoshal, Vindhyan, Gondwana supergroup of rocks and deccan trap basalt.

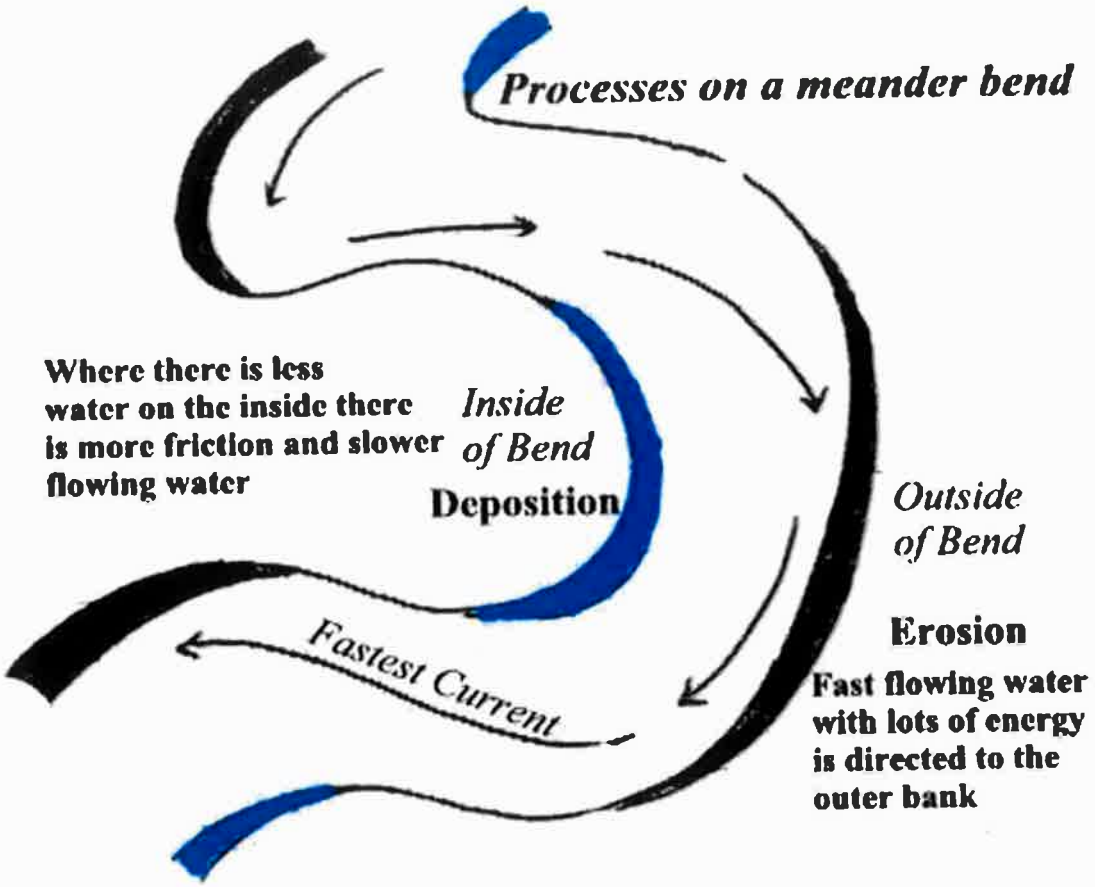

Figure No. 4 Conducive Areas of Sand Deposition

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7. GENERAL PROFILE OF THE DISTRICT

Table No. 6 General Profile of the District

S. No.	ITEMS	STATISTICS	
1.	**GENERAL INFORMATION**		
	i) Geographical Area	3330 sq.km.	
	ii) Administrative Divisions (As on 2012) Number of Tehsils	6	
	Number of Blocks	3 (Harda, Khirkia, Timarni)	
	Number of Panchayats	211 Village Panchayats	
	Number of Villages	573	
	iii)Population (As per 2011 census)	570302	
	iv)Average Annual Rainfall (mm)	1374.5 mm	
2.	**GEOMORPHOLOGY**		
	i) Major Physiographic Units	1. Satpura range and extension of Malwa Plateau in the south 2. Ridges (equivalent to Aravalli) 3. Alluvial plain in the north-east and central part	
	ii) Major Drainage	Narmada river and its tributaries, namely Ganjal river, Ajnal river, Sukni nadi, Midkul nadi, Dedra nadi, Machak nadi, Syani nadi and Kalimachak river.	
3.	**LAND USE**		
	i) Forest area:	780.92 Sq. Km.	
	ii) Net area sown:	1797.87 Sq. Km.	
	iii) Cultivable area:	1845.32 Sq. Km.	
4.	**MAJOR SOIL TYPES**		
		Black soils and ferruginous red lateritic soils, Sandy clay loam, sandy loam and clay loam. (	
5.	**AREA UNDER PRINCIPAL CROPS**		
6.	**IRRIGATION BY DIFFERENT SOURCES**		
		Number of Structures	**Area (sq km)**
	Dugwells	8140	307
	Tube wells/Bore wells	1894	142
	Tanks/Ponds	1	1
	Canals	1	795
	Other Sources	169	
	Net Irrigated Area	1414	
	Gross Irrigated Area	1414	
7.	**NUMBER OF GROUND WATER MONITORING WELLS OF CGWB (31.3.2013)**		
	No. of Dug Wells No. of Piezometers	9 3	

8	**PREDOMINANT GEOLOGICAL FORMATIONS**	
		Archaean Granite; Porcellanite/ quartzite/ schist (equivalent to Aravallies); Deccan Trap basaltic lava flows and older dolerite dykes/ sills and Recent laterite and alluvium
9	**HYDROGEOLOGY**	
	Major Water Bearing Formation **Pre-monsoon** depth to water level during 2012 **Post-monsoon** depth to water level during 2012 Long Term water level trend in 10 years (2003-2012) in m/yr	Alluvium, Deccan Trap and weathered granite. 3.81 to 16.27 m.bgl 0.30 to 17.8 m.bgl 0.04 to 0.73 m fall/annum During Pre-monsoon 0.02 to 0.38 m rise/annum (Post-monsoon)
10.	**GROUND WATER EXPLORATION BY CGWB (As on 31.3.2013)**	
	No of wells drilled (EW,OW,PZ,SH, Total)	1 EW, 3 PZ
	Depth Range (m)	32.61to 98.45 m.bgl
	Discharge (litres per second)	meagre to 10 lps.
11.	**GROUND WATER QUALITY**	
	Presence of Chemical constituents more than permissible limit (eg EC, F, As,Fe)	High Nitrate (> 45 mg/l) recorded in 5 water samples
	Type of Water	Calcium Bicarbonate type
12	**DYNAMIC GROUND WATER RESOURCES (2009) in MCM**	
	Net Ground Water available	540.72
	Gross Annual Ground Water Draft	134.34
	Projected Demand for Domestic and Industrial uses up to 2035	13.47
	Stage of Ground Water Development	24%
13.	**MAJOR GROUND WATER PROBLEMS AND ISSUES**	
		Ground water level in declining in Khirkiya block and parts of Timarni block.

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8. LAND UTILISATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, MINING, ETC.

Table No. 7 Land Utilisation Pattern of the District

L1	L2	Area in sq.km.
Agriculture	Crop land	2085.56
	Current Shifting cultivation	
	Fallow	64.98
	Plantation	
Barren/unculturable/Wastelands	Barren Rocky	
	Gullied / Ravinous Land	1.18
	Rann	
	Salt Affected Land	
	Sandy Area	
	Scrub Land	111.75
Builtup	Mining	0.088
	Rural	44.62
	Urban	10.76
Forest	Deciduous	872.84
	Evergreen/Semi evergreen	
	Forest Plantation	
	Scrub Forest	23.82
	Swamp / Mangroves	
Grass / Grazing	Grass / Grazing	
Snow and Glacier	Snow and Glacier	
Wet lands / Water bodies	Inland Wetland	
	Coastal Wetland	
	River/Stream/Canals	74.86
	Water bodies	39.12

Landuse and Landcover areas of the district Harda are shown in map and attached as Plate No. 3of this District Survey Report.

State Level Environment Impact Assessment Authority, M.P.

9. PHYSIOGRAPHY OF THE DISTRICT

Physiographically the district can be divided in three major divisions:-

- Satpura range and extension of Malwa Plateau in the South.
- Ridges (equivalent to Aravalli Hills) in the North-West.
- Alluvial plain in the North-East and Central part.

The district is bounded by Satpura ranges in South and by Narmada river in the North. The area slopes North-West towards the Narmada river. The slope is generally steep at the foothills of Satpura but moderate to gentle towards Narmada river. The land surface attains a maximum altitude of 734 m above mean sea level at Kaoti (77° 19' 30" : 22° 03' 00"), and minimum altitude of 240 m above mean sea level at confluence of Machak river with the Narmada (76° 46' 50" : 22° 19' 00"). A large number of North Westerly flowing tributaries originating from the Satpura join the Narmada River along the left bank. The area is mainly drained by Narmada river and its tributaries namely Ganjal river, Ajnal river, Sukni nadi, Midkul nadi, Dedra nadi, Machak nadi, Syani nadi and Kalimachak river.

10. MONTHLY RAINFALL OF THE DISTRICT

The climate of Harda district is characterized by a hot summer and general dryness except during the south west monsoon season. The year may be divided into four seasons. December to February is the cold season, followed by the hot season from March to about the middle of June. The period from the middle of June to September is the South-West monsoon season. October and November form the post monsoon period. The normal rainfall of Harda district is 1374.5 mm. It receives maximum rainfall during South-West monsoon period. About 90.5% of the annual rainfall is received during monsoon season and only 9.5% of the annual rainfall takes place during October to May period. The surplus water for groundwater recharge is available only during the South-West monsoon period. The normal annual mean maximum and minimum temperature of Harda district is 32.8°C and 19.8°C respectively. During the South-West monsoon season the relative humidity generally exceeds 91% (August month). Rest of the year is drier. The driest part of the year is the summer season, when relative humidity is less than 33%. April is the driest month of the year. The wind velocity is higher during the pre-monsoon period as compared to post monsoon period. The maximum wind velocity 7.7 km/hr is observed during the month of June and minimum 2.9 km/hr during the month of December. The average normal annual wind velocity of Harda district is 5.0 km/hr.

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Month Wise Rainfall Data Of Last Five Year

Table No. 8 Monthly Rainfall Data of last 5 years of the District

S.No.	Month	2017	2018	2019	2020	2021
		Month wise Average Rainfall (m.m.)	Month wise Average Rainfall (m.m.)	Month wise Average Rainfall (m.m.)	Month wise Average Rainfall (m.m.)	Month wise Average Rainfall (m.m.)
1	January	4.2	0.0	0.0	1.3	1.0
2	February	1.3	3.6	18.9	3.1	0.0
3	March	0.0	0.0	25.6	14.0	2.8
4	April	0.0	0.0	1.0	0.8	0.0
5	May	0.0	0.0	0.0	2.5	39.4
6	June	126	94.5	33.6	290.5	232.6
7	July	267.1	304.3	441.7	168.6	224.6
8	August	118.3	362.0	533.2	553.5	188.8
9	September	156.7	60.5	692.7	81.2	208.9
10	October	1.0	8.9	59.1	6.4	87.6
11	November	0.0	0.0	2.5	0.0	0.0
12	December	0.0	0.0	3.8	9.2	0.0
	Total	**674.6**	**883.8**	**1812.1**	**1131.1**	**985.7**

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11. GEOLOGY AND MINERAL WEALTH OF THE DISTRICT

The area exhibits Archean gneisses, metabasic and phyllites of Mahakoshal group, Harda granitoids, Bijawar group of sediments and Deccan trap basalt. Geological succession is as presented below:-

Table No. 9 Geological Distribution of the District

Age	Formations	Rocks
Quaternary		Alluvium & Gravel beds
Upper Cretaceous to Palaeogene	Deccan Trap	Basaltic lava flows and dykes
Neo Proterozoic Palaeo-Meso Proterozoic	Vindhyan Super group Bijawars	Immature Sandstone, grits Dolomite, Chert breccia and Quartzite
^^^^^^^^^^^^^^^^^^^^	^^^^^Unconformity^^^^^^	^^^^^^^^^^^^^^^^^^^^
Palaeo Proterozoic	Harda Granitoids Mahakoshal Group	Granite, Granitic gneisses, Schists, Phyllite, Basic/Acid Intrusive

The augen gneisses are the oldest rocks of the area and exposed about 2 km South-East of Abgaon kalanvillage. It shows strong foliation, outcrops of Mahakoshal group are noticed about 1km North of Abgaon kalan and occur as enclaves within the granites, which includes metabasics and phyllites. TheHarda granitoids consist of pink and grey granite. It is medium to fine grained, crudely foliated. It appears that granitoids forming the basement for the Bijawar group with angular unconformity.

Bijawar group of rocks occur unconformably over the Archeans. They are represented by dolomite, quartzite and cherty breccia. The main rock type of the group is dolomite which covers extensive area around Jharpa, Neemgaon, Undawa, Chhirgaon. Dolomites are grey to smoky grey in colour and are fine grained. The rocks weather peculiarly and have rough pointed and hardly cut up surface giving the appearance of an elephant skin. Dolomite has been traversed by lenses and ribbons of quartz, which are hard, compact. Quartzite is exposed around Kayagaon and north of Ajnas. It is hard and compact, white to dirty brown in colour. Chert breccia is other extensive horizon exposed around Adalpur, Jhalwan, Jamli, Dhangaon. It is composed of angular pieces of chert, quartz and sometimes quartzite within silicified cherty matrix. The Bijawar sedimentary rocks generally trend North-East to South-West and East-North-East to West-South-West with dip varying between 35^0 to 55^0.

Vindhyan super group rocks have also been noticed in the south of Handiya along the Indore

road and mainly consist of conglomerate and sandstone. The sandstone forms the major part of this formation, it is fine to medium grained, immature, light brown, pink and purple colored. The pebbles are mainly derived from chert breccia of Bijawar rocks.

The basaltic lava flows occupy the major part of the district. The different trappean flows are well distinguished at many places by presence of Inter-trappean horizons and red colored shale bands known as red boles between the flows. Inter trappean beds consisting of impure siliceous limestone, chert and sometimes clays.

Deep alluvium deposits semi-consolidated to unconsolidated are found along the Narmada River. The lower strata consist of older Alluvium or the buried alluvium. The alluvium also occurs along the tributary streams and foot of the Vindhyan scarps below the boulder beds. The basaltic areas are mostly covered with black cotton soil whereas the reddish, brownish colored ferruginous soil indicates underlying Bijawars.

Drainage

The entire district is drained by Narmada River and its tributaries. Thus the area falls in the Narmada Basin. The river Narmada flows along the northern boundary of the district. The Ganjal river is the major tributary of the Narmada river and flows from south to north along the eastern boundary of Harda district before merging into the Narmada river. The other major tributary of the Narmada river draining the district are Ajnal river, Sukni nadi, Midkul nadi, Dedra nadi, Machak nadi, Syani nadi and Kalimachak river.

Narmada

The magnificent River flows along the Northern boundary of the District in a rift valley from East to West with a northerly inclination. It rises from the Amarkantak Plateau (22° 40' : 81° 45') of the Satpura range in Anuppur district. Flowing to the West it touches the district at Lasangaon (75° 31' E) at the confluence with Ganjal river. It forms the northern boundary of the District along with that of the Dewas. The states of Madhya Pradesh, Maharashtra, Gujarat and Rajasthan are interested in developing the resources of the river by the construction of a series of dams on the Narmada and its tributaries. The source of the Narmada is a small tank called the Narmada kund located on the Amarkantak hill (1057 metres) at 22° 40' N : 81° 46' E. The river descends from the Amarkantak hill range at the Kapildhara falls over a cliff. After leaving Shadol district it meanders in the hills flowing through a tortuous course crossing the rocks and islands up to the ruined palace of Ramnagar. Between Ramnagar and Mandla 25 km further South-East the course is comparatively straight with deep water devoid of rocky obstacles. The Banjar joins from the left. The river then runs North-East

in a narrow loop towards Jabalpur. Close to this city, after a fall of some 9 metres called the Dhuandhara, the fall of mist, it flows for 3 km in a deep narrow channel which it has carved out for itself through the magnesian limestone and basalt. From a width of about 90 metre it is compressed in this channel of 18 metre only. The highest point of the cliff was measured 40.5 metre high from the water level in December 1965 by the GSI. Beyond this point up to its meeting the Arabian sea the Narmada enters 3 narrow valleys between the Vindhyan scarps in the North and the Satpura range in the South. The southern extension of the valley is wider at most places.

Ganjal

The Ganjal river rises from the adjoining Hoshangabad district & forms the eastern boundary of district. The river bori originates from southern part of the district and It flows due north and joined Ganjal. Ultimately river Ganjal meets river Narmada. It drains about 25 % of the district.

Ajnal

The Ajnal, tributary of Narmada, rises from the central part of the district and flows westerly. It drains major portion of the district, amounts to about 42% of the total area.

The Machak & Kali Machak rivers are also rises from the southern upland and jointly drain into the Narmada. They both together drains about 25 % area of the district Drainage system with description of main rivers.

12. IMPACT ON THE ENVIRONMENT DUE TO MINING ACTIVITY

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

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

Air

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

The major air pollutants due to mining activity includes particulate matter (dust) of various sizes, gases such as Sulphur Dioxide, Oxides of Nitrogen, Carbon Monoxide etc., from vehicular exhaust.

Dust is the single Air pollutant observed in the open cast mines. Diesel operating drilling machines, small amount of blasting and movement of machinery/ vehicles produce gaseous (NOx and SOx) emissions, usually at low levels. Dust can be of significant nuisance surrounding land users and potential health risk in some circumstances.

Water Impact

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

Noise

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

Land Environment

The topography of the area will change; due to the Topographical changes the entire Eco system will be altered. Erosion might be promoted directly or indirectly through mining of sand.

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.

13. REMEDIAL MEASURE TO MITIGATE THE IMPACT OF MINING ON THE ENVIRONMENT

Air

Mitigated measures suggested for air pollution controls are based on the baseline ambient air quality of the area. The following measures are proposed to adopted in the mines such as,

- Dust generation shall be reduced by using sharp teeth of shovels.

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

Water

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

Noise

- Periodic maintenance of machinery, equipment shall be ensured to keep the noise generated at minimum.
- Development of thick green belt around mining area and haul roads to reduce the noise.
- Provision of earplugs to workers exposed to high noise generating activities. Workers and operators at work site will be provided with earmuffs.
- Conducting periodical medical check-up of all workers for any noise related health problems.
- Proper training to personnel to create awareness about adverse noise level effects.

- Periodic noise monitoring at suitable locations in the mining area and nearby habitations to assess efficacy of adopted control measures.
- During the blasting, optimum Spacing, Burden and charging of holes will be made under the supervision of competent qualified mines foreman, mate as approved by Director of Mines safety.

Land Environment

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

Biological Environment

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

Reclamation of Mined Out Area

Mine reclamation is the process of modifying land that has been mined to ecologically functional or economically usable state. Although the process of mine reclamation occurs once mining is completed, the planning of mine reclamation activities occurs prior to a mine being

permitted or started. Mine reclamation creates useful landscapes that meet a variety of goals ranging from the restoration of productive ecosystems to the creation of industrial and municipal resources. In the United States, mine reclamation is a regular part of modern mining practices. Modern mine reclamation reduces the environmental effects of mining.

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.

14. DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER OF MINING LEASE VIZ NO. OF MINING LEASE LOCATION

Table 10 Details of the Cluster of Mining Leases

S.No.	Tehsil/Division	Village/Location Name	Khasra No.	Khasra Area (In Ha.)	Cluster and Non Cluster
1	Timarni	Chhipaner	1/1	15.00	Non-Cluster
2	Handiya	Handiya	1/1	20.00	Non-Cluster
3		Golamalgujari-A	1/1 to 6-47	8.00	Cluster
4		Golamalgujari-B	1/1 to 6-47	6.00	Cluster
5		Malpone	1/1	6.00	Cluster
6	Timarni	Lachora	1/1	10.00	Non-Cluster
7	Handiya	Sigon	70/1, 70/4	21.00	Cluster
8		Uchan	1/1	22.00	Non-Cluster
9		Khedineema-A	1	13.00	Cluster
10		Khedineema-B	1	14.00	Cluster
11		Mohanpura	1/1	10.00	Cluster
12	Timarni	Pachora	1/1	15.00	Non-Cluster
13		Chidgoanmail	62	7.81	Non-Cluster
14	Handiya	Surjana	1/1	20.00	Non-Cluster
15		Aajnai	1/1	8.00	Non-Cluster
16		Goyat	1/1	8.00	Non-Cluster

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15. SAND REPLENISHMENT PLAN AND PROJECTIONS

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 figures presented may just be a mere prediction, based on the production in the preceding years. More so, practically, it is not possible that in such a short period, single person can visit each spot within the district and determine how much quantity of sand may be replenished every year. The data narrated in the report, regarding annual deposition of sand and associated aggregates and minable mineral potential is concerned, is only an estimation based on the production data provided by the district mining office. Thus, the figures may vary from area to area and year on year basis. Therefore, this document is not a static one but have to be a dynamic one, the figures of which may vary with respect to the area under question for which the prior environmental clearance will be sought.

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

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

Negative Impacts

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

Positive Impacts

Employment and socio-economic status of the habitats living besides the river depends on sand mining industries. Construction of concrete infrastructure, roads and some other related

activities depends on the river bed sand. Continuous accumulation of sand ultimately leads to the reduction in water carrying capacity of the river leading excessive flood in the river. Sustainable extraction of sand from river will lead to overcoming the problem.

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

16. 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

17. DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVERS

Drainage

The entire district is drained by Narmada River and its tributaries. Thus the area falls in the Narmada Basin. The river Narmada flows along the northern boundary of the district. The Ganjal river is the major tributary of the Narmada river and flows from south to north along the eastern boundary of Harda district before merging into the Narmada river. The other major tributary of the Narmada river draining the district are Ajnal river, Sukni nadi, Midkul nadi, Dedra nadi, Machak nadi, Syani nadi and Kalimachak river.

18. SALIENT FEATURES OF IMPORTANT RIVERS AND STREAMS

Table No. 11 Salient Features of Important Rivers and Streams

S. No.	Name of the River	Total Length in the District (In km)	Place of Origin	Altitude at origin
1	Narmada	55 km	Amarkantak	1048 m
2	Machak	63 km	Kewati	700 m
3	Kalimachak	30 km	Kumbhikheda	391 m
4	Ajnal	72 km	Gorakhal	640 m
5	Bankur	25 km	Gosar	315 m
6	Ganjal	80 km	Dehriya	734 m

19. MINERAL POTENTIAL AND ANNUAL DEPOSITION

Table No. 12 Details of Mineable Mineral and Annual Deposition

Boulder (m^3)	Bajri (m^3)	Sand (m^3)	Total Mineable Mineral Potential (cu.m)	Annual Deposition
It is associated with river sand as unsorted material as per volume it constitutes approximately 5% of total deposition/ Mineable mineral potential i.e. 948135 m^3 in the stream. hence the volume of boulder is 47406 m^3.	It is associated with river sand as less sorted material as per volume it constitute approximately 10% of total deposition/ Mineable mineral potential i.e. 948135 m^3 in the stream, hence the volume of bajri is 94814 m^3.	It is found mainly in Narmada river, though the resources as per their area in the district is huge, as per volume it constitute approximately 85% of total deposition/ Mineable mineral potential i.e. 948135 m^3 in the stream. hence the volume ofsand is 805914 (85%) m^3.	Huge, immense because river Narmada flows nearly 55 km in the Harda district and it is a perineal river. The Minable mineral is sum of Boulder, Bajri and Sand i.e. 948135 m^3.	Approx. 1561550 m^3 is annual deposit, of which 40% of this have to be left for the protection of bank.

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

20. MINEABLE MINERAL POTENTIAL

Table No. 13 Details of Mineable Mineral Potential

S. No.	Portion of the River or Stream Recommended for Mineral Concession			Length of area recommended for mineral concession (in kilometres)	Average width of area recommended for mineral concession (in meters)	Sanctioned Area (In Ha.)	Area recommended for mineral concession (in sq.m) (Area x Depth)	Total Sand Potential (In metric tonne) {@ cu.m x 1.4 = m.t}	Mineable mineral potential (60% of total mineral potential) (in metric tonne)	Annual Sand Production 2019-20 (In cu.m)	Annual Sand Production 2020-21 (In cu.m)	Annual Sand Production 2021-22 (In cu.m)
	River	Village	Khasra No.									
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Narmada	Chhipaner	1/1	0.590	254	15.00	150000 x 2	420000 m.t	252000 m.t	N.A	110603.79	129324.29
2		Handiya	1/1	0.999	200	20.00	200000 x 0.5	140000 m.t	84000 m.t	N.A	29936.96	0
3		Golamalgujari-A	1/1 to 6-47	0.682	117	8.00	80000 x 1.5	168000 m.t	100800 m.t	N.A	74431.31	0
4		Golamalgujari-B	1/1 to 6-47	0.306	196	6.00	60000 x 1	84000 m.t	50400 m.t	N.A	31512.54	0
5		Malpone	1/1	0.398	150	6.00	60000 x 1	84000 m.t	50400 m.t	N.A	36560.40	0
6		Lachora	1/1	0.673	148	10.0	100000 x 0.5	70000 m.t	42000 m.t	N.A	236	90023.58
7		Sigon	70/1, 70/4	1.296	162	21.00	210000 x 0.5	147000 m.t	88200 m.t	N.A	46863.08	174648.00
8		Uchan	1/1	0.899	244	22.00	220000 x 0.5	154000 m.t	92400 m.t	N.A	2620.32	99999.64
9		Khedineema-A	1	0.618	210	13.00	130000 x 0.5	91000 m.t	54600 m.t	N.A	0	0
10		Khedineema-B	1	0.622	225	14.00	140000 x 0.5	98000 m.t	58800 m.t	N.A	0	0
11		Mohanpura	1/1	0.790	126	10.00	100000 x 1	140000 m.t	84000 m.t	N.A	58753.17	6028.75
12		Pachora	1/1	1.045	143	15.00	150000 x 0.5	105000 m.t	63000 m.t	N.A	0	0
13	Ganjal	Chidgoanmail	62	1.028	75	7.81	78100 x 0.5	54670 m.t	32802 m.t	N.A	0	0
14	Narmada	Surjana	1/1	1.010	198	20.00	200000 x 0.5	140000 m.t	84000 m.t	N.A	0	0
15		Aajnai	1/1	0.588	136	8.00	80000 x 1	112000 m.t	67200 m.t	N.A	0	0
16		Goyat	1/1	0.657	121	8.00	80000 x 1	112000 m.t	67200 m.t	N.A	0	0
Total						**203.81 Ha**	**2038100**	**1958670 m.t**	**1175202 m.t**			

N.A. — Not Available

Environment Impact Assessment Authority, M.P. (EPCO) Parvavaran Parisar Arera Colony, Bhopal (M.P.)

21.DETAILS OF THE OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT

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

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

Physical Hazards due to Mining Operations:

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

Light:-

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

Heat and Humidity:-

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

Eye Irritation:-

During the high windy days in summer the dust could be the problems for eyes like itching and watering of eyes.

Respiratory Problems:-

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

Noise Induced Hearing Loss: -

Machinery is the main source of noise pollution at the mine site.

Risk Level using Risk Matrix:

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

In Harda there is one district hospital with 100 beds. Malaria control in Madhya Pradesh is complex because of vast tracts of forest with tribal settlement. Fifty four million individuals of various ethnic origins, accounting for 8% of the total population of India, contributed 30% of total

malaria cases, 60% of total falciparum cases and 50% of malaria deaths in the country. Ambitious goals to control tribal malaria by launching "Enhanced Malaria Control Project" (EMCP) by the National Vector Borne Disease Control Program (NVBDCP), with the World Bank assistance, became effective in September 1997 in eight north Indian states. Under EMCP, the program used a broader mix of new interventions, i.e. insecticide-treated bed nets, spraying houses with effective residual insecticides, use of larvivorous fishes, rapid diagnostic tests for prompt diagnosis, treatment of the sick with effective radical treatment and increased public awareness and IEC.

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

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

22.PLANTATION AND GREEN BELT DEVELOPMENT IN RESPECT OF LEASE GRANTED IN THE DISTRICT

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

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

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

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

Table 13 Recommended Plant species for green belt development/plantation

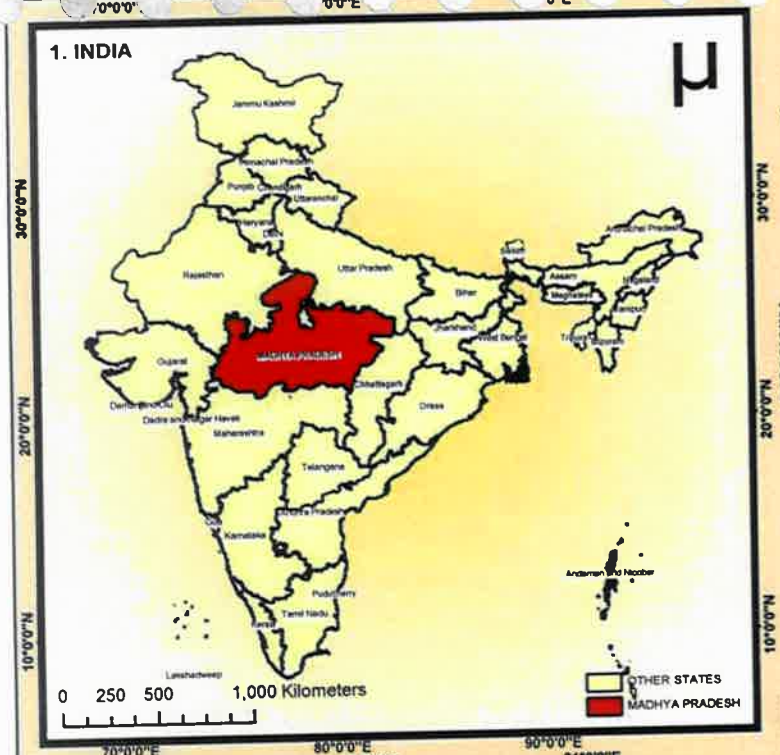
S.No.	Botanical Name	Family	Common Name
1.	Bougainvillea glabra choisy	Nyctagianaceae	Boogenbel
2.	Hibiscus rosa-sinensis L	Malvaceae	Gurhal
3.	Nerium indicum Mill.	Apocynaceae	Kaner
4.	Plumeria rubra L	Apocynaceae	Champa
5.	Tabernaemontana divaricata (L) R. Br. Ex Roem. & Schult	Apocynaceae	Chandni
6.	Ailanthus excels Roxb.	Simaroubaceae	Maha nimbi

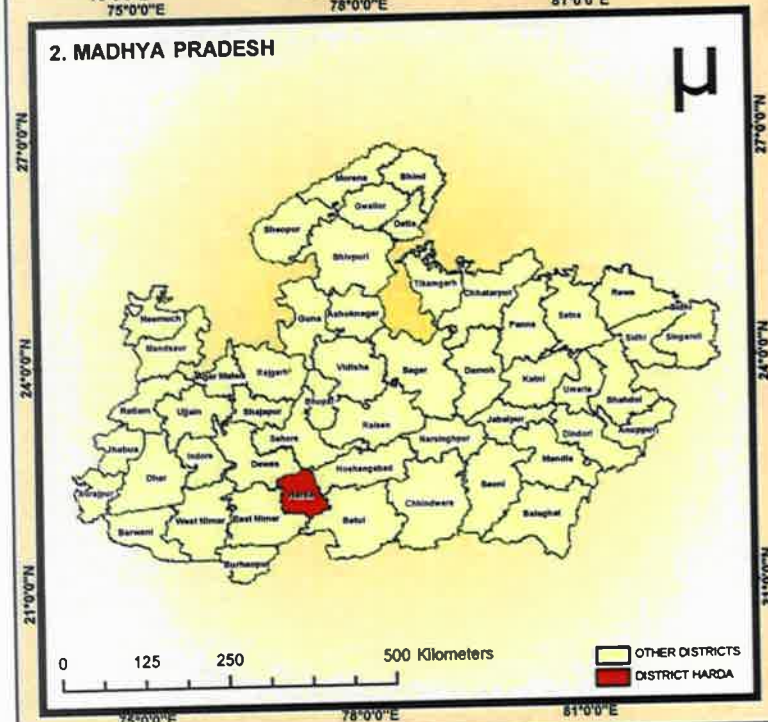
7.	Alastonia scholaris (L.) R.Br	Apocynaceae	Chitvan
8.	Cassia Fistula L	Caesalpiniaceae	Amaltas
9.	Butea monosperma (Lamk) taub	Fabaceae	Khakra/ Palash
10.	Nyctanthes arbour-tristis L.	Oleaceae	Harsingar
11.	Azadirachta indica A. Juss	Meliaceae	Neem
12.	Ficus religiosa L	Moraceae	Pipal
13.	Pterospermum acerifolium willd	Sterculiaceae	Kanak Champa
14.	Tectona grandis L	Verbenaceae	Teak/ Sagun
15.	Terminalia cattapa L	Combretaceae	Jangli badam
16.	Ziziphus mauritiana Lamk.	Rhamnaceae	Bada ber

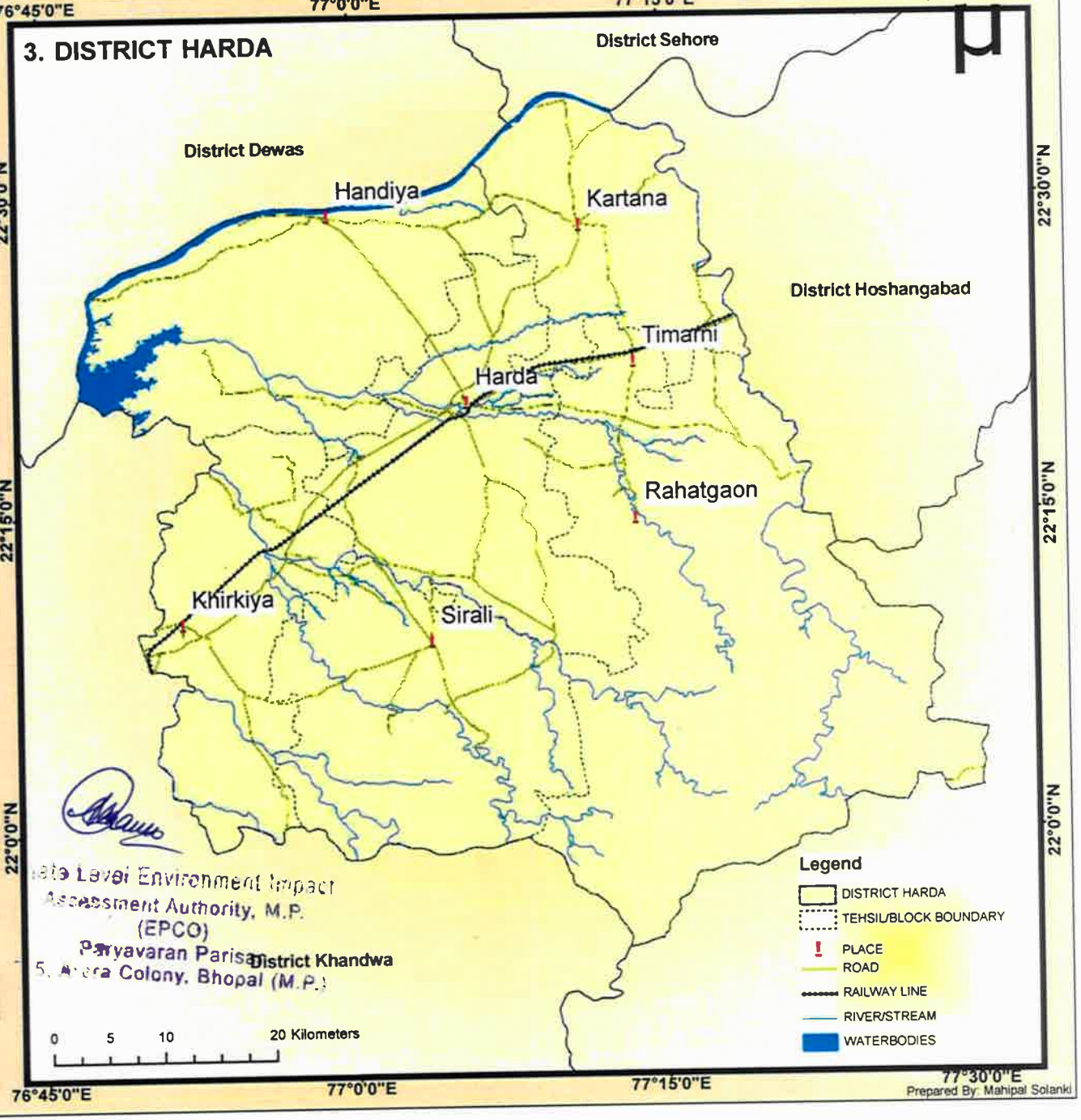
Plantation has been done by project proponent on Barrier Zone, Non Mining Area, Approach road, nearby river bank and ravines etc. as per the suggestions of the authority.

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

LOCATION MAP OF DISTRICT HARDA, MADHYA PRADESH







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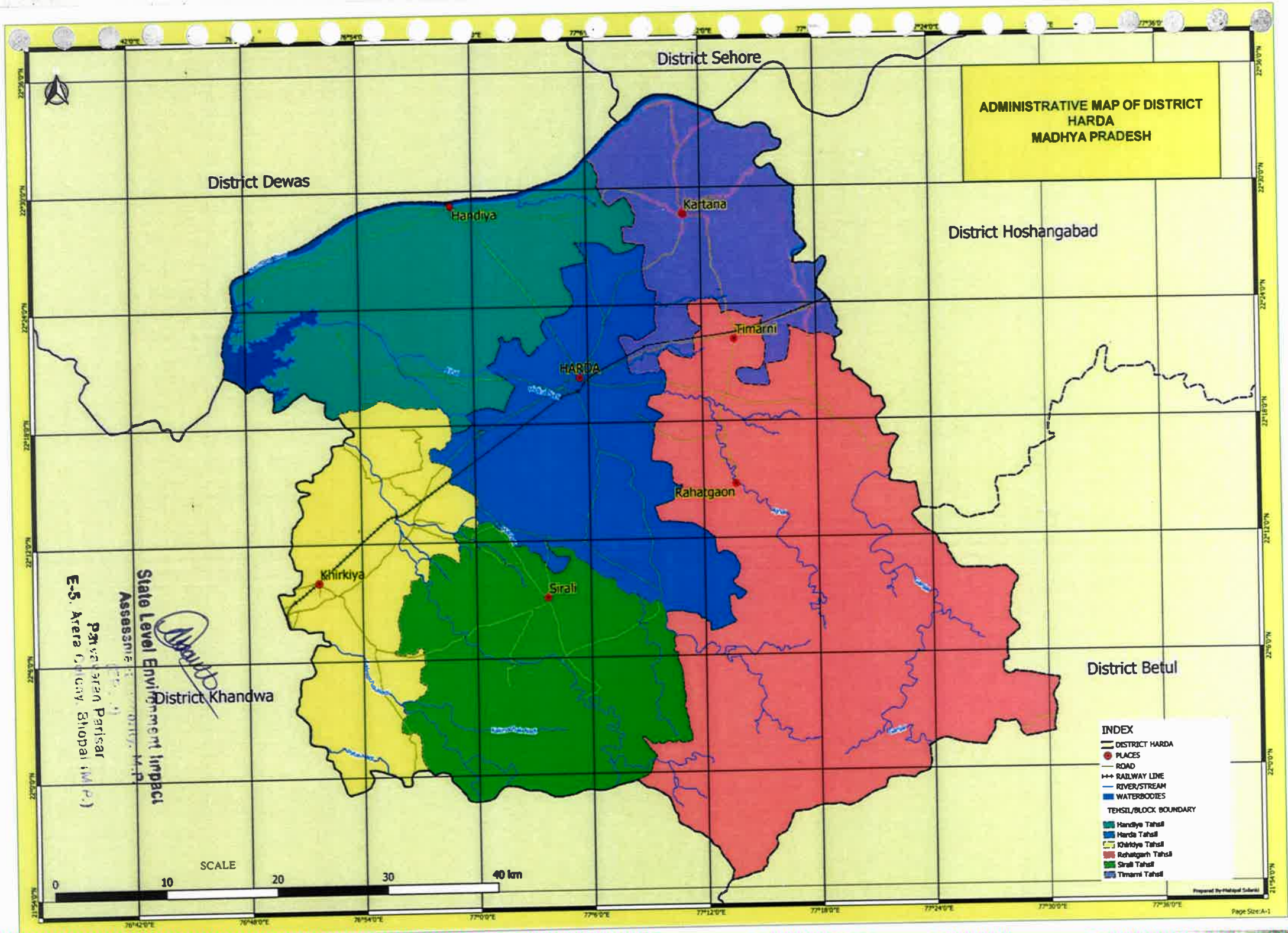
Prepared By: Mahipal Solanki


ADMINISTRATIVE MAP OF DISTRICT
HARDA
MADHYA PRADESH
District Sehore
District Dewas
District Hoshangabad
District Khandwa
District Betul
Handiya
Kartana
Timarni
HARDA
Rahatgaon
Khirkiya
Sirali
INDEX
DISTRICT HARDA
PLACES
ROAD
RAILWAY LINE
RIVER/STREAM
WATERBODIES
TEHSIL/BLOCK BOUNDARY
Handiya Tahsil
Harda Tahsil
Khirkiya Tahsil
Rahatgarh Tahsil
Sirali Tahsil
Timarni Tahsil
SCALE
0
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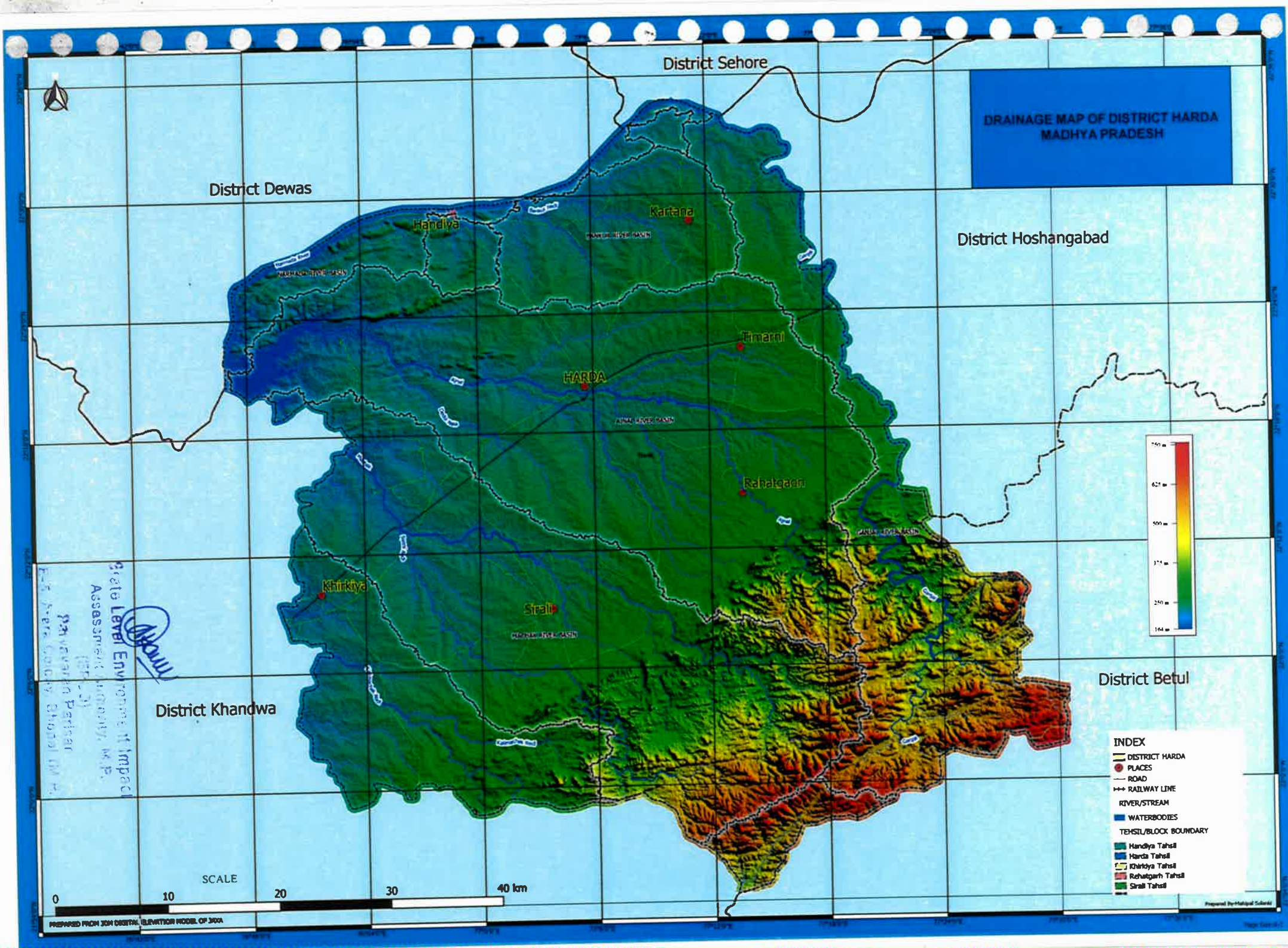
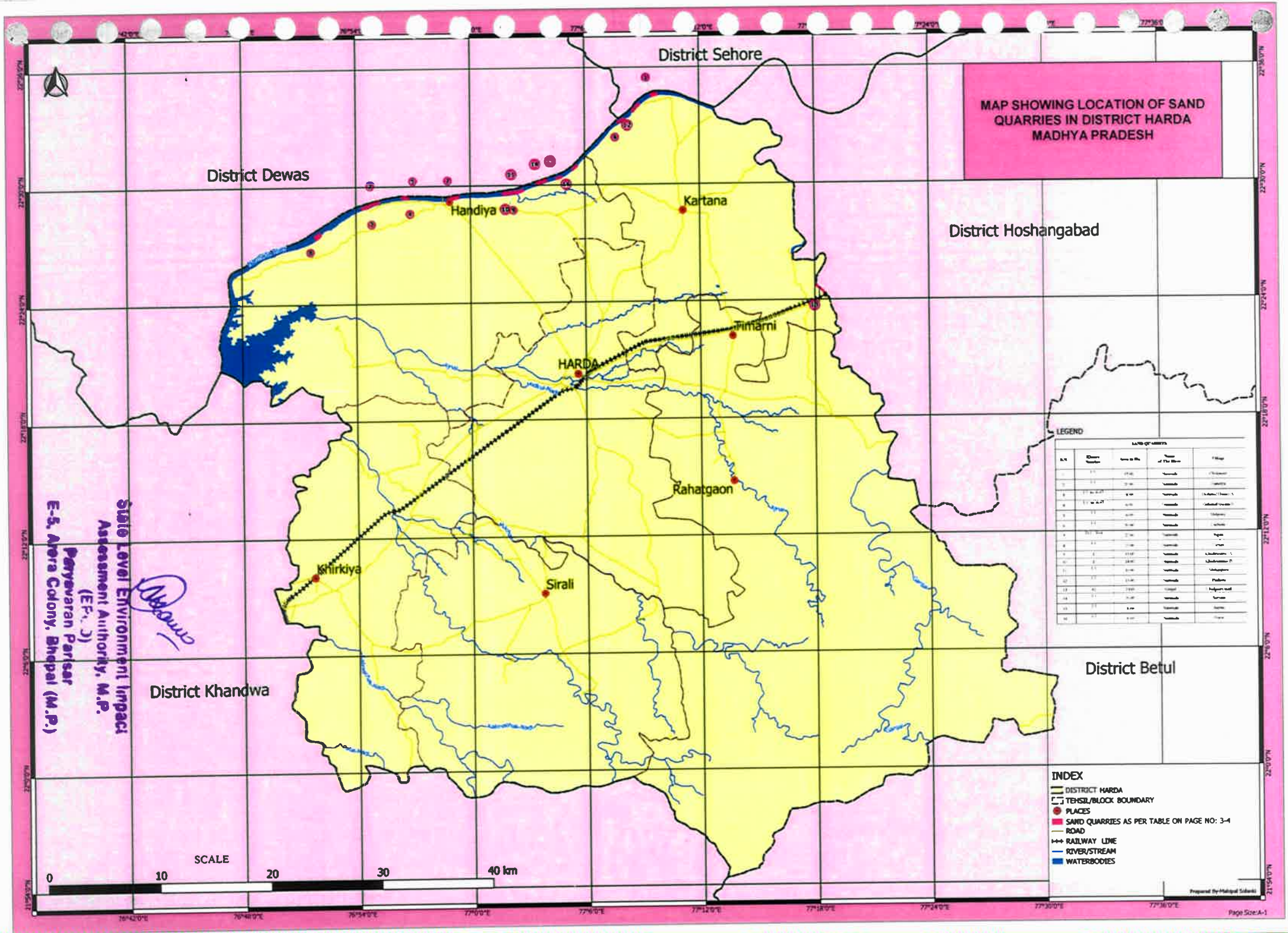
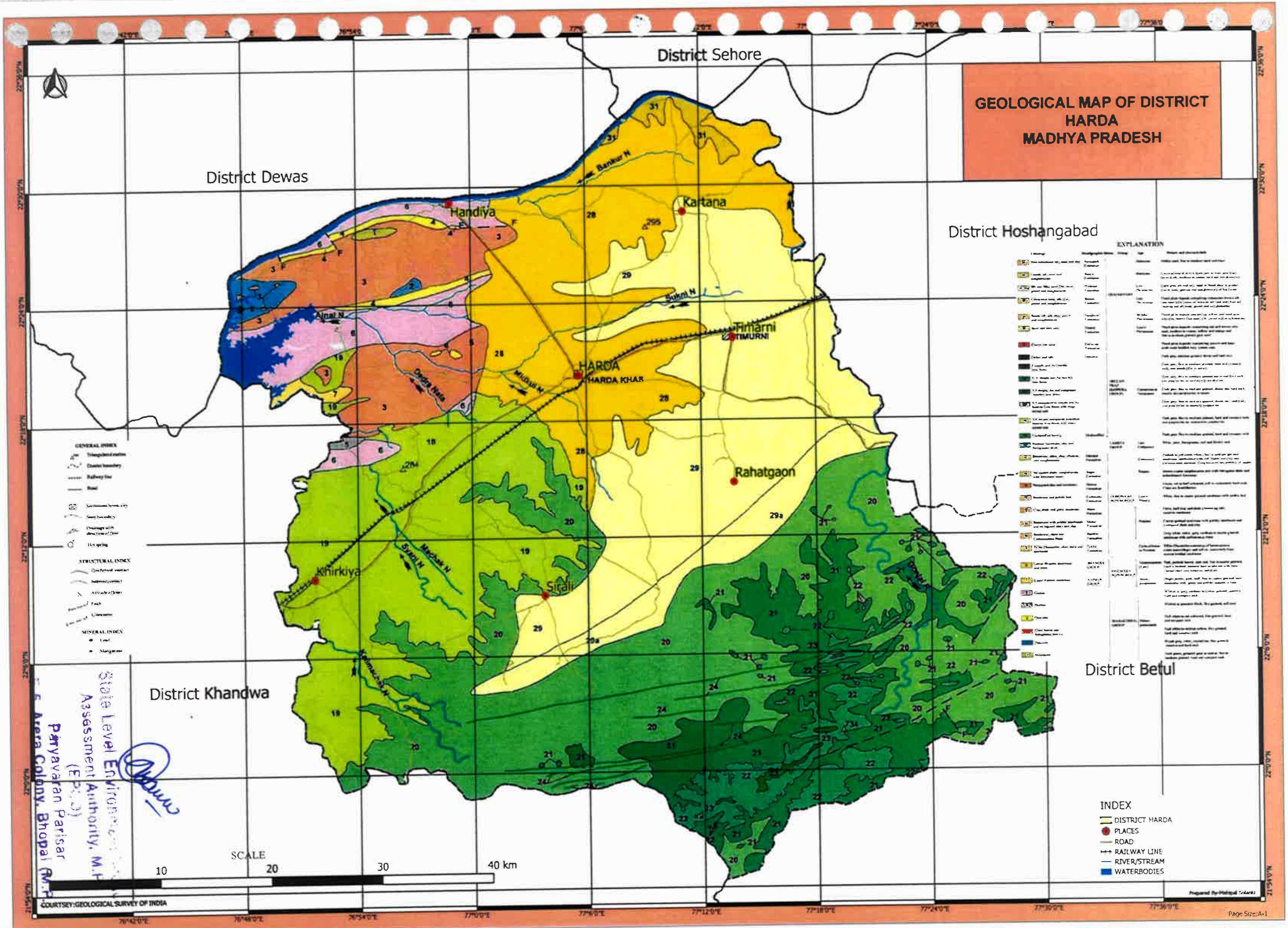
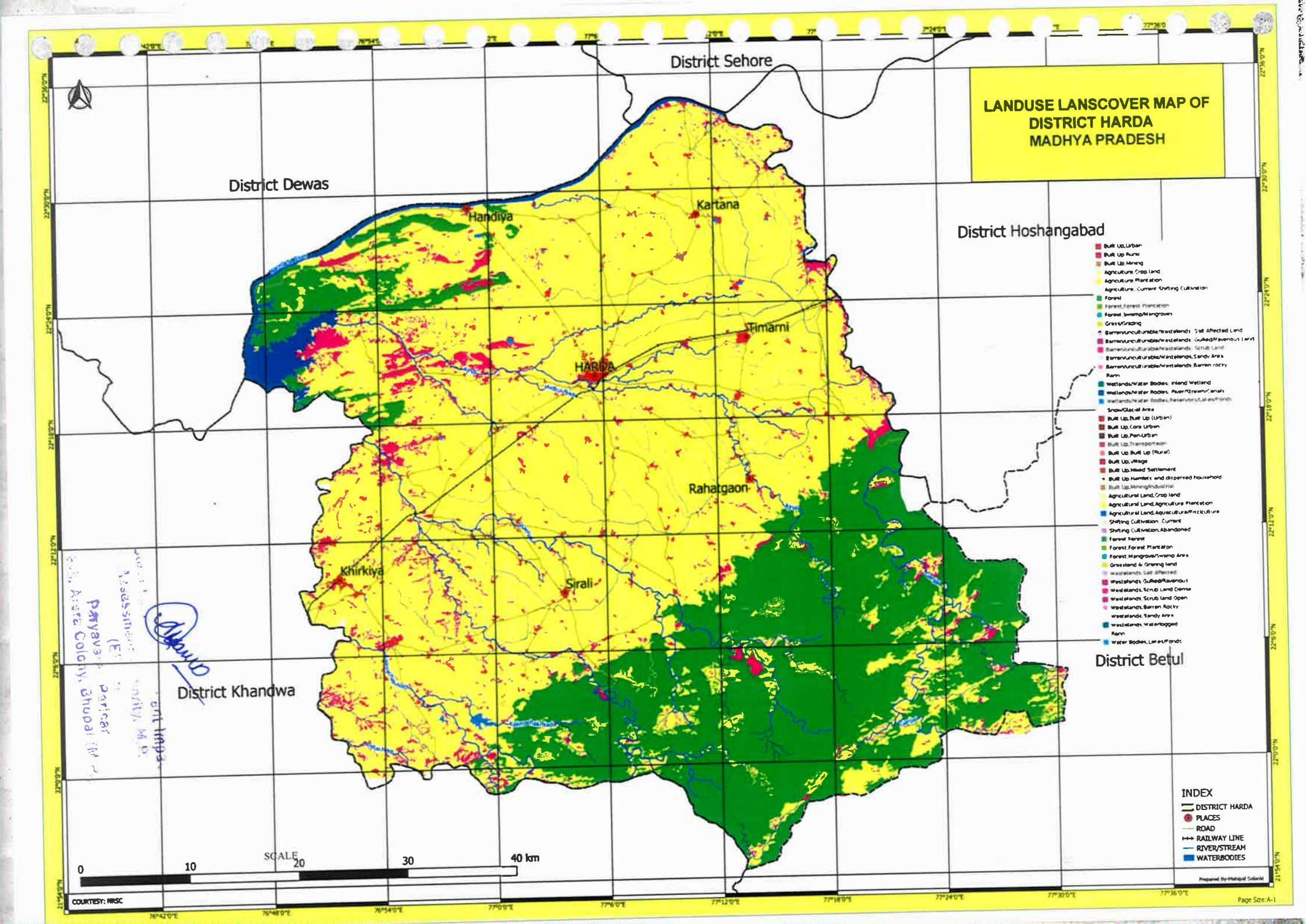
20
30
40 km
State Level Environment Impact
Assessment
E-5, Arera Colony Bhopal (M.P.)


DRAINAGE MAP OF DISTRICT HARDA
MADHYA PRADESH
District Sehore
District Dewas
District Hoshangabad
District Betul
District Khandwa
Handiya
Kartana
Timarni
HARDA
Rahatgarh
Khirkiya
Sirali
INDEX
DISTRICT HARDA
PLACES
ROAD
RAILWAY LINE
RIVER/STREAM
WATERBODIES
TEHSIL/BLOCK BOUNDARY
Handiya Tahsil
Harda Tahsil
Khirkiya Tahsil
Rehatgarh Tahsil
Sirali Tahsil
SCALE
0
10
20
30
40 km
PREPARED FROM 30M DIGITAL ELEVATION MODEL OF ASTER


MAP SHOWING LOCATION OF SAND QUARRIES IN DISTRICT HARDA MADHYA PRADESH
District Sehore
District Dewas
District Hoshangabad
District Khandwa
District Betul
Handiya
Kartana
Timarni
HARDA
Rahatgaon
Khirkiya
Sirali
LEGEND
INDEX
DISTRICT HARDA
TEHSIL/BLOCK BOUNDARY
PLACES
SAND QUARRIES AS PER TABLE ON PAGE NO: 3-4
ROAD
RAILWAY LINE
RIVER/STREAM
WATERBODIES
SCALE
0
10
20
30
40 km
State Level Environment Impact Assessment Authority, M.P. (EFCC)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)




LANDUSE LANSCOVER MAP OF
DISTRICT HARDA
MADHYA PRADESH
District Sehore
District Dewas
District Hoshangabad
District Khandwa
District Betul
Handiya
Kartana
Timarni
HARDA
Rahatgaon
Khirkiya
Sirali
INDEX
DISTRICT HARDA
PLACES
ROAD
RAILWAY LINE
RIVER/STREAM
WATERBODIES
SCALE
0
10
20
30
40 km
COURTESY: NRSC

	उपरोक्त संदर्भ में समझाईश दी गयी।

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

समिति ने पाया कि खनि. अधिकारी,कार्यालय कलेक्टर,(खनिज शाखा) जिला– राजगढ़ के पत्र क0 789/खनिज/2022 दिनांक 02/09/22 के माध्यम से खदान की जानकारी मे आवश्यक संशोधन कर निर्धारित प्रपत्र मे दे दी गई है तथा लीज धारकों द्वारा किये गये वृक्षारोपण के फोटोग्राफ्स संलग्न किये है। अतः समिति राजगढ़ जिले की जिला सर्वेक्षण रिपोर्ट (अन्य गौण खनिज–रेत को छोड़कर) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।

8. जिला सर्वेक्षण रिपोर्ट (रेत खनिज) हरदा –

Mineral	**Sand**
Earlier DSR Discussed	SEAC 592th Meeting dated 09.06.2022
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (S**and Mineral**)
Deliberation in the SEAC 592th Meeting dated 09.06.2022	**राज्य स्तरीय मूल्यांकन समिति की 592वीं बैठक दिनांक 09/06/22** **जिला सर्वेक्षण रिपोर्ट – रेत खनिज, जिला – हरदा** आज दिनांक 06/09/22 को जिला सर्वेक्षण रिपोर्ट के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय एवं श्री धनराज काटोलकर, खनिज अधिकारी उपस्थित रहे । हरदा जिले की नवीन जिला सर्वेक्षण रिपोर्ट (रेत खनिज) हेतु प्रस्तुत की गई, जिसमें पाया कि :– ➢ पेज क0. 16 एंव 17 की तालिका क0. 14 मे रेत खनिज का मिनरल पोटेंशियल दिया गया है परन्तु मिनरल पोटेंशियल मी.टन मे नही दिया गया है अतएव इसे पुनरिक्षित कर प्रस्तुत किया जाये। चर्चा उपरांत समिति की यह अनुशंसा है कि हरदा 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 जावे तत्संबंध में उपस्थित खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गयी।
Revised DSR received from District	Vide District Collectorate (Mining) Office, Vidisha letter No. 334 dated 12.09.2022

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

Collectorate (Mining)	
SEAC meeting dated 21/09/22	जिले की जिला सर्वेक्षण रिपोर्ट मे तालिका क्र0 20 पेज न0. 27 में माइनेबल मिनरल पोटेंशियल (घनमीटर में) 60% टोटल मिनरल पोटेंशियल, लीजवार, लंबाई, चौड़ाई एंव गहराई के साथ दर्शाया है एवं विगत 03 वर्षो के उत्खनित रेत की मात्रा का लीजवार पोटेंशियल दिया गया है। जिससे ज्ञात हो सके कि उस स्थल पर खदान का मिनरल पोटेंशियल विगत 03 वर्षो मे कितना रहा।

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

चर्चा उपरांत समिति ने पाया कि खनि. अधिकारी,कार्यालय कलेक्टर,(खनिज शाखा) जिला– हरदा के पत्र क्र0 334, दिनांक 12/09/22 के माध्यम से मिनरल पोटेंशियल की गणना में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है मिनरल पोटेंशियल की गणना दर्शाने वाली टेबल में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है।

समिति ने जिला सर्वेक्षण रिर्पोटो के प्रस्तुतीकरण एवं परीक्षण में पाया कि रेत की कई स्वीकृत खदानों में 60 प्रतिशत माइनेबल पोटेंशियल तथा विगत् 03 से 05 वर्षो के उत्पादन की मात्रा में 10 गुना से भी अधिक का अंतर है जिसके संदर्भ में उपस्थित खनन् अधिकारियों द्वारा बताया गया कि विगत् 02 से 03 वर्षो 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 खनन् के ऐसे प्रकरण जहां 60 प्रतिशत माइनेबल पोटेंशियल तथा विगत् 03 से 05 वर्षो 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 खनन् योजना में उस स्थल की सारगर्भित रिप्लेनिशमेंट स्टडी प्रस्तुत की जाये तथा 60 प्रतिशत माइनेबल पोटेंशियल के विरूद्व 05 गुना या उससे से भी अधिक रेत की मात्रा के अंतर का औचित्य दर्शाया जाये ।

समिति की यह भी अनुशंसा है कि जिला स्तर पर जिला सर्वेक्षण रिपोर्ट तैयार करने हेतु गठित जिला समिति की अनुशंसा तथा की गई रिप्लेनिशमेंट स्टडी की जानकारी (जिसके आधार पर जिला सर्वेक्षण रिपोर्ट तैयार की गई हैं) संबंधित जिला खनिज अधिकारी कार्यालय में सुरक्षित रखी जाये ।

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

9. जिला सर्वेक्षण रिपोर्ट (रेत खनिज) जिला छिंदवाड़ा (म.प्र.) ।

Mineral	**Sand**
Earlier DSR Discussed	SEAC 567 & 592th Meeting dated 20.04.22 & 09.06.2022
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (S**and Mineral**)
Deliberation in the SEAC 592th Meeting dated 09.06.2022	**राज्य स्तरीय मूल्यांकन समिति की 567वीं बैठक दिनांक 20/04/22** **जिला सर्वेक्षण रिपोर्ट – रेत खनिज, जिला – छिंदवाड़ा** राज्य स्तरीय पर्यावरण समाघॉत निर्धारण प्राधिकारण (सिया) ने पत्र क्रमांक 185 दिनांक 20/04/22 के माध्यम से शिवपुरी जिले की 02 जिला सर्वेक्षण रिपोर्ट (1. जिला खनिज (रेत) सर्वेक्षण प्रतिवेदन जिला छिंदवाड़ा (म.प्र.) – वर्ष 2021–22 एवं 2. जिला सर्वेक्षण रिपोर्ट (खनिज रेत को छोड़कर) जिला छिंदवाड़ा (म.प्र.) – वर्ष 2021–22) राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के परीक्षण हेतु भेजी गई है जो राज्य स्तरीय मूल्यांकन समिति को दिनांक 22/4/22 को प्राप्त हुई । उक्त जिला सर्वेक्षण रिपोर्ट, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के सदस्यों को दिनांक 26/04/22 को प्रेषित की गई थी तथा उस पर चर्चा राज्य स्तरीय मूल्यांकन समिति की 567वीं बैठक दिनांक 29/04/22 में प्रस्तावित की गई । राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की 567वीं बैठक दिनांक 29/04/22 में शिवपुरी जिले की जिला सर्वेक्षण रिपोर्ट पर चर्चा की गई जिसमें पाया गया कि :– ● कार्यालय कलेक्टर (खनिज शाखा) जिला छिंदवाड़ा द्वारा प्रस्तुत जिला खनिज (रेत) सर्वेक्षण प्रतिवेदन जिला छिंदवाड़ा (म.प्र.) – वर्ष 2021–22 एवं 2. जिला सर्वेक्षण रिपोर्ट (खनिज रेत को छोड़कर) जिला छिंदवाड़ा (म.प्र.) – वर्ष 2021–22 के अनुसार दोनों जिला सर्वेक्षण रिपोर्टो का अनुमोदन गठित समिति द्वारा किया गया है जिसका गठन सभी जिलों हेतु संचालक, प्रशासन एवं खनिकर्म, भोपाल ने पत्र क्रमांक 2981 दिनांक

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

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

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

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

22. जिला सर्वेक्षण रिपोर्ट – हरदा (रेत खनिज)

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

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

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

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

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

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

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

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

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

राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण, म.प्र.

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

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

No: 1874 / SEIAA/2022
Date: 20/10/22

प्रति,

कलेक्टर
जिला – हरदा (म.प्र.)

विषयः नवीन जिला सर्वेक्षण रिपोर्ट – हरदा (रेत खनिज)

संदर्भः आपका पत्र क्र. 334, दिनांक 12/09/22

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

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

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

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

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

(श्रीमन् शुक्ला)
सदस्य सचिव

क्र.. /SEIAA/2022 भोपाल दिनांक
प्रतिलिपि :–

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