


DISTRICT SURVEY REPORT FOR SAND MINING DISTRICT KHARGONE 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**

YEAR-2022

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


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

::कार्यालय कलेक्टर (खनि-शाखा) जिला-खरगोन (म.प्र.)::

क्रमांक/ 8221 /खनिज/22
प्रति,

खरगोन, दिनांक 06/09/2022

सदस्य सचिव,
राज्य विशेषक मूल्यांकन समिति,
भोपाल म0प्र0


विषय:- 592 वी. राज्य स्तरीय विशेषज्ञ ऑकलन समिति की बैठक दिनांक 06.09.2022 मे जिला खरगोन की सर्वेक्षण रिपोर्ट मे चाही गई जानकारी के संबंध में।

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उपरोक्त विषयांतर्गत जिले की रेत खदानों मे रेत मात्रा का ऑकलन जिला सर्वेक्षण रिपोर्ट (डीएसआर) तैयार करने हेतु गठित समिति के द्वारा मौका निरीक्षण कर किया गया है।

अतः अनुरोध है कि, राज्य स्तरीय विशेषक ऑकलन समिति (SEAC) की बैठक दिनांक 27.08.2022 मे की गई चर्चा एवं दिये गये निर्देशानुसार जानकारी निम्नानुसार है-

- 1- विगत वर्षो मे कोविड-19 के संक्रमण के कारण उक्त खदानों से पर्याप्त मात्रा मे रेत खनिज की निकासी नहीं की जा सकी।
- 2- विगत वर्षो मे खनिज की माँग कम होने के कारण उक्त खदानों से पर्याप्त मात्रा मे रेत खनिज की निकासी नहीं की जा सकी है।
- 3- जिला सर्वेक्षण रिपोर्ट (डीएसआर) तैयार करने हेतु गठित समिति के द्वारा परीक्षण के दौरान भी उक्त खदानों मे दर्शित माईनेवल मात्रा अनुसार रेत खनिज का उल्लेख रिप्लेनिसमेंट प्लान के अध्ययन मे भी उक्त खदानों मे माईनेवल मात्रा से अधिक रेत खनिज का रिप्लेनिसमेंट होना पाया गया।
- 4- रेत खदानों मे क्षेत्रफल के बराबर रेत उपलब्ध नहीं है। जिले की डी.एस.आर रिपोर्ट मे जिले की रेत खदानों मे जितने रकबे मे रेत उपलब्ध उसका पॉटेंशियल रिजर्व बताया गया है। जानकारी आगामी कार्यवाही हेतु प्रेषित है।


06.09.2022
प्रभारी अधिकारी
खनिज शाखा


जिला खरगोन (म0प्र0)

खरगोन, दिनांक 06/09/2022

पृ. क्रमांक/ 8222 /खनिज/22

प्रतिलिपि:-

- 1- सदस्य सचिव राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण भोपाल की ओर सूचनार्थ।
- 2- संचालक भौमिकी तथा खनिकर्म भोपाल की ओर सूचनार्थ।


06.09.2022
प्रभारी अधिकारी
खनिज शाखा
जिला खरगोन (म0प्र0)

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::कार्यालय कलेक्टर (खनिज शाखा) जिला खरगोन म0प्र0::

कमांक/ 8158 /खनिज/22
प्रति

खरगोन दिनांक 27/08 /2022

सदस्य सचिव सिएक
पर्यावरण परिसर,
भोपाल म0प्र0

विषय:- जिले की जिला सर्वेक्षण रिपोर्ट (DSR) प्रस्तुत करने के संबंध में।

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उपरोक्त विषयान्तर्गत निवेदन है कि, खरगोन जिले की खनिज रेत की जिला सर्वेक्षण रिपोर्ट (DSR) अनुशंसा सहित मूलतः प्रेषित की गई थी। सिएक की 591 वीं बैठक दिनांक 27.08.2022 में पेज नं. 52 की टेबल में ऑकडे मीट्रिक टन में उपलब्ध कराने हेतु निर्देश दिये गये थे। उक्त टेबल में ऑकडे मीट्रिक टन में तथा टंकण त्रुटी में सुधार कर कर लिया गया है।

जिले की रेत खदानों में रेत मात्रा का आंकलन जिला जिला सर्वेक्षण रिपोर्ट (DSR) तैयार करने हेतु गठित कमेटी के द्वारा मीका निरीक्षण कर किया गया है।

अतः अनुरोध है कि, राज्य स्तरीय विशेषज्ञ आंकलन समिति (SEAC) की बैठक दिनांक 27.08.2022 में की गई चर्चा एवं दिये गये निर्देशानुसार वांछित जानकारी आवश्यक कार्यवाही हेतु सादर संप्रेषित ।

संलग्न :- उपरोक्तानुसार।

27/08/2022
प्रभारी अधिकारी
खनिज-शाखा

जिला-खरगोन म0प्र0

खरगोन दिनांक 27/08 /2022

पू. कमांक/ 8159 /खनिज/22
प्रतिलिपि:-

- 1- सदस्य सचिव सिया कार्यालय भोपाल की ओर सूचनार्थ एवं आगामी कार्यवाही हेतु।
- 2- संचालक, भूमिकी तथा खनिकर्म, 29-ए खनिज भवन भोपाल की ओर सूचनार्थ।

27/08/2022
प्रभारी अधिकारी
खनिज-शाखा

जिला-खरगोन म0प्र0

::कार्यालय कलेक्टर (खनिज शाखा) जिला खरगौन म0प्र0::

क्रमांक/ 8097 /खनिज/22
प्रति ,



खरगौन दिनांक 10/08/2022

सदस्य सचिव

राज्य पर्यावरण समाधान निर्धारण प्राधिकरण (SEIAA)

पर्यावरण

विषय:- जिले की जिला सर्वेक्षण रिपोर्ट (DSR) प्रस्तुत करने के संबंध में।

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उपरोक्त विषयान्तर्गत निवेदन है कि, जिले की जिला सर्वेक्षण रिपोर्ट (DSR) मे सिएक बैठक दिनांक 10.06.2022 मे जिला सर्वेक्षण रिपोर्ट मे आवश्यक संशोधन हेतु सुझाव दिये गये थे। जिला सर्वेक्षण रिपोर्ट मे सिएक द्वारा दिये गये सुझाव अनुसार आवश्यक संशोधन उपरांत अनुशंसा सहित (DSR) रिपोर्ट मूलतः आगामी कार्यवाही हेतु इस पत्र के साथ संलग्न प्रेषित है।
संलग्न:- जिला सर्वेक्षण रिपोर्ट (DSR) 03 प्रति


(कुमार पुरुषोत्तम)
कलेक्टर

जिला खरगौन म.प्र.

पृ. क्रमांक/ 8098 /खनिज/22

खरगौन दिनांक 10/08/2022

प्रतिलिपि:-संचालक, भौमिकी तथा खनिकर्म, 29-ए खनिज भवन भोपाल की ओर सूचनार्थ।


कलेक्टर
जिला खरगौन म.प्र.

::कार्यालय कलेक्टर (खनि-शाखा) जिला-खरगोन (म.प्र.)::

क्रमांक/ 8101 /खनिज/22
प्रति,

खरगोन 10/08 /2022



राज्य स्तरीय मूल्यांकन समिति,
भोपाल म.प्र.

विषय- 576 वीं बैठक दिनांक 10.06.2022 में दर्ज आपत्तियों का निराकरण किया जाकर संशोधित जिला सर्वेक्षण रिपोर्ट रेत खनिज हेतु अनुमोदन हेतु प्रस्तुत।

संदर्भ- राज्य स्तरीय मूल्यांकन समिति की बैठक दिनांक 10.06.2022 दर्ज आपत्तियां।

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उपरोक्त संदर्भित विषयांतर्गत लेख है कि पूर्व में प्रेषित जिला सर्वेक्षण रिपोर्ट जिला खरगोन म.प्र. का 576 वीं बैठक दिनांक 10.06.2022 में परीक्षण उपरांत राज्य स्तरीय मूल्यांकन समिति की बैठक में दिये गये सुझाव एवं दर्ज आपत्तियों का निराकरण किया जाकर अधिसूचना दिनांक 25/07/2018 में निर्धारित फार्मेट अनुसार तैयार की जाकर, संशोधित जिला सर्वेक्षण रिपोर्ट रेत खनिज हेतु अनुमोदन हेतु संलग्न प्रस्तुत है।

क्र.	आपत्ति	निराकरण
1	जिला सर्वेक्षण रिपोर्ट के पेज नं. 14 एवं 15 दी गई रेत खदानों की सूची में खसरा नं. एवं क्षेत्रफल की जानकारी नहीं दी गई है।	रेत खदानों की सूची में खसरा नं. एवं क्षेत्रफल की जानकारी का समावेश किया गया है, पृष्ठ संख्या 07 से 13 तक का अवलोकन करने का कष्ट करें।
2	जिला सर्वेक्षण रिपोर्ट के पेज नं. 27 की तालिका-6 में तीन वर्ष 2019-20, 2020-21 एवं 2021-22 में रेत की मात्रा अलग-अलग दर्शाई गई जबकि उन्ही वर्षों में रॉयल्टी/ राजस्व प्राप्ति की राशि (रु. 17,28,00000) बराबर है, स्थिति स्पष्ट करें।	त्रुटि का सुधार किया गया है। कृपया पृष्ठ संख्या 14 तालिका क्र. 04 एवं 05 का अवलोकन करने का कष्ट करें।
3	तालिका-11 एवं 12 में प्री-मानसून एवं पोस्ट-मानसून में प्रदाय की गई अनुमानित रेत की मात्रा में लीजवार (60 प्रतिशत टोटल मिनरल पोटेणशियल) (लम्बाई एवं चौड़ाई के साथ) नहीं दी गई है।	तालिका में लीजवार क्षेत्र की लम्बाई एवं चौड़ाई के साथ 60 प्रतिशत टोटल मिनरल पोटेणशियल की जानकारी पृष्ठ क्र. 53 तथा 54 में संशोधित की गयी है।
4	प्रस्तुत जिला सर्वेक्षण पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 में निर्धारित फार्मेट अनुसार नहीं बनाई गई है तथा कई जानकारिया वॉछित तालिका में नहीं दी गई है जिस कारण रिपोर्ट अपूर्ण है।	संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 में निर्धारित फार्मेट अनुसार तैयार की गयी है।
5	बिंदु क्रमांक-26 की जानकारी जो माईनर मिनरल (रेत छोड़कर) से संबंधित है, के अवलोकन से ज्ञात होता है कि जिले में हरित क्षेत्र के विकास हेतु खदानों में वृक्षारोपण की जानकारी नहीं दी गई है, जिसको अद्यतन किया जाना चाहिए। साथ की निर्धारित लक्ष्य के विरुद्ध कितना वृक्षारोपण किस वर्ष किया है, उसको भी अंकित किया जाना चाहिए।	आपत्ति माईनर मिनरल (रेत छोड़कर) से संबंधित होने से आपत्ति का निराकरण माईनर मिनरल (रेत छोड़कर) की जिला सर्वेक्षण रिपोर्ट में किया गया है।
6	इस प्रकार जिले में स्वीकृत/प्रस्तावित खदानों को को-आर्डिनेट के अनुसार डिजिटार्इज मेप (आर्क व्यू/गूगल अर्थ कम्पेरेवल-सी.डी.में) भी संलग्न किया जाये ताकि पर्यावरण अभिस्वीकृति के समय खदानों की सही स्थिति	जिले में स्वीकृत/ प्रस्तावित खदानों को को-आर्डिनेट के अनुसार डिजिटार्इज मेप (आर्क व्यू/ गूगल अर्थ कम्पेरेवल-सी.डी.में) संलग्न प्रेषित है।

(Handwritten Signature)
10/08/22

	ज्ञात करने में तथा 500 मीटर के अंदर स्थित अन्य स्वीकृत खदानों की जानकारी प्राप्त करने में सुविधा हो।	
7	प्रायः देखा जा रहा है जिला सर्वेक्षण रिपोर्ट में रेत निर्माण होने की भू-वैज्ञानिक विधि की सामान्य जानकारी दी जाती है 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।	आपत्ति का निराकरण संशोधित जिला सर्वेक्षण रिपोर्ट रेत खनिज हेतु के पृष्ठ क्र. 20 के अंतिम पैरा पर किया गया है।
8	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 सकें। यदि ए-4 साईज में नक्शों नहीं आ पा रहे हो तो ए-3 साईज में नक्शों को बनाना चाहिए।	प्रदर्शित नक्शों में जो भी फीचर्स दिखाया गया है उसको संबंधित नक्शों के लीजेंड में भी दर्शाया गया है एवं नक्शों का स्केल ऐसा रखा गया है कि समस्त फीचर स्पष्ट दिख सकें।
9	समिति ने संबंधित जिलों के खनिज अधिकारियों को निर्देशित करता है कि इस बात का भी ध्यान रखा जाये कि नदियों में किसी स्थान पर मछलियों/कछुआ/ घड़ियाल/ मगरमच्छ आदि जल चरों 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।	नदियों में किसी भी स्थान पर मछलियों/कछुआ/ घड़ियाल/ मगरमच्छ आदि जलचरों का ब्रीडिंग ग्राउण्ड होना परिलक्षित नहीं है।
10	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 संवेदन शीलता 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।	दिये गये सुझाव का ध्यान रखा जा रहा है।

संलग्न:- के.एम.एल फाइल की सीडी।


 10.08.2022
 प्रभारी अधिकारी
 खनिज-शाखा
 जिला खरगोन म0प्र0

विभाग: जिला सर्वेक्षण रिपोर्ट नंबर करने के संबंध में।

कृपया संचालक भौमिकी तथा खनिकर्म भोपाल के संदर्भित पत्र क्रमांक-1 के माध्यम से सस्टेनेबल सेण्ड माईनिंग मैनेजमेंट गाईडलाइन 2016 एवं इन्फोर्समेंट मॉनिटरिंग फॉर सेण्ड माईनिंग 2020 गाईडलाइन के तहत जिला सर्वेक्षण रिपोर्ट तैयार किये जाने हेतु माननीय सर्वोच्च न्यायालय द्वारा सिविल अपील क्रमांक 3661-3662/2020 (बिहार राज्य एवं अन्य विरुद्ध पवन कुमार एवं अन्य) में पारित आदेश दिनांक 10.11.2021 के पालन में माध्यम से प्रारूप डी.एस.आर. तैयार करने हेतु पूर्व में समिति का गठन किया जा चुका है। जिले की जिला सर्वेक्षण रिपोर्ट पूर्व में तैयार की गई थी। जिसे दिनांक 24.05.2022 को सिएक (SEAC) को भेजी गई थी। जिसमें सिएक बैठक दिनांक 10.06.2022 में जिला सर्वेक्षण रिपोर्ट में आवश्यक संशोधन हेतु सुझाव दिये गये थे। जो नस्ती में संलग्न है। जिला सर्वेक्षण रिपोर्ट में सिएक द्वारा दिये गये सुझाव अनुसार आवश्यक संशोधन कर लिया गया है।

अतः जिले की जिला सर्वेक्षण रिपोर्ट (DSR) अनुशंसा सहित सिएक (SEAC) को कलेक्टर महोदय द्वारा भेजा जाना प्रस्तावित है। जिले की जिला सर्वेक्षण रिपोर्ट का गठित समिति द्वारा अवलोकन कर लिया गया है। जिले की जिला सर्वेक्षण रिपोर्ट (DSR) समिति की अनुशंसा सहित कलेक्टर महोदय के माध्यम से (SEAC) को भेजा जाना प्रस्तावित है।

अनुविभागीय अधिकारी (रा.)
अनुभाग - खरगोन

अनुविभागीय अधिकारी (वन)
अनुभाग - खरगोन

क्षेत्रीय अधिकारी द्वारा नामांकित अधिकारी
म.प्र. प्रदूषण नियंत्रण बोर्ड क्षेत्रीय कार्या. इन्दौर

कार्यपालन यंत्री
जल संसाधन विभाग खरगोन

प्रभारी अधिकारी
खनिज-शाखा खरगोन

कृपया जिले की जिला सर्वेक्षण रिपोर्ट (DSR) पूर्व में SEAC समिति द्वारा आशंकित संशोधन हेतु दिनांक 10.06.2022 को निर्देश दिए गये थे। SEAC समिति द्वारा दिए निर्देशानुसार समिति द्वारा (DSR) रिपोर्ट तैयार कर प्रभार के माध्यम से SEAC समिति को भेजे जाने हेतु अनुमोदन पत्र प्राप्त करने के लिए प्रस्तावित।

कलेक्टर महोदय

10/08

प्रभारी अधिकारी
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जल संसाधन (म.प्र.)

10.08.2022

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(EPCO)

Paryavaran Parishad
E-5, Ansa Colony, Gandhinagar (M.P.)

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MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE NOTIFICATION

New Delhi, the 25th July, 2018

S.O. 3611(E).—Whereas by notification of the Government of India in the erstwhile Ministry of Environment and Forest issued *vide* number S.O. 1533(E), dated the 14th September, 2006 published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) (hereinafter referred to as the said notification) directions have been given regarding the prior environmental clearance:

And whereas, the Ministry of Environment, Forest and Climate Change has amended the said Notification *vide* S.O. 141 (E) dated 15th January, 2016 wherein the procedure for preparation of District Survey Report for minor mineral has been prescribed:

And whereas, the Hon'ble High Court of Jharkhand at Ranchi in its orders dated the 11th April, 2018 and 19th June, 2018 in W.P. (PIL) No. 1806 of 2015, in the matter of Court on its Own Motion Versus the State of Jharkhand & Others with W.P. (PIL) No. 290 of 2013, in the matter of Hemant Kumar Shilkarwar Versus the State of Jharkhand & Others, has *inter-alia* directed the preparation of District Survey Report for minor minerals other than Sand and Bajri or delegation of the powers for preparation of format of District Survey Report of minor minerals other than sand and bajri to the State Government and/or District Environment Impact Assessment Authority and District Expert Appraisal Committee;

And whereas, the Central Government hereby in the public interest dispense with the requirement of notice under clause (a) of sub-rule (3) of rule 5 of the Environment Protection Rules, 1986,

Now, therefore in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following further amendments to the notification of the Government of India, in the erstwhile Ministry of Environment and Forests *vide* number S.O. 1533(E), dated the 14th September, 2006, namely: -

In the said notification, for Appendix X, the following shall be substituted, namely: -

"APPENDIX - X

[See paragraph 7 (iii) (a)]

I. PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT FOR SAND MINING OR RIVER BED MINING

The main objective of the preparation of District Survey Report (as per the Sustainable Sand Mining Guideline) is to ensure the following: -

Identification of areas of aggradation or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.

The report shall have the following structure:

- (1) Introduction;
- (2) overview of Mining Activity in the District;
- (3) the List of Mining Leases in the District with location, area and period of validity;
- (4) details of Royalty or Revenue received in last three years;
- (5) detail of Production of Sand or Bajri or minor mineral in last three years;
- (6) process of Deposition of Sediments in the rivers of the District;
- (7) general Profile of the District;
- (8) land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc.;
- (9) physiography of the District;

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

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- (10) rainfall: month-wise;
- (11) geology and Mineral Wealth.

In addition to the above, the report shall contain the following:

- (a) District wise detail of river or stream and other sand source;
- (b) District wise availability of sand or gravel or aggregate resources;
- (c) District wise detail of existing mining leases of sand and aggregates.

A survey shall be carried out by the District Environment Impact Assessment Authority with the assistance of Geology Department or Irrigation Department or Forest Department or Public Works Department or Ground Water Boards or Remote Sensing Department or Mining Department etc. in the district.

Drainage system with description of main rivers

S. No.	Name of the River	Area drained (Sq. Km)	% Area drained in the District
(1)			
(2)			

Salient Features of Important Rivers and Streams:

S. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin
(1)				
(2)				

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
Annual Deposition			


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[भाग II-खण्ड 3(ii)]

भारत का राजपत्र : असाधारण

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S. No.	River or Stream	Portion of the river or stream recommended for mineral concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Minable mineral potential (in metric tonne) (60% of total mineral potential)
(1)						
(2)						
Total for the District						

A Sub-Divisional Committee comprising of (i) Sub-Divisional Magistrate, (ii) Officers from (a) Irrigation department, (b) State Pollution Control Board or Committee, (c) Forest department, (d) Geology or mining officer shall visit each site for which environmental clearance has been applied for and make recommendation on suitability of site for mining or prohibition thereof.

Methodology adopted for calculation of Mineral Potential:

The mineral potential is calculated based on field investigation and geology of the catchment area of the river or streams. As per the site conditions and location, depth of minable mineral is defined. The area for removal of the mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50 % to 60 % of the area of a particular river or stream. For Example, in some hill States mineral constituents like boulders, river born Bajri, sand up to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river or stream.

The District Survey Report shall be prepared in the district and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on the district's website for twenty-one days. The comments received shall be considered and if found correct, shall be incorporated in the final Report to be finalised within six months by the District Environment Impact Assessment Authority.

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.

II. PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT OF MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

The District Survey Report shall be prepared for each minor mineral in the district separately and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on district's website for twenty-one days. The comments received shall be considered and if found fit, shall be incorporated in the final Report to be finalised within six months by the DEIAA.

The District Survey Report for minor minerals other than sand mining or River bed mining shall be as per structure mentioned below: -

FORMAT FOR PREPARATION OF DISTRICT SURVEY REPORT FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

- (1) Introduction;
- (2) overview of Mining Activity in the District;
- (3) general Profile of the District;
- (4) geology of the District;
- (5) drainage of Irrigation pattern;
- (6) Land Utilisation Pattern in the District: Forest, Agricultural, Horticultural, Mining etc.;
- (7) surface Water and Ground Water scenario of the district;

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

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Dr. Anshu
प्रभारी अधिकारी
खनिज शाखा
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[PART II—Sec. 3(ii)]

(8) rainfall of the district and climatic condition;

(9) details of the mining leases in the District as per the following format :-

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Lessee	Mining lease Grant Order No. & date	Area of Mining lease (ha)	Period of Mining lease (Initial)		Period of Mining lease (1 st /2 nd ...renewal)	
						From	To	From	To
1	2	3	4	5	6	7	8	9	10

Date of commencement of Mining Operation	Status (Working/Non-Working/Temp. Working for dispatch etc.)	Captive/ Non-Captive	Obtained Environmental Clearance (Yes/No), If Yes Letter No with date of grant of EC.	Location of the Mining lease (Latitude & Longitude)	Method of Mining (Opencast/Underground)
11	12	13	14	15	16

(10) details of Royalty or Revenue received in last three years;

(11) details of Production of Minor Mineral in last three years;

(12) mineral Map of the District;

(13) list of Letter of Intent (LOI) Holders in the District along with its validity as per the following format :-

(14) total Mineral Reserve available in the District;

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Letter of Intent Holder	Letter of Intent Grant Order No. & date	Area of Mining lease to be allotted	Validity of Lol	Use (Captive/ Non-Captive)	Location of the Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7	8	9

(15) quality /Grade of Mineral available in the District;

(16) use of Mineral;

(17) demand and Supply of the Mineral in the last three years;


(18) mining leases marked on the map of the district;

(19) details of the area of where there is a cluster of mining leases viz. number of mining leases, location (latitude and longitude);

(20) details of Eco-Sensitive Area, if any, in the District;


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 Assessment Authority, M.P.
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 Paryavaran Parisar
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- (21) impact on the Environment (Air, Water, Noise, Soil, Flora & Fauna, land use, agriculture, forest etc.) due to mining activity;
- (22) remedial Measures to mitigate the impact of mining on the Environment;
- (23) reclamation of Mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan);
- (24) risk Assessment & Disaster Management Plan;
- (25) details of the Occupational Health issues in the District. (Last five-year data of number of patients of Silicosis & Tuberculosis is also needs to be submitted);
- (26) plantation and Green Belt development in respect of leases already granted in the District;
- (27) any other information.

The District Environment Impact Assessment Authority (DEIAA) based on the nature and type of minor mineral in the District may include the additional parameters in the District Survey Report in consultation with the Department of Mines and Geology of the concerned State Government.

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”;

[P.No. L-11011/26/2018-(A-II)(M)]

GYANESH BHARTI, Jt. Secy.

Note : The principal notification was published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) vide number S.O. 1533 (E), dated the 14th September, 2006 and subsequently amended by :-

1. S.O. 1949 (E), dated the 13th November, 2006;
2. S.O. 1737 (E), dated the 11th October, 2007;
3. S.O. 3067 (E), dated the 1st December, 2009;
4. S.O. 695 (E), dated the 4th April, 2011;
5. S.O. 156 (E), dated the 25th January, 2012;
6. S.O. 2896 (E), dated the 13th December, 2012;
7. S.O. 674 (E), dated the 13th March, 2013;
8. S.O. 2204 (E), dated the 19th July 2013;
9. S.O. 2555 (E), dated the 21st August, 2013;
10. S.O. 2559 (E), dated the 22nd August, 2013;
11. S.O. 2731 (E), dated the 9th September, 2013;
12. S.O. 562 (E), dated the 26th February, 2014;
13. S.O. 637 (E), dated the 28th February, 2014;
14. S.O. 1599 (E), dated the 25th June, 2014;
15. S.O. 2601 (E), dated the 7th October, 2014;
16. S.O. 2600 (E), dated the 9th October, 2014;
17. S.O. 3252 (E), dated the 22nd December, 2014;
18. S.O. 382 (E), dated the 3rd February, 2015;
19. S.O. 811 (E), dated the 23rd March, 2015;
20. S.O. 996 (E), dated the 10th April, 2015;


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

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1. INTRODUCTION

In pursuance to the Gazette Notification, Ministry of Environment, Forest and Climate Change (MoEF& CC), the Government of India Notification NoS.O. 141 (E) Appendix– X, Dated 15.01.2016 & S.O. 3611 (E) New Delhi, 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 (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

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- 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.

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

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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.

Surrounding Districts

Khargone district is located in the south western part of Madhya Pradesh. The district is surrounded by Indore in the north, Khandwa and Burhanpur in the east, Dhar and Barwani in the west and Maharashtra state in the southern portion of the district. The district covers an area of 8030 square kilometer. The district is situated between the latitudes 21°22' and 22°35'

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north and longitudes 74°25' and 76°14' East. The district lies in parts of survey of India Toposheet No. 46N, 460, 55B and 55C and encompasses an area of 8030 sq. km. The district forms almost central section of Narmada valley which is bordered by Vindhyan escarpment in the north and Satpura hills ranges in the south.

**Table 1 Administrative Setup
of the District**

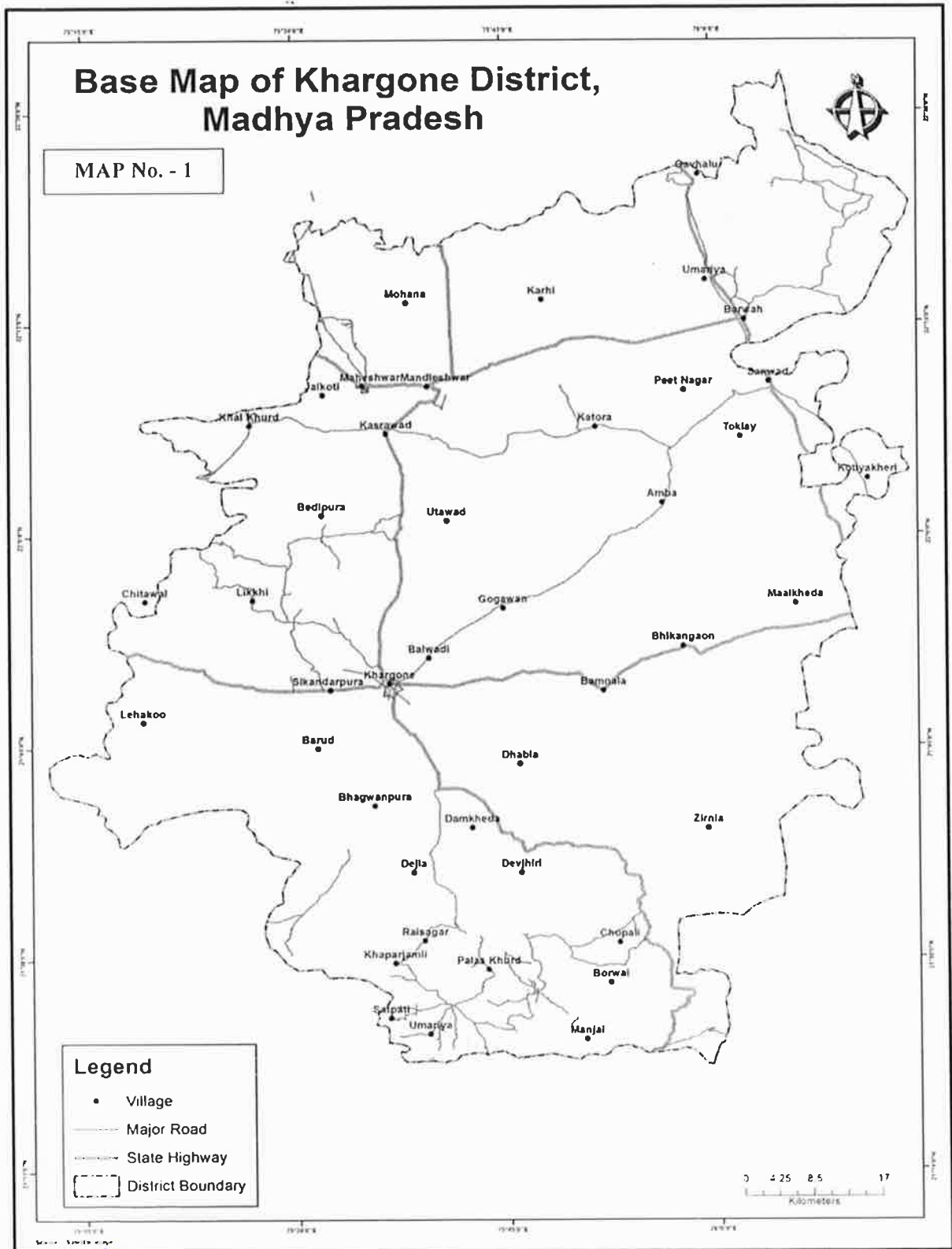
SUB-DIVISION	TEHSIL
Khargone	Khargone Town
	Khargone
	Segaon
	Bhagwanpura
	Gogaon
Kasrawad	Kasrawad
Mandleshwar	Mandleshwar
Badwah	Badwah
	Sanawad
Bhikangaon	Bhikangaon
	Jhirniya


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2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT


Sand is an important mineral for our society in protecting the environment. Sand mining is the process of removal of sand and gravel where this practice is becoming an environmental issue as the demand for sand increases in industry and construction. In almost every mineral bearing region, soil mining and land degradation have been inseparably connected. Unscientific mining has caused degradation of land, accompanied by subsidence and consequential mine fires and disturbance of the water table leading to topographic disorder, severe ecological imbalance and damage to land use patterns in and around mining regions.

Stone Crusher are working in 203.551 hectare including Murram working mine, sand mining in 186.506 hectare, and dolomite in 4.047 hectare.

Table No. 2 Details of Mineral Areas

Mineral name	Places	Total area in hectare
Stone crusher & Murram	Khargaon, Bhikangaon, Badawaha, Bhagwanpura, Gogawa, Jhirniya, Kasrawad, Maheshwar, Sengaon	186.506
Sand	Khargaon, Maheswar, Kasrawad, Badwah, Bhikangaon.	186.506
Dolomite	Badwah	4.047
Total area		394.104
<i>* Based on available data DGM</i>		

Major Minerals: No Mining Lease of Major Mineral Sanctioned in The District


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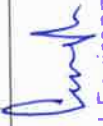

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3. MINOR MINERALS MINE IN THE DISTRICT


Table 3 Sand Mines in the District

S. No.	Village	Tehsil	Khasra Number	Area in Ha.	Proposed Quantity Per/Year	Coordinates
1.	Jalkoti	Maheshwar	176	5.000	15000	22°10'28.49"N 75°31'51.00"E 22°10'30.68"N 75°31'59.07"E 22°10'36.31"N 75°31'59.28"E 22°10'31.46"N 75°31'51.35"E
2.	Bhasunda	Maheshwar	49	4.000	10000	22°09'12.29"N 75°42'24.88"E 22°09'12.19"N 75°42'38.13"E 22°09'12.19"N 75°42'38.13"E 22°09'16.45"N 75°42'25.09"E
3.	Bhasunda	Maheshwar	32/1/1/1	5.000	10000	22°09'30.37"N 75°42'21.60"E 22°09'30.74"N 75°42'31.92"E 22°09'36.11"N 75°42'31.13"E 22°09'35.95"N 75°42'21.03"E
4.	Jalkota (A)	Maheshwar	149/1/1	15.000	15000	22°10'17.00"N 75°31'23.03"E 22°10'24.00"N 75°31'44.67"E 22°10'33.64"N 75°31'45.19"E 22°10'35.72"N 75°31'29.18"E 22°10'23.95"N 75°31'18.86"E
5.	Jalkota (B)	Maheshwar	149/1/1	14.430	15000	22°10'24.19"N 75°31'44.67"E 22°10'30.07"N 75°31'11.16"E 22°10'34.34"N 75°32'12.74"E 22°10'33.64"N 75°32'12.74"E



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6.	Gogawa	Maheshwar	223/1	4.000	10000	22°10'06.75"N 75°45'35.91"E 22°10'17.33"N 75°45'46.25"E 22°10'15.69"N 75°45'31.36"E 22°10'11.43"N 75°45'31.33"E
7.	Pandyaghat	Maheshwar	55/1	5.000	22000	22°11'33.26"N 75°50'22.82"E 22°11'33.09"N 75°50'33.19"E 22°11'37.78"N 75°50'33.57"E 22°11'37.95"N 75°50'22.69"E
8.	Pitamali	Maheshwar	5/1/1	4.000	20000	22°11'08.55"N 75°49'51.32"E 22°11'06.85"N 75°50'08.87"E 22°11'10.89"N 75°50'09.55"E 22°11'12.96"N 75°49'51.05"E
9.	Chirakhan	Maheshwar	48/1/1	5.000	15000	22°11'02.45"N 75°47'50.15"E 22°11'02.45"N 75°48'01.46"E 22°11'10.05"N 75°48'01.46"E 22°11'09.83"N 75°47'50.53"E
10.	Gangatkhedi	Maheshwar	132/1, 133	7.652	15000	22°11'29.72"N 75°56'46.28"E 22°11'27.50"N 75°57'03.68"E 22°11'22.69"N 75°57'02.73"E 22°11'24.65"N 75°56'45.95"E
11.	Sulgao	Maheshwar	313/1/1/1	15.000	40000	22°09'38.36"N 75°43'49.01"E 22°09'39.19"N 75°44'02.54"E 22°09'37.25"N 75°44'02.81"E 22°09'37.42"N 75°44'07.40"E 22°09'39.51"N 75°44'07.76"E 22°09'39.57"N 75°44'16.72"E 22°09'35.59"N 75°44'16.80"E 22°09'32.93"N 75°44'08.72"E

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						22°09'31.75"N 75°43'59.24"E 22°09'31.60"N 75°43'49.42"E 22°09'54.06"N 75°38'35.35"E 22°09'56.07"N 75°38'35.02"E 22°09'57.04"N 75°38'33.56"E 22°09'57.92"N 75°38'33.35"E 22°09'59.16"N 75°38'33.70"E 22°10'00.07"N 75°38'33.35"E 22°10'00.90"N 75°38'34.03"E 22°10'00.46"N 75°38'36.85"E 22°10'00.49"N 75°38'39.55"E 22°09'57.89"N 75°38'39.51"E 22°09'55.96"N 75°38'39.38"E 22°09'53.89"N 75°38'39.44"E 22°10'12.81"N 75°39'00.50"E 22°10'11.98"N 75°39'05.12"E 22°10'17.90"N 75°39'05.66"E 22°10'17.85"N 75°39'01.16"E 22°09'23.26"N 75°35'54.81"E 22°09'22.42"N 75°35'59.27"E 22°09'36.50"N 75°35'59.97"E 22°09'34.97"N 75°35'55.67"E 22°09'46.68"N 75°36'59.13"E 22°09'47.56"N 75°37'15.25"E 22°09'43.55"N 75°37'15.44"E 22°09'42.94"N 75°37'14.49"E 22°09'42.90"N 75°37'12.63"E 22°09'43.43"N 75°37'10.51"E
12.	Makadkheda	Kasrawad	4/1	3.000	15000	
13.	Makadkheda	Kasrawad	1	2.024	20000	
14.	Malgao	Kasrawad	3/2	4.000	10000	
15.	Badgao	Kasrawad	25/1	7.000	30000	

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								22°09'42.53"N 75°37'09.34"E 22°09'41.51"N 75°37'06.50"E 22°09'40.16"N 75°37'03.28"E 22°09'42.36"N 75°37'03.07"E 22°09'42.11"N 75°36'59.73"E
								22°09'35.71"N 75°36'18.73"E 22°09'38.13"N 75°36'26.17"E 22°09'36.91"N 75°36'27.12"E 22°09'36.37"N 75°36'28.47"E 22°09'36.31"N 75°36'29.75"E 22°09'36.33"N 75°36'30.67"E 22°09'34.60"N 75°36'30.53"E 22°09'34.41"N 75°36'26.37"E 22°09'28.78"N 75°36'21.56"E 22°09'25.44"N 75°36'21.53"E 22°09'23.45"N 75°36'15.90"E 22°09'24.62"N 75°36'13.64"E 22°09'31.27"N 75°36'13.23"E 22°09'31.23"N 75°36'14.97"E 22°09'30.42"N 75°36'17.20"E 22°09'31.18"N 75°36'18.76"E 22°09'32.22"N 75°36'19.93"E 22°09'33.89"N 75°36'20.26"E 22°09'34.74"N 75°36'19.82"E
16.	Badgao	Kasrawad	64,65,67	10,000			30000	
17.	Badgao	Kasrawad	176, 177,	9,000			30000	22°09'22.32"N 75°37'11.14"E 22°09'20.14"N 75°37'11.70"E



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			178.179,190, 189			22°09'19.51"N 75°37'10.16"E 22°09'16.99"N 75°37'09.70"E 22°09'16.51"N 75°37'05.45"E 22°09'13.24"N 75°37'04.04"E 22°09'11.77"N 75°37'04.81"E 22°09'11.69"N 75°37'02.17"E 22°09'10.85"N 75°36'58.24"E 22°09'11.27"N 75°36'57.74"E 22°09'11.92"N 75°36'58.42"E 22°09'12.92"N 75°37'00.51"E 22°09'12.97"N 75°37'02.16"E 22°09'11.87"N 75°37'02.56"E 22°09'13.01"N 75°37'03.30"E 22°09'14.82"N 75°37'03.20"E 22°09'13.91"N 75°37'01.33"E 22°09'13.52"N 75°37'00.47"E 22°09'12.58"N 75°36'58.60"E 22°09'12.90"N 75°36'58.47"E 22°09'14.14"N 75°37'00.17"E 22°09'15.51"N 75°36'59.78"E 22°09'16.25"N 75°36'58.67"E 22°09'17.36"N 75°36'58.80"E 22°09'17.52"N 75°36'58.08"E 22°09'21.12"N 75°37'00.35"E
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18.	Kathora	Kasrawad	107/3	4.000	15000	22°09'48.72"N 75°38'13.88"E 22°09'50.19"N 75°38'13.04"E 22°09'52.16"N 75°38'12.73"E 22°09'53.44"N 75°38'11.86"E 22°09'54.81"N 75°38'12.12"E 22°09'55.57"N 75°38'11.95"E 22°09'57.02"N 75°38'12.11"E 22°09'58.58"N 75°38'19.08"E 22°09'56.25"N 75°38'19.04"E 22°09'53.92"N 75°38'16.88"E 22°09'52.50"N 75°38'16.44"E 22°09'51.84"N 75°38'17.04"E 22°09'50.00"N 75°38'18.50"E 22°09'48.86"N 75°38'18.84"E 22°09'48.97"N 75°38'15.74"E
19.	Kayatkhedhi	Kasrawad	1	1.200	10000	22°10'33.14"N 75°46'45.17"E 22°10'34.93"N 75°46'53.75"E 22°10'37.19"N 75°46'52.99"E 22°10'35.29"N 75°46'44.18"E
20.	Katghada	Barwaha	175	4.000	10000	22°13'27.82"N 76°01'22.25"E 22°13'31.79"N 76°01'20.23"E 22°13'36.01"N 76°01'29.49"E 22°13'31.99"N 76°01'31.50"E
21.	Mardana (B)	Sanawad	70	20.000	10000	22°10'23.84"N 75°48'27.73"E 22°10'40.52"N 75°48'25.78"E 22°10'42.39"N 75°48'45.31"E 22°10'30.74"N 75°48'43.41"E
22.	Kapasthal	Barwaha	185	4.000	10000	22°11'32.95"N 75°57'12.49"E 22°11'32.93"N 75°57'23.68"E 22°11'28.91"N 75°57'23.40"E 22°11'29.11"N 75°57'12.15"E

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23.	Shahpura	Khargone	1	5.000	10000	21°46'37.67"N 75°35'02.16"E 21°46'55.84"N 75°35'05.35"E 21°47'05.45"N 75°35'10.15"E 21°47'13.00"N 75°35'04.86"E
24.	Gogawa	Khargone	15	4.000	8000	21°48'09.05"N 75°35'41.83"E 21°48'05.28"N 75°35'48.28"E 21°48'21.02"N 75°35'55.64"E 21°48'21.66"N 75°35'49.79"E
25.	Umarkhali	Gogawa	243	5.100	6000	21°42'54.62"N 75°35'28.83"E 21°42'52.67"N 75°35'37.00"E 21°43'11.04"N 75°35'48.23"E 21°43'15.49"N 75°35'37.28"E
26.	Titpur	Gogawa	33	8.100	10000	21°43'26.05"N 75°35'43.92"E 21°43'56.72"N 75°36'02.47"E 21°44'35.12"N 75°35'56.82"E 21°44'31.58"N 75°35'49.82"E
27.	Daheriya	Barwaha	54/3	4.000	10000	22°13'45.96"N 76°03'31.26"E 22°13'46.66"N 76°03'38.93"E 22°13'40.29"N 76°03'38.19"E 22°13'40.01"N 76°03'31.14"E
28.	Lalpur	Maheshwar	44	4.000	10000	22°09'32.42"N 75°44'35.06"E 22°09'32.30"N 75°44'49.86"E 22°09'29.44"N 75°44'49.85"E 22°09'29.23"N 75°44'35.09"E
29.	Penpur	Gogawa	319	4.000	2500	21°41'39.47"N 75°37'56.87"E 21°41'40.12"N 75°37'00.58"E 21°42'04.20"N 75°36'52.47"E

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4. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS :

Table 4 Licensing Fee received in last three years for Sand Mine lease

Year	Royalty/Revenue (In Rs.)
2019-20	43200000/-
2020-21	84498394/-
2021-22	76118804/-

Note-Rs.57859401/- to be recovered from previous sand contractor, hence revenue is less in 2021-22

5. DETAILS OF PRODUCTION OF SAND OR BAJRI IN LAST 3 YEARS

Table 5 Sand Production in last 3 years

Year	Production(In Cu.Mt)
2019-20	51883
2020-21	81098.59
2021-22	113327

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

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 bedsand 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 shapethat are preferred for construction.

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- Also, offer the advantages of being naturally sorted by grain-size, easily accessible, and able to be transported inexpensively using barges. Despite plentiful supplies of desert sand (Aeolian) which produce materials unsuitable for making concrete.

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

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

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

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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:

- **Pit Sand**

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

- **River Sand**

This sand is obtained from banks or beds of rivers. The river sand consists of fine rounded grains probably due to mutual attrition under the action of water current.

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The colour of river sand is almost white. As river sand is usually available in clean condition, it is widely used for all purposes.

• Sea Sand

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

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, methylene blue value (MB), crushing value index, mica content, light-matter content, etc

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.

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

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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 of 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

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

Most of the rivers/streams flowing in the district are originated within the district and produced black sand, because whole district of Khargone 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, hence produced balu sand.


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7. GENERAL PROFILE OF THE DISTRICT

1. Geographical Position	Khargone district lies between north latitudes 22°47' and 22°35' and east longitudes 75°19 and 76°14 in parts of survey of India Toposheet No. 46N, 460, 55B and 55C.
2. Area and Population	<p>I. Geographical Area (Sq.Km) Total Area (Sq.Km): 8,030 Km²</p> <p>II. CENSUS 2011</p> <p>I. Population</p> <p>a. Total Population: 1,873,046</p> <p>b. Male Population: 953,121</p> <p>c. Female Population: 919,925</p> <p>II. Literates</p> <p>a. Total Literates: 986,234</p> <p>b. Male: 575,428</p> <p>c. Female: 410,806</p> <p>III. Main Workers (Census 2011)</p> <p>a. Total Workers: 756,735</p> <p>b. Male Workers: 466,922</p> <p>c. Female Workers: 289,813</p> <p>d. Cultivators: 307,085</p> <p>e. Agricultural Labourers: 425,712</p> <p>f. Other Workers: 149,798</p> <p>V. Languages Spoken in the District The main language spoken in the district is Nimadi, followed by Hindi and then Bareli.</p>
3. Temperature	Mean- Maximum temperature: 34°C Mean- Minimum temperature: 19.6°C
4. Rainfall (In mm)	Normal – South West Monsoon: 835mm Annual Rainfall: 835mm
5. Agriculture	<p>a. Total Cultivable Area (lakh. Ha): 405.7</p> <p>b. Net Area Sown (Ha): 405.66</p> <p>c. Area Sown more than once (Ha): 51.76</p>
6. Rivers, etc.	The main drainage in formed being Narmada river and various small nalas and rivulets joins to Narmada. The Tapti drainage system extends in a limited area along the southern boundary of the district.
7. Revenue Administrative Divisions	Revenue Divisions: <p>a. Revenue Tehsils: 11</p> <p>b. Revenue Villages: 1,421</p>
8. Local Bodies	<p>a. Municipalities: 8</p> <p>b. Town Panchayats: 594</p>

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Description	2011
Actual Population	18,73,046
Male	9,53,121
Female	9,19,925
Population Growth	22.85 %
Area Sq. km.	8,025
Density/KM ²	233
Proportion to population of Madhya Pradesh	2.58 %
Sex Ratio (Per 1000)	965
Child Sex Ratio (0-6 Age)	938
Average Literacy	62.70
Male Literacy	72.08
Female Literacy	53.03
Total Child Population (0-6 Age)	2,99,990
Male Population (0-6 Age)	1,54,758
Female Population (0-6 Age)	1,45,232
Literates	9,86,234
Male Literates	5,75,428
Female Literates	4,10,806
Child Proportion (0-6 Age)	16.02 %
Boys Proportion (0-6 Age)	16.24 %
Girls Proportion (0-6 Age)	15.79


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8. LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURAL, MINING, ETC.,

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

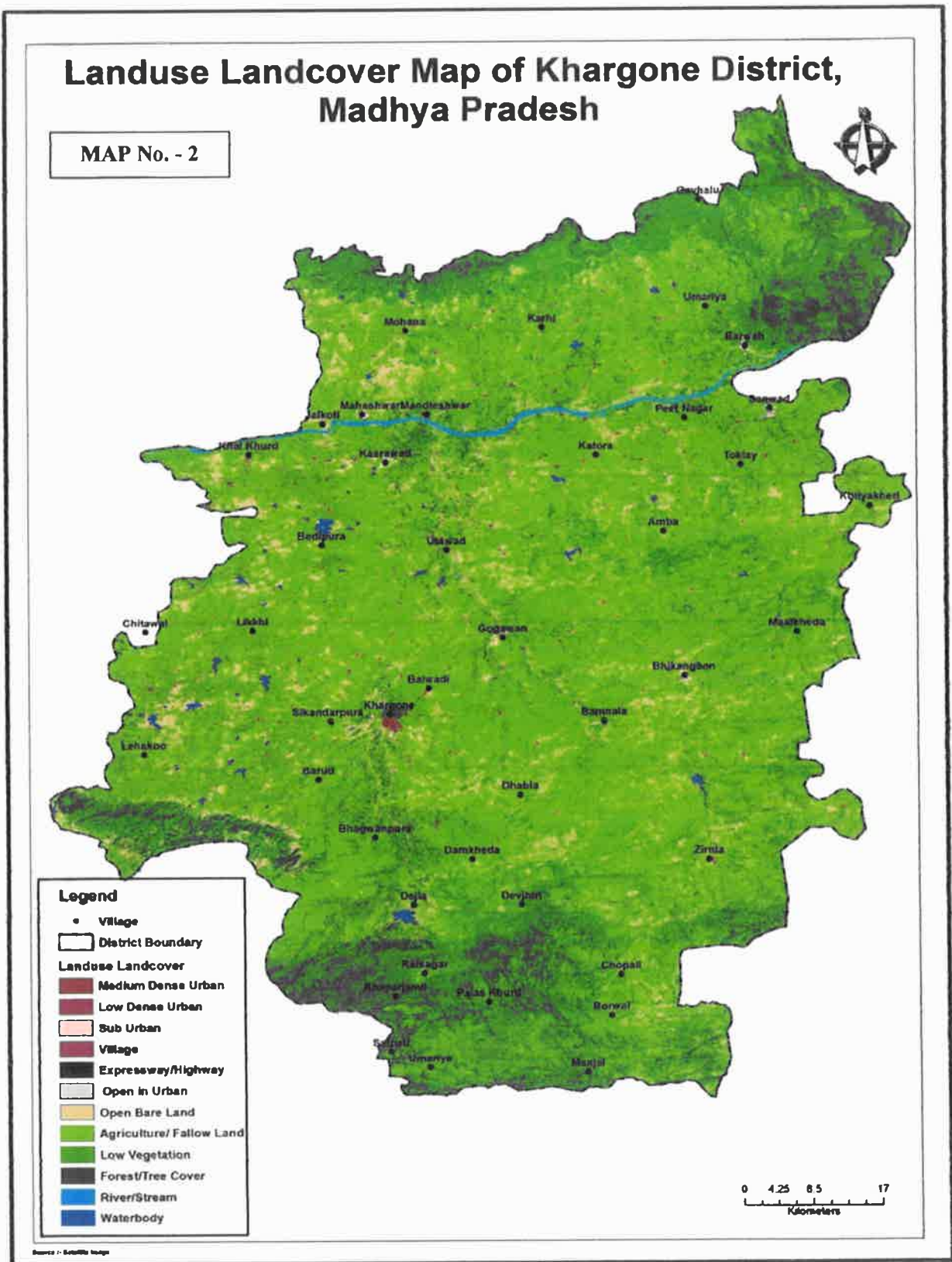
Table 6 Land Use Pattern of the Study Area

Sr. No	Class	Area in Ha	Percentage of coverage
1	Agricultural Plantation	121.00	0.02%
2	Aquaculture	8.00	0.00%
3	Barren rocky	3,542.00	0.44%
4	Canal/drain	992.00	0.12%
5	Cropland	4,84,357.00	60.54%
6	Deciduous (Dry/Moist/Thorn)	1,40,035.00	17.50%
7	Fallow land	1,105.00	0.14%
8	Gullied/Ravenous land	2,900.00	0.36%
9	Industrial	921.00	0.12%
10	Lake/Ponds	854.00	0.11%
11	Mining / Quarry	344.00	0.04%
12	Reservoir/Tank	7,796.00	0.97%
13	River	10,925.00	1.37%
14	Rural	7,863.00	0.98%
15	Scrub Forest	56,646.00	7.08%
16	Scrub land	78,917.00	9.86%
17	Tree Clad Area	444.00	0.06%
18	Urban	2,254.00	0.28%
	Total	8,00,024.00	100.00%

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9. PHYSIOGRAPHY OF THE DISTRICT

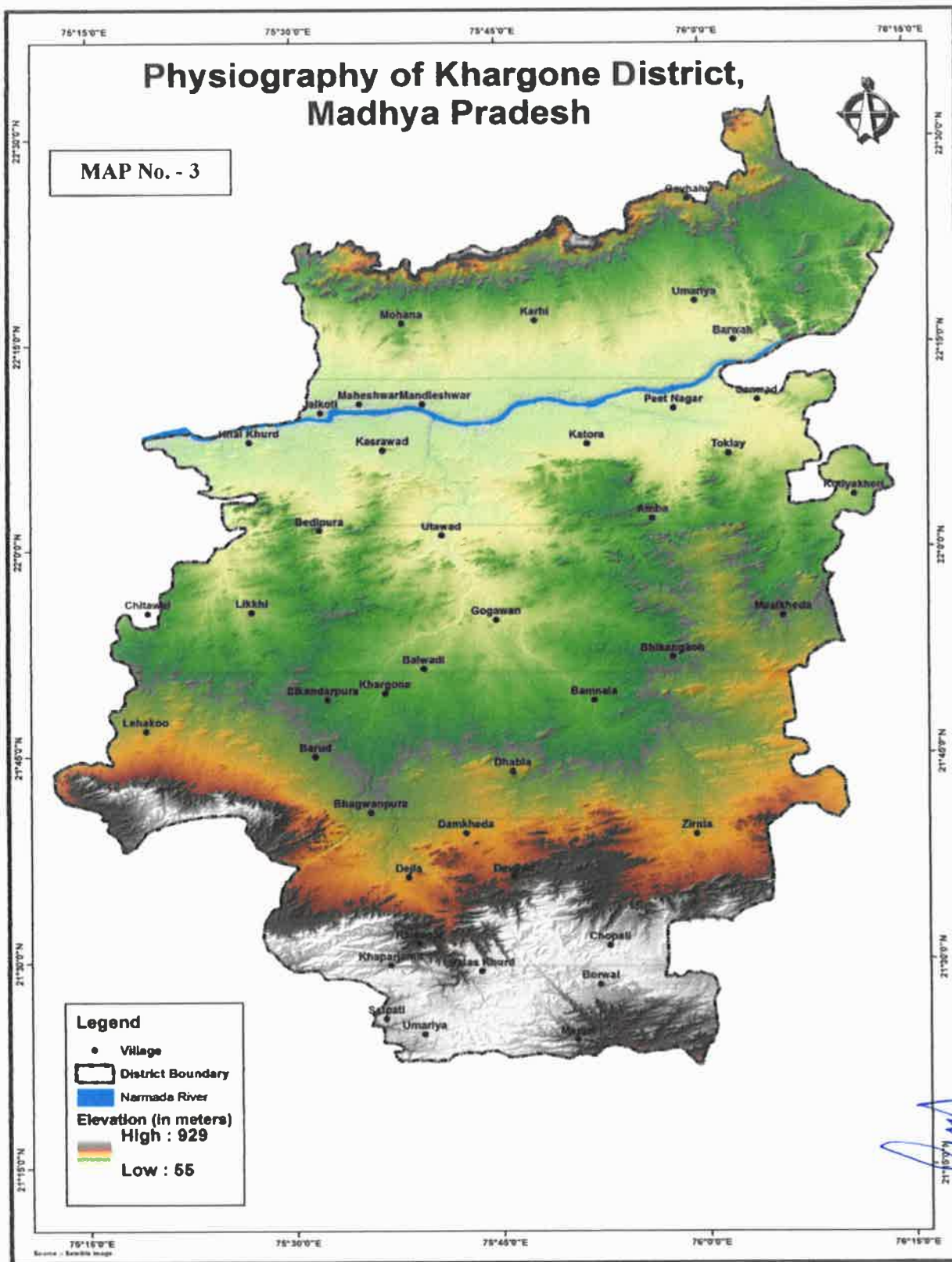
The district exhibits varied geomorphic units, the presence of fluvial units showing the occurrences of alluvium in the flood plains of all major streams and rivers, buried Pedi plains showing denudational hills as seen in the north western parts of the district. Similarly structural hogbacks and Cuesta belonging to Vindhyan Meta sedimentary are restricted to northern boundary of the district. Basaltic uplands forming lower belt that extends from west to east in the southern parts of the district. This upland tract also forms major forests in the district.


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(E.C.-)
Faryavaran Parisar
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10. RAINFALL OF THE DISTRICT


The normal annual rainfall of Khargone district is 835 mm. The maximum rainfall received during south west monsoon period i.e., June to September about 92.8% of the annual rainfall received during monsoon season. Only 7.2% of the annual rainfall takes place between October to May period. Thus, surplus water for ground water recharge is available only during the south west monsoon period. During the south west monsoon season the relative humidity generally exceeds 85% (August month). In the rest of the year is drier. The driest part of the year is the summer season, when relative humidity's are less 34% April is the driest month of the year.

CLIMATIC CONDITIONS

The climate of Khargone district, M. P. is characterized by a hot summer and general dryness except during the south west monsoon season. The year may be divided into four seasons. The cold season, December to February is followed by the hot season from March to about the middle of June. The period from the middle of June to September is the south west monsoon season. October and November form the post monsoon or transition period. The normal maximum temperature received during the month of May is 41.8° C and minimum temperature of Khargone district is 34° C and 19.6°C, respectively. The wind velocity is higher during the pre-monsoon period as compared to post monsoon period. The maximum wind velocity 9.0 km/hr. observed during the month of June and minimum 2.5 km/hr. during the month of December. The average normal annual wind velocity of Khargone district is 4.9 km/hr.

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

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The month wise rainfall of Khargone district for last three years has been shown below in the table :-

Table No.7 Month wise Rainfall

Year	2019	2020	2021
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	66.20	235.33	96.14
July	274.66	188.51	148.23
August	391.31	290.16	124.68
September	243.94	192.80	228.73
October	42.11	4.54	52.01
November	0	0	0
December	0	0	0
Total	959.24	892.80	649.79

11. GEOLOGY AND MINERAL WEALTH

Geologically the area comprises rocks of Mahakoshal group of Palaeo –Protozoic (>2000m.y.). Bijawar group of palaeo to meso- protozoic(1600 to 2000m.y.). Rewa group of Vindhyan super group of neoproterozoic (570 to 1600m.y.). Bagh and Lameta group of upper cretaceous (110m.y.). Basaltic flows of Deccan trap of late cretaceous to palaeogene period (68-62m.y.) and alluvium of quaternary (<1-654m.y.). The rocks of Mahakoshal, Bijawar, Rewa and Bagh groups occur in the small area in the north eastern part of the district. The Mahakoshal group is represented by phyllites and quartzite occurring as isolated outcrops. The Bijawar group of rocks include chert breccias and ferrogeneous breccias. Dolomite shell and sandstone and Meta basalt. The breccias consist of angular fragments of vein quartz, smoky and white chert, and jasper embedded in siliceous matrix. Dolomite occurs as lenses and bands and is siliceous in nature. At some places it shows stromatolite structures. The Vindhyan super group is represented by the Rewa group which includes formations namely Kanar sandstone and Jamoti shells. The sandstone is pink to purple in colour, fine grain, thinly to thickly bedded and quartzitic in nature.

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Sedimentary structures like cross bedding, ripple marks, groove cast, load structures, mud cracks and clay galls are well preserved in the sandstone. The jamoti shells consist of thick brick red shell interbedded with brownish siltstone and fine grained sandstone. It shown gradational contact with Kanar sandstone. The bagh group includes fossiliferous cherty limestone while lameta group consist of middle to coarse grain friable gritty sandstone. Calcareous sandstone and shell outcrop of those rocks are seen on northern bank of Narmada river, north east and east of barwaha.

Basaltic lava flows of Deccan trap occupy a major part of area in the district. They have been classified into two groups viz. malwa and satpura groups respectively confined to the north and south of Narmada River. The narmada valley delineates a contact between these two groups. The malwa group include a total of 40 basaltic flows, majority of the flows of a Aa type while few are of compound pahoehoe type. The thickness of Aa flows varies from 15 m to 20m, while the individual pahoehoe units are 2 to 5 m thick. These flows are further classified into five formations on the bases of distinct physical characters of the flows. All the flows are nearly horizontally disposed. The rock is fine to medium grained, aphyric to sparsely moderately porphyritic and mega-porphoritic in nature. The satpura group comprises 55 flows of varied types between 198 m and 1033 m elevations above the msl. The general thickness of the individual flows varies between 15 m and 40 m .the lower and middle sequences are of "pahoehoe" type while upper flows are Aa type. The lava flows show tilting in the vicinity of the faults. This group is classified into six formations on the basis of occurrence of magacryst flows and presence of red/green boles.

Numerous dykes of various length, width and composition traverse the flows. Most of them display appreciable relief giving rise to narrow ridge in the area. The dykes have a trend of North West south east and N70°E- S70°W which corresponds to the Narmada lineament. Compositionally the order of abundance of these dykes is basaltic, doleritic, gabbroic, and acidic. The calcite bands form the minor intrusive showing a general trend of ENE-WSW and N15°W- S15°E. these are 0.5. to 20m.

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thick and comprise greenish or yellowish transparent, rhombic crystals of calcite. Alluvium of the quaternary occurs in small patches along narmada river in the north-east corner of district. It includes very fine sand/slit/clay and interlayered sequence of rock gravel.

Minor occurrences of calcite, fluorite and dolomite have been noticed in the area. Fluorite occurs in form of minute discontinuous veinlets and disseminations are found in bijawar group of rocks. The latter occurrence show higher values of phosphate (upto 31.65% P₂O₅). Occurrence of dolomite limestone has been recorded. Occurrences of Manganese have been reported near nandia. Iron ore occur in minor amount within the banded iron formations. Sandstone of rewa group (vindhyan super group) and lameta group are used as building materials. Basalts and dolerite rocks serve purpose of road material and dimension stone.

Table No. 8 Location of Minerals in Khargone District

S.No.	Name of mineral	Name of place	Latitude/longitude
1.	Calcite	Hirakia	21 ⁰ 53'-74 ⁰ 55'
2.		Budipapar	21 ⁰ 50'-74 ⁰ 46'
3.		Kirkur	21 ⁰ 52'-74 ⁰ 55'
4.		Chaklia	21 ⁰ 50'-74 ⁰ 49'
5.		North of Pauljiwari	21 ⁰ 45'-74 ⁰ 56'
6.		Jalkhera	21 ⁰ 49'-74 ⁰ 54'
7.		Yarwada	21 ⁰ 57'-74 ⁰ 43'
8.		Masterkund	21 ⁰ 53'-74 ⁰ 34'
9.		Chickwani	21 ⁰ 50'-74 ⁰ 39'
10.		Samokhera	21 ⁰ 49'-74 ⁰ 57'
11.		Swetikhera	21 ⁰ 48'-74 ⁰ 52'
12.	Fluorite	SE Modri	22 ⁰ 16'-76 ⁰ 07'
13.		North of sadkhera	22 ⁰ 17'-76 ⁰ 03'
14.	Dolomite	Barwaha, near nayapura	22 ⁰ 23'-76 ⁰ 08'
15.		West of chorboli	22 ⁰ 17'-76 ⁰ 01'
16.	Manganese	Near nandia	22 ⁰ 16'15"- 76 ⁰ 0'20"

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The stratigraphic sequence of various rock formations exposed in Khargone district is as below:-

Table No. 9 Chronological Sequence of Geology of Khargone

Formation	Rock Types
Recent	Alluvium, Boulder bed and calc-tuffa
Deccan traps	Basaltic flows and basic intrusions
-----Unconformity-----	
Lametas	Sandstone and siliceous limestone
Bagh – beds	Coralline limestone & Niwar sandstone
-----Unconformity-----	
Vindhyan	Sandstones, shales and Quartzites
-----Unconformity-----	
Bijawars	Quartzites, shales, breccias, chert, Dolomites & Dolomitic limestone.
-----Unconformity-----	
Archeans	Schists, phyllites, granites, Quartzites and Intrusives

11.1.1 Archeans

The rock of Archeans group represented by phyllites hornblende schist and chlorite schists. The phyllites are seen merging into quartz-sericite and chlorite schist with subordinate band of quartz. These rocks are steeply dipping and foliated with foliation plain of WNW ESE direction. Large exposures of these rocks occur at the base of vindhyan quartzite near Surtipura, Chinkti Mondri, and south of Koteswar, phyllites are exposed in the south of Badel and Baryhar and north east of Badlipura. In the Kanar river section (N-E of Okhla) coarse porphyritic granites are seen intruding the phyllites, schistose rock and granitic gneisses. These rocks are much weathered and there feldspar is completely altered into sericite/kaolinite.

These rocks are intruded by both acid and basic intrusive. The acid intrusive include felsites, quartz-porphyry and quartz veins. Exposers of felsites dykes are seen 1.5

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km. north of surtipura tank. There color ranges between brown to pink. It is fine grained and consisting of quartz and feldspar. Indication of flourites has also been recorded in it.

11.1.2 Bijawars

These formations are unconformably over laying the Archeans and are represented by dolomitic and magnesia limestone with occasional irregular veins of quartz / chert, breccias, shell of quartzites. The bijawar formations are over lain, unconformable by vindhyan by sediments.

The outcrops of bijawar dolomite / dolomitic limestone, an important member in the area, are seen in the section of Odhali Nala, cholar river, mondri nala, buitkhera, sandkhera, mohinda, S.E. of "Mondri" and Nadia village. It is a light grey to dark grey with various shades fo pink, purple, black or brown colors. It is hard compact, massive and siliceous / cherty in nature interbedding of chert berccia and irregular distribution of quartz veins and veinlets are frequently seen in these rocks. Its general strike EW, with 25° 55° dip towards south. Dolomitic limestone is well jointed and most of the joints follow the strike direction. Oblique joints are also seen in this rock. This formation at places exhibit brecciated nature where, the irregular fragments of dolomitic limestone are seen cemented in calcareous matrix bedded and brecciated nature of this formation clearly indicates its post formation deformation and subsequent cementation. The elephant skin weathering is characteristic feature of the dolomitic limestone.

11.1.3 Chert

Chert and flint nodules found in dolomitic limestone are mostly siliceous but slightly calcareous nature of these nodules have also been noticed in the east and S.E. of village mondri outcrops of microcrystalline silica (chert and flint) in the form of insitu boulders are seen and these are found to be slightly phosphatic near the contact of dolomitic limestone. Near village chidhkhera, chert interbedded with dolomitic limestone was also found to be feebly phosphatic.

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11.1.4 Breccia

In the upper Narmada valley the larger portion is occupied by breccias which are overlying the dolomitic limestone. The breccias seen exposed along choral rover, S.E. of mohida , Sadukhera, jaintinala surtipura, bhadhripura, sulgaon, mondri, mandli, and around mahidikhera is cherty, ferruginous and calcareous in nature. Around mondri the breccias is cherty and ferruginous while it is ferruginous in the SE of mondri and also indicates the presence of phosphate. Breccias exposed in other places is non phosphatic in nature. It was found to be mangniferrous and calcareous around namdia mehdikhera and jantinala. Exposed thickness of berccia in this region ranges between 10 to 20 m.

In mondri nala section the ferruginous breccias in the contact of vindhyan quartzite is specularite (iron ore) bearing as seen in old pits near mondri and mehdikhera area and manganese bearing in the north of nandia. Othe r manganese bearing pockets have been recorded in kanar river section, mehdikhera and jantimala area. Hear the breccia is mainly calcareous and manganese oxides seem to have been segregated in it. The cave temple of jantimata is situated in this rock which is relatively softer in nature.

11.1.5 Shales

The bijawar shales overlying the breccias are seen cropping out due SE of mondri, deojhiri and jantimata. These shales are associated with ferruginous breccia in the north and dolomitic limestone in the south.

11.1.6 Quartzites

In the south east of mondri village the quartzites are seen over lying in the shales. It is dull white to white in color with occasional current bedding and ripple marks.

11.1.7 Vindhyan

The eastern region of the area is occupied by the vindhyan formations which are represented by sandstone, shales and quartzite. Sandstone and quartzite's forms high ridges and the shales are exposed in the low lying areas. The sandstone and quartzite vary in color from grey to dark brown and consist of medium to fine grained quartz cemented in ferruginous and siliceous matrix. The shales are highly

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laminated, fractured and friable in nature. The color varies from greenish brown to pink at places reddish with micaceous stone. Ripples marks and mud cracks in the shales are developed in sulgaon and sidhwar koot area.

Primary sedimentary features i.e. ripple marks current bedding and graded bedding is quite common. Quartzite often shows intercalation and interbedding of shales and is traversed by quartz veins of varying magnitude across and along the bedding plains.

11.1.8 Bagh beds

The bagh beds are represented by niwar sandstone, coralline limestone and nodular limestone. Niwar sandstone is the basal member of bagh beds and it occurs as patches in coralline limestone along the nala section. It is fine grained, white to dull in color and upper surface is calcareous in nature. These formations are exposed around agrawara.

Coralline limestone is best exposed in the nala section at village agrwara. It exposures are also seen in guljiri and khokar nala near villages naya and astartia. It is fine to medium grained and color varies from yellowish to dull white and at places light pink to brown.

11.1.9 Lametas

Lametas in the area are represented by sandstone and thin layer of limestone. The sandstone is occasionally conglomeratic in nature. The lametas are exposed in vicinity of katkut, ghatia, salgaon, rawatpulasia etc. in the form of mounds and low redges. Lametas sandstone is medium to coarse grained, paler dirty brown pink to green in colour.

11.1.10 Deccan tarps

Bedded lava flows over lie the intra-trappean and at places of the vindhyan. The basaltic flows are black to dark grey in color fine to medium grained, hard, and compact and have uniform texture and composition over wide area. These flows form plateau in the area. The basic rocks are also seen as intrusive near the village's sulgaon, kariakund, surtipura etc.

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Amygdaloidal nature has also been observed in the basalt in the area. Geodes are also quite common calcite veins are also seen in the basalt and recored aroud villages pati, jhaklia, darvelia, gandhawal, palwat, limdi, sewli, thar, atarsambcha, masauda, sindhi, kiradia, chandwari, hirakherai, palsud, jalkheda and minimata. The most promising calcite veins were recorded around chaklia, damlia, gandhawal, galkheda and masoda villages.

11.1.11 Recent

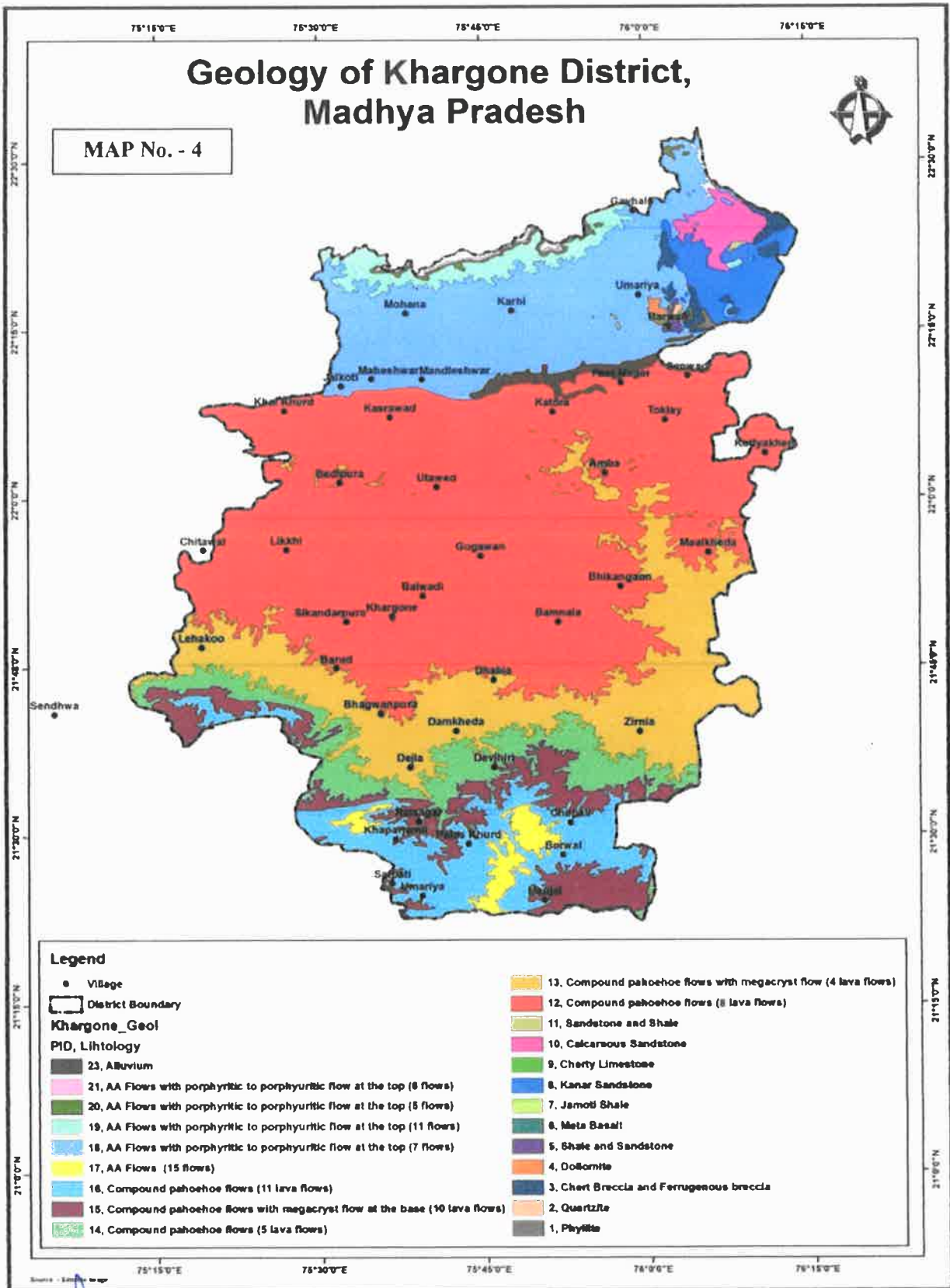
Recent formations in the area are represented by alluvium, boulder bed and calc-tuffa which are covering the older rocks.


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11.2 Mineral Wealth

Besides vast resource of building material, the district has few mineral of economic importance. Calcite, clay, dolomitic limestone, coralline limestone, inter trappean, tuffa limestone, fluorite, iron ore, limestone, manganese ore and glass sand are some of the important mineral. Showing of ochre (red and yellow) and rock phosphate have also been reported. Mineral wealth of Khargone district has been shown in **Map No. 5**

11.2.1 Calcite

In barwaha tehsil of district occurrences of calcite have been recorded in near umaria, barwaha and jamunia. The calcite is white, grayish white to yellowish white in color, massive, crystalline and mostly semi transparent in nature. The width of calcite veins ranges between 2-3 meters.

11.2.2 Clay

Around barwaha, occurrences of clay have been recorded in the limestone near chorbaoli, in a well below 3 meters cover of black soil and basalt. The color of the clay ranges from white, grayish white to pinkish white.

11.2.3 Dolomitic limestone

Outcrops of dolomitic limestone have been recorded and studied in detail from north of barwaha in odhali nala section near naya para in choral river and its western bank, south of village chorbaoli in a NS trending ridge west of nandia, north of jantimata and NW of village tiramia in kanar river and its western bank.

General strike direction of dolomitic limestone recorded in nayapara area is NNE-SSW. With a dip varying from 25° to 45° WNW direction. The barwaha area the rock is relatively free from siliceous bands and is been worked extremely for lime burning. In chorbaoli area the rock is grayish white to pink in colour. In nandia area it is grayish white to grey with dominance of quartz and chert veins. In jointinala area, the rock is hard compact, whitish grey, pink to dark grey.

11.2.4 Coralline limestone

Near villages naya and Astaria in guljhiri and khilar nala bed, small exposers of coralline limestone have been observed. The limestone is fine to medium grain compact rock rich in bryozoa and bivalved fossils besides small form of ostria. It is

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yellowish white light pink to brown and horizontally bedded.

In an area of 0.364 sq. km. near village agawara D.G.M. M.P. has estimated about 1.96 million tones of reserve of this limestone. Overall analysis of this limestone gives more than 45% CaO and less than 3% of MgO.

The borehole data has revealed in increasing trend of over burden and limestone thickness, towards north and it needs further check, in respect of economic viability of OB/ore ratio.

11.2.5 Inter trappean limestone

Occurrence of this limestone has been recorded from kadwalia and rupabaldi villages. The limited extent, limited thickness and variation in grade of this limestone clearly indicate that it may not be of any economic interest.

11.2.6 Tuffa- limestone

The occurrence of tuffaceous limestone has been recorded in a nala, south of chiktimondri though it is analyzing 51% CaO, but due to restricted occurrence, it has no economic significance.

11.2.7 Fluorite

Occurrence of fluorite has been recorded as disseminations and criss-cross veinlets in a quartz porphyry dyke. It is purple to bluish white in color. There occurrence are having lateral extension of 150 meters in WNW-ESE direction. In koteswar area of barwaha tehsil also occurrences of fluorite have been noticed. These occurrences are not of any economic importance.

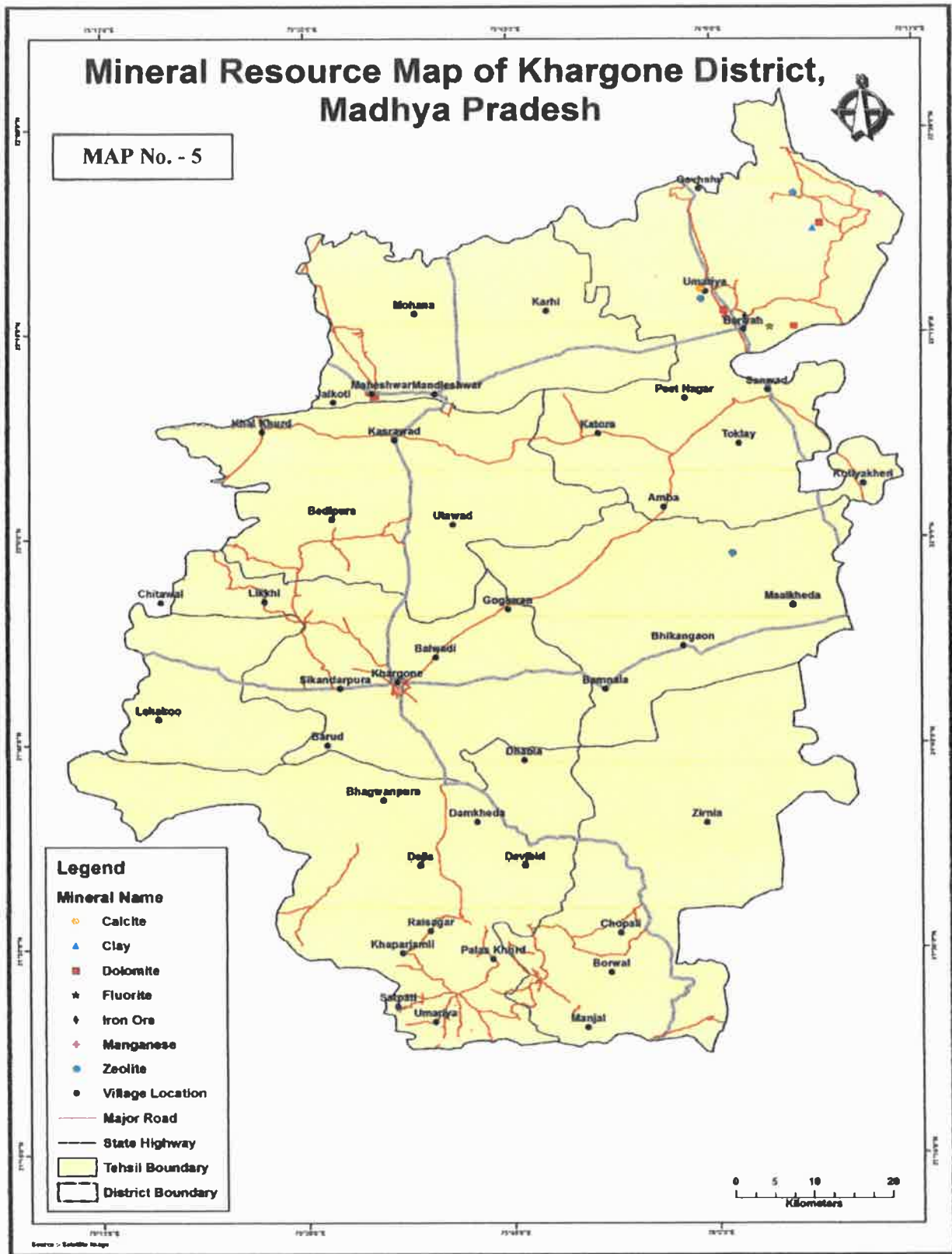
11.2.8 Iron -ore

Iron ore in the area is associated with ferruginous breccias of bijawar formation. In chiktimondri area a reserve of about 2.25million tones of iron ore bearing breccias has been estimated. The iron ore is mostly massive but occasional development of specular iron ore (specularite) is also noticed. In mehdikhera, an area of about 6000 sq. m. is seen occupied by old workings with the deposit of limonitic iron ore and reserve of about 3.0 million tones. The Depth of iron ore deposit is about 10 m below ground level.

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11.2.9 Manganese ore

Occurrence of manganese ore reported around village's nandia and agrwara of barwaha tehsil near tirania. The manganese ore, like iron ore is also found associate with bijawar breccias. The old working area is NNW direction of tirania village in the form of shaft and underground excavations. Mn ore is associated with cherty and calcareous breccia and dolomitic limestone.

11.2.10 Glass sand

Occurrences of glass sand have been recorded in the area of pirakala and karondiakhedha the sand is friable and white in color.

11.2.11 Building material


Large heaps of sandstone is found in nearby ghatia stone quarry area. Narmada sand is also used for this purpose.

12. DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVERS

The district area is mainly drained by the Narmada River and its tributaries. *Goi, Beda, Kudi, Borar Dondar, Deb, Nahali and Bhongali* Rivers flow from south to north while *Kharki, Gomathi, Malan and Makeswari* rivers flow from north to south in the southern bank of Narmada on the eastern part of the district.

Choral is the main river draining into the northern bank of the river Narmada. These major rivers are perennial to some extent and retain some water even during summer months. All the small Nallahs which feed the major streams during the monsoon, Remain dry during summer. The drainage pattern is mostly dendritic to sub-dendritic in dissected plateau and hilly area, while it is parallel to sub-parallel in plain area. However, a characteristic radial drainage is observed in the Basaltic terrain, south of Segaoon and east of Sendhwa in between longitudes E 75 15' to E 75 30 and latitudes N 22 30' to 22 45'. The streams appear to be fractured and joint controlled in the basaltic terrain.

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Narmada River

The Narmada also called the Rewa, is a river in central India and the fifth longest river in the Indian subcontinent. It is the fourth longest river that flows entirely within India, after the Ganga, the Godavari, and the Krishna. It is also known as "Life Line of Madhya Pradesh" for its huge contribution to the state of Madhya Pradesh in many ways. It forms the traditional boundary between North India and South India and flows westwards over a length of 1,312 km (815.2 mi) before draining through the Gulf of Cambay into the Arabian Sea, 30 km (18.6 mi) west of Bharuch city of Gujarat.

In Khargone district Narmada is the main river flowing from the central part of the district. The River Narmada flows along a path of 88 kilometres inside the district. The main drainage is formed being Narmada river and various small nalas and rivulets joins to Narmada. The Tapi drainage system extends in a limited area along the southern boundary of the district.

River Kunda

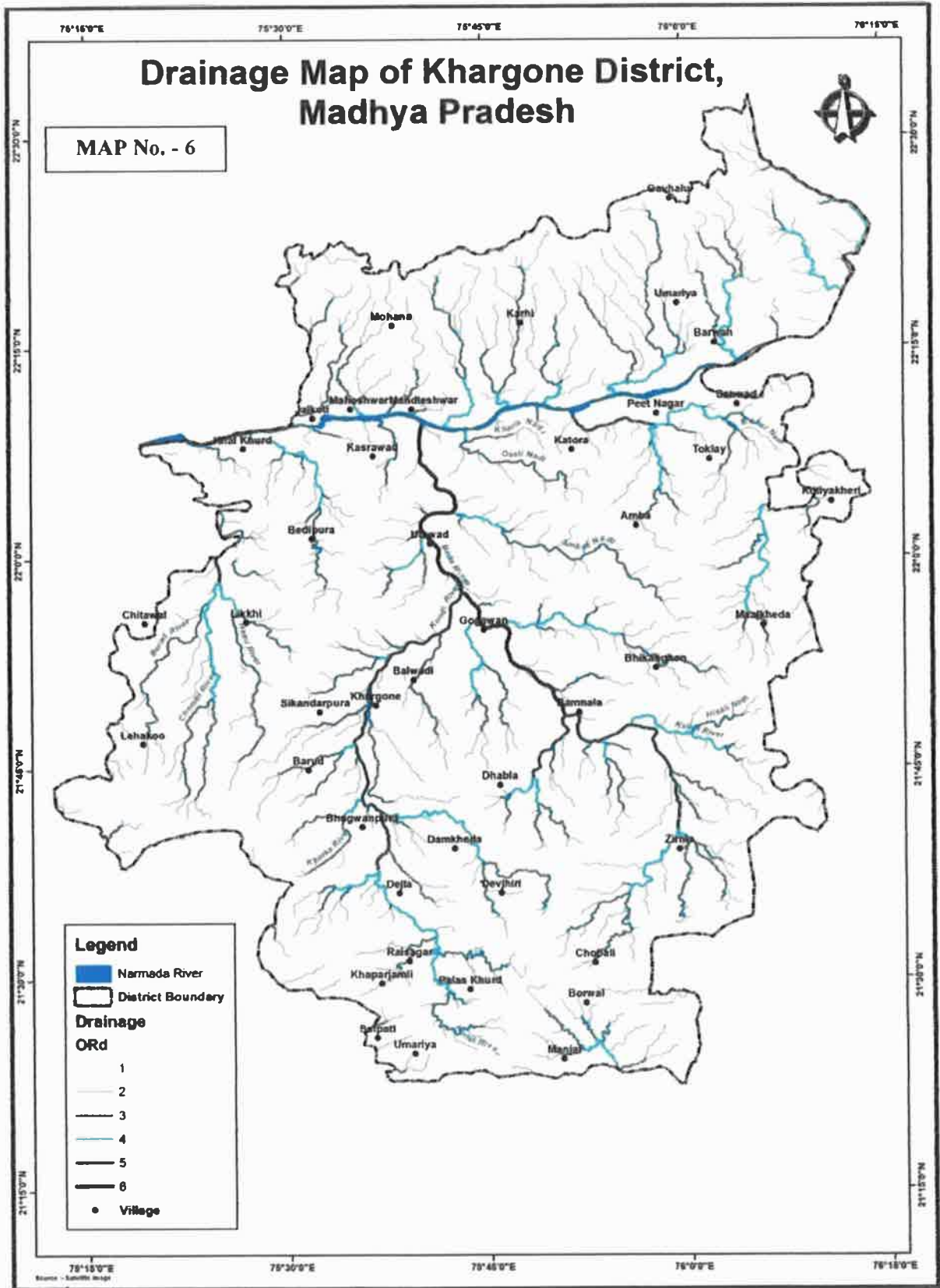
Kunda river is a large tributary of Narmada from Nimar region, originated from forest, Amba and Sirvel village and it flows from Village Pipalzhopa, (Block Bhagwanpura,) to Village Hopa, (Block Kaswarad). It has a length of approximately 169Kms. and its catchment area of 3825 sq. km. This river is situated in the west directions of Khargone but it river flows from South to North which passes through four block of Khargone district -Bhagwanpura, Goganwa, Khargone, and Kasrawad..


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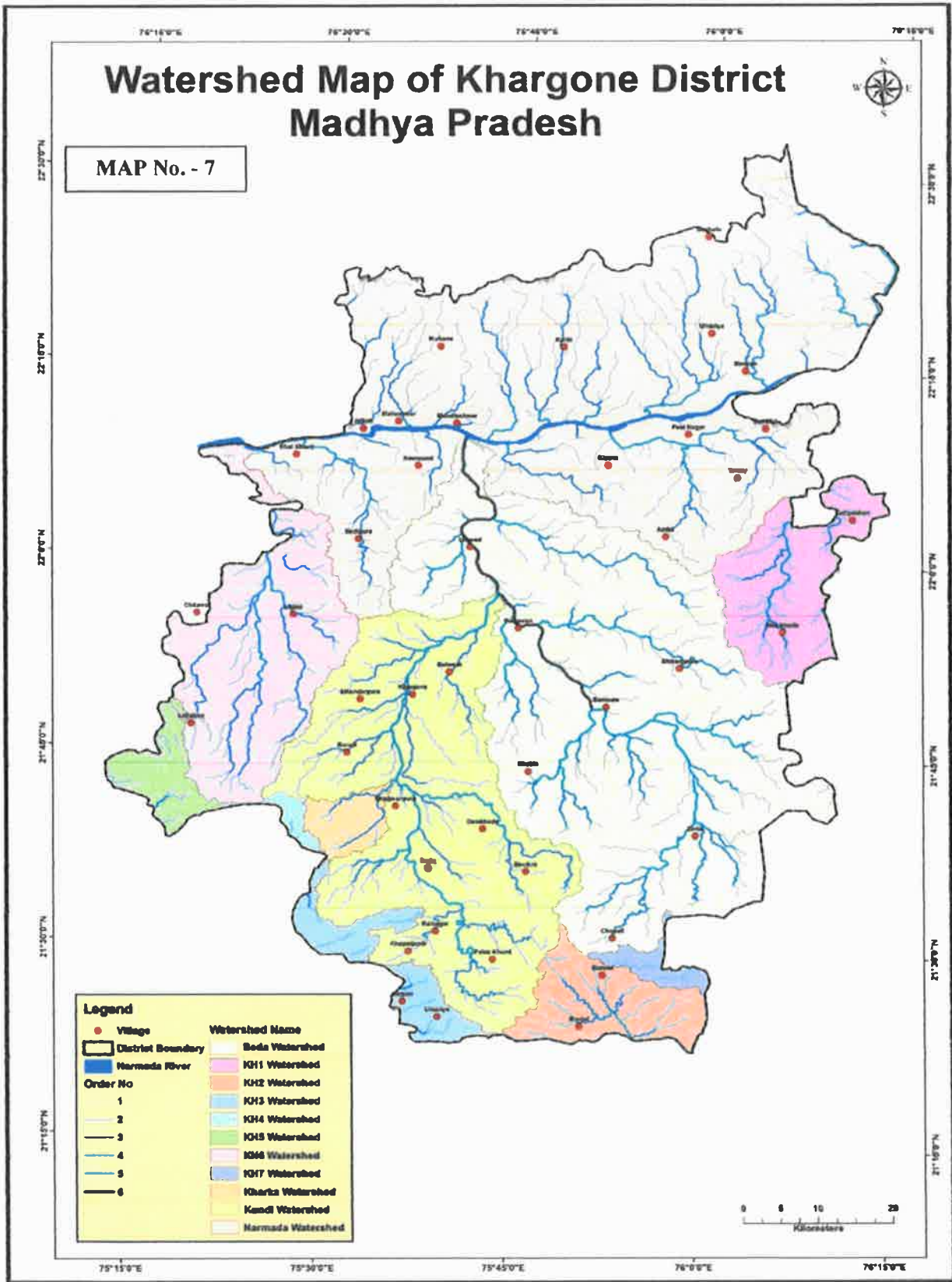
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River Beda

River Beda is a tributary of river Narmada which is flowing from south to the north direction in khargone district.

Elevation and Gradient of Watershed

The highest elevation of various watersheds varies from 827 to 351 m amsl while lowest in the range of 600 to 66 m amsl. Narmada River flows between elevations from highest 730 m amsl to lowest 66 m amsl in the khargone district area. The highest slope gradient of Narmada River is 65° and lowest is 0.17°, mean is 3.23°. Similarly gradient (Fig No.5) and elevation of other watershed is varies from 62 (KH3) and 0.02 (Kunda) and 743 (Beda) and 96 (Beda) respectively

Table No. 10 Elevation and Gradient of Watershed

Name of Watershed	Elevation (m amsl)		Slope (Degree)			No of tributaries/order					
	High est	Lowest	High est	Lowest	Mean	I	II	III	IV	V	VI
Narmada	730	66	65	0.17	3.23	871	199	48	14	1	
Beda	743	96	44	0.14	3.49	673	156	39	11	4	1
Kharka	351	230	40	0.23	7.13	31	7	2	1		
Kunda	723	142	50	0.02	5.36	400	90	23	6	1	
KH1	287	160	30	0.2	2.84	114	30	7	1		
KH2	827	365	60	0.42	10.61	75	15	6	2		
KH3	719	400	62	0.64	10.52	48	14	5			
KH4	513	367	40	0.85	10.30	5	2				
KH5	618	255	39	1.07	7.67	39	8	2			
KH6	506	133	35	0.14	3.42	209	45	8	2	1	
KH7	720	600	51	0.35	4.53	17	4				
						2482	570	140	37	7	1

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Calculation of sedimentation index for prioritization of watershed

There is a need to identify priority area within the vast catchment areas. For determining the relative priority of micro watershed within the river valley catchment (RVP), the All India soil and land use survey organization has developed a sedimentation yield index (SYI).

Sediment yield in the total sediment out flow from a catchment or drainage basin is at a particular reference point. Sediment deposition from a hydrologic unit in to a reservoir

As function of the product of

- Potential soil detachment (P)
- Transportability of the detachment material (T)
- Area of the hydrological unit (A)

$$\text{Sediment deposition} = P \times T \times A$$

Gross sediment yield in tons per sq km have been commutated based on slope and catchment, runoff, and land use pattern.

Table No. 11 Calculation of Sediment Yield Index in the watershed

Name of Watershed	Computation of Sediment Yield (tons/sq km)					
	Area in sq km	Weightage value	Delivery Ratio	Gross Yield tons/sq km	SYI Value	Category
Namrada	2754.1	16	0.63	20821.00	1008	Medium
Beda	2187.32	15	0.6	14764.41	900	Low
Kharka	84.93	16	0.65	662.45	1040	Medium
Kunda	1362.96	15	0.6	9199.98	900	Low
KH1	350.08	16	0.63	2646.60	1008	Medium
KH2	235.53	17	0.68	2042.05	1156	Medium
KH3	164.8	17	0.68	1428.82	1156	Medium

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KH4	26.82	17	0.68	232.53	1156	Medium
KH5	126.83	16	0.71	1080.59	1136	Medium
KH6	684.87	13	0.55	3672.62	715	Low
KH7	51.81	16	0.65	404.12	1040	Medium
	8030.05			56955.16		

In Khargone district catchment area of 11 watersheds, the estimated gross sediment yield is 56955 tons per sq km. It is highest (20821.00 tons/sq km) in the Narmada watershed area and lowest (232.53 tons/sq km) in the KH4 watershed. This sediment yield varies with rainfall, runoff and catchment characteristics. Prioritizations of watershed category are fall in low to medium category.

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.

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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

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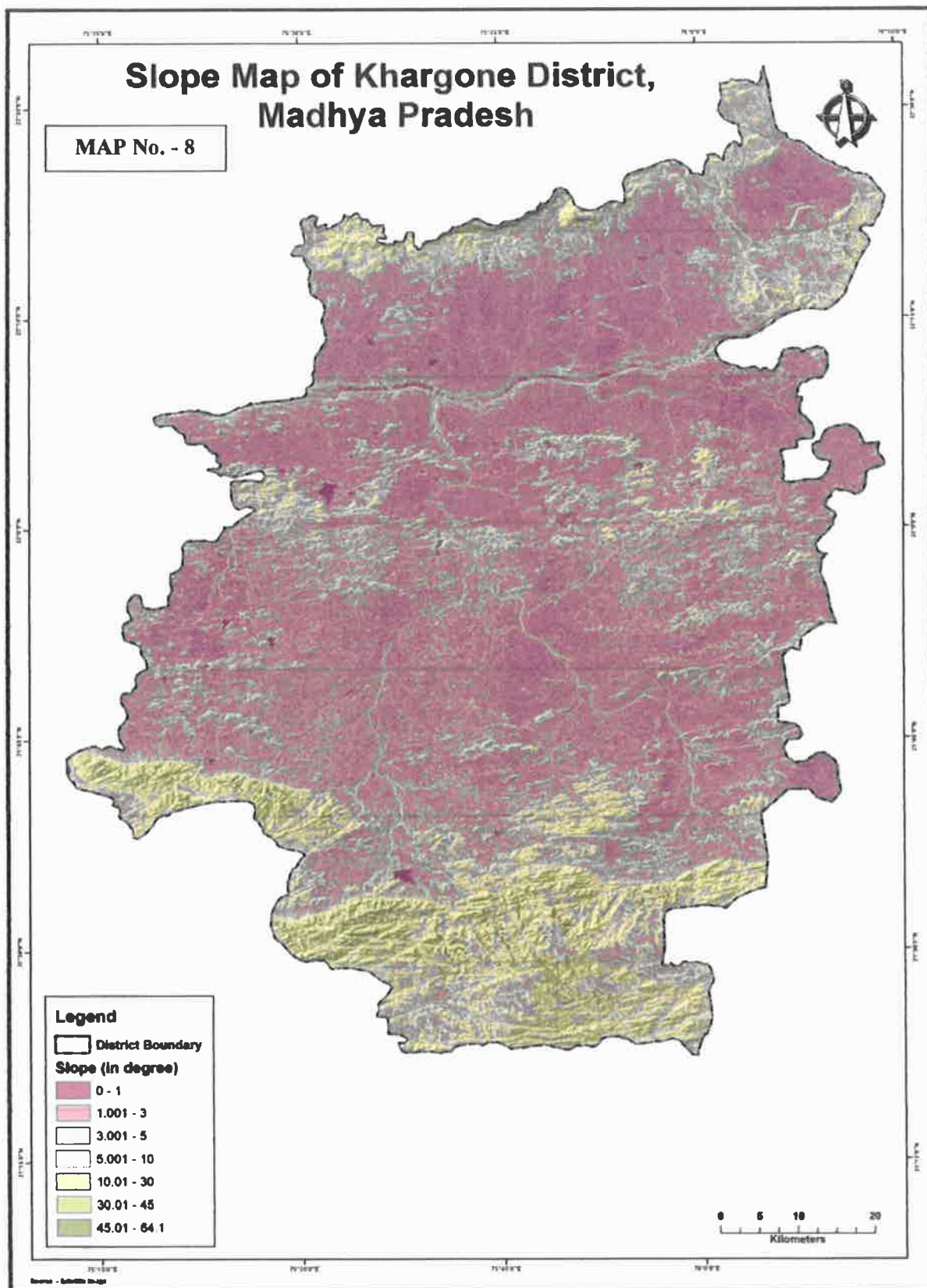
fourth survey at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river. Based on the replenishment rate future auction may be planned. The replenishment period may vary on nature of the channel and season of deposition arising due to variation in the flow. Such period and season may vary on the geographical and precipitation characteristic of the region and requires to be defined by the local agencies preferable with the help of the Central Water Commission and Indian Meteorological Department. The excavation will, therefore, be limited to estimated replenishment estimated with consideration of other regulatory provisions.


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(EPCO)
Paryavaran Parisar
R. N. Arera Colony, Bhopal (M.P.)

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S.No	Name of River or Stream for the mineral concession	Village	Portion of the River (Khasra No.) or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometers)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in m ²)	Mineable mineral potential in m ³ (60% of total mineral potential)
1	Narmada (Khodu Bharu)	Jalkoti	176	260	192	5.000	15000
2	Narmada	Bhasunda	49	440	91	4.000	10000
3	Narmada (Khodu Bharu)	Bhasunda	32/1/1/1	290	173	5.000	10000
4	Narmada (Khodu Bharu)	Jalkota(A)	149/1/1	1980	76	15.000	15000
5	Narmada (Khodu Bharu)	Jalkota (B)	149/1/1	1700	85	14.430	15000
6	Narmada (Khodu Bharu)	Gogawa	223/1	350	114	4.000	10000
7	Narmada (Khodu Bharu)	Pandyaghat	55/1	420	119	5.000	22000
8	Narmada (Khodu Bharu)	Pitamali	5/1/1	325	123	4.000	20000
9	Narmada (Khodu Bharu)	Chirakhan	48/1/1	220	227	5.000	15000
10	Narmada	Gangatkhedhi	132/1, 133	495	155	7.652	15000
11	Narmada	Sulgao	313/1/1/1	750	200	15.000	40000
12	Narmada (Khodu Bharu)	Makadheda	4/1	197	152	3.000	15000
13	Narmada (Khodu Bharu)	Makadheda	1	170	119	2.024	20000
14	Narmada (Khodu Bharu)	Malgao	3/2	338	118	4.000	10000
15	Narmada (Khodu Bharu)	Badgao	25/1	460	152	7.000	30000

16	Narmada (Khodu Bharu)	Badgao	64,65,67	513	195	10,000	30000
17	Narmada (Khodu Bharu)	Badgao	176, 177, 178,179,190, 189	520	173	9,000	30000
18	Narmada (Khodu Bharu)	Kathora	107/3	265	151	4,000	15000
19	Narmada	Kayatkhedhi	1	230	52	1,200	10000
20	Narmada	Katghada	175	290	138	4,000	10000
21	Narmada (Khodu Bharu)	Mardana (B)	70	450	445	20,000	10000
22	Narmada	Kapasthal	185	320	125	4,000	10000
23	Kunda	Shahpura	1	550	91	5,000	10000
24	Kunda	Gogawa	15	346	116	4,000	8000
25	Kunda	Umarkhali	243	435	117	5,100	6000
26	Kunda	Titpur	33	2195	37	8,100	10000
27	Narmada	Daheriya	54/3	207	193	4,000	10000
28	Narmada (Khodu Bharu)	Lalpur	44	422	95	4,000	10000
29	Kunda	Penpur	319	250	160	4,000	2500

प्रमारी अखिल
अखिल अखिल
अखिल अखिल (म.प्र.)

समिति द्वारा अनुमोदित

Name of River or Stream/Recommended for Mineral Concession	Village	Portion of the River (Khasra No.) or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometres)	Average width of area recommended for mineral concession (in metres)	Area recommended for mineral concession (in m ²)	Length of sand deposition (in meter)	Width of sand deposition (in meter)	Thickness of sand deposition (in meter)	Total mineral potential (in m ³)	Mineable mineral potential (60% of total mineral potential)	Mineable mineral potential (in MT) (60% of total mineral potential)	2019-20	2020-21	2021-22
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Narmada (Khodu Bharu)	Jalkoti	176	260	192	5.000	191	131	1	25021	15013	21018	0	954	8251
Narmada	Bhasunda	49	440	91	4.000	291	88	3	76824	46094	64582	0	46075	0
Narmada (Khodu Bharu)	Bhasunda	32/1/1/1	290	173	5.000	180	93	1	16740	10044	14062	0	0	0
Narmada (Khodu Bharu)	Jalkota (A)	149/1/1	1980	76	15.000	835	60	0.5	25050	15030	21042	0	0	25
Narmada (Khodu Bharu)	Jalkota (B)	149/1/1	1700	85	14.430	770	65	0.5	25025	15015	21021	0	0	0
Narmada (Khodu Bharu)	Gogawa	223/1	350	114	4.000	166	100	1	16600	9960	13944	0	1641.10	1170
Narmada (Khodu Bharu)	Pandyaghat	55/1	420	119	5.000	349	105	1	36645	21987	30782	0	21	10532
Narmada (Khodu Bharu)	Pitamali	5/1/1	325	123	4.000	303	110	1	33330	19998	27997	0	1082	1837
Narmada (Khodu Bharu)	Chirakhan	48/1/1	220	227	5.000	170	147	1	24990	14994	20992	0	1901.33	9922
Narmada	Gangalkhed	132/1, 133	495	155	7.652	145	115	1.5	25012.5	15008	21011	0	0	0
Narmada	Sulgao	313/1/1/1	750	200	15.000	240	139	2	66720	40032	56045	0	0	0
Narmada (Khodu Bharu)	Makadkhe	4/1	197	152	3.000	363	140	1	50820	30492	42689	0	8681.27	30440
Narmada (Khodu Bharu)	Makadkhe	1	170	119	2.024	333	100	1	33300	19980	27972	0	0	0
Narmada (Khodu Bharu)	Malgao	32	338	118	4.000	340	120	1	40800	24480	34272	0	455	24443

प्रादेशी अधिकारी
राजिज अख्ता
जिल्हा-उद्योजन (म.प्र.)

Kindly refer to the attached documents

State Level Environment Impact Assessment Authority, M.P. (EPCC)
Bharuvasan, District...

52(A)

District Survey Report: Khargone

PORTION OF THE DISTRICT OR STREAM RECOMMENDED FOR MINERAL CONCESSION

Table No. 13 River or Stream and other sand source

S. No	Name of the River	Area drained (Sq. Km)	% Area drained in the District
1	Narmada River	8030	100% of the area drained by Narmada, through its Tributaries like Veda, Kundi, Chondri-Hatni-Borad rivers
2	Veda River	2811	35
3	Kundi River	1204	15.00
4			
	Chondri-Hatni-Borad river	1205	15
5	Rivers flowing North of Narmda like Choral, Kholar, Gomathi and Nani	2007	25
6	Orther small rivers, riverlets	803	10
	Total	8030	100

Salient Features of Important Rivers and Streams:

Table No. 14 Salient Features of Important Rivers and Streams:

S. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin (m)
1	Narmada River	88	Amarkantak	1069
2	Beda River	122	Chopali	743
3	Kharka River	18	Deonalya	351
4	Kunda River	96	Kumbhi	723
5	Rivers flowing North of Narmda like Choral, Kholar, Gomathi and Nani	25 to 30	From Malwa plateau	750

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

समिति द्वारा अनुमोदित

प्रभारी अधिकारी
 सनिज शाखा
 जिला-खरबोन (म.प्र.)

District Survey Report: Khargone

MINERAL POTENTIAL

Table No. 15 Mineral Potential

Boulder/ Bajari in m ³	Sand m ³	Total Mineable Mineral Potential m ³
5% of the minable mineral potential is 21,675 m ³ found as unsorted aggregates.	4,11,825 m ³	7,22,500 m ³ (60% of total minable mineral potential 4,33,500 m ³)


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

समिति द्वारा अनुमोदित


प्रभारी अधिकारी
सूनिज शाखा
जिला-खरबोन (म.प्र.)

District Survey Report: Khargone

Table No. 15 Location of Sand Potential Areas

S No	River Name	Longitude	Latitude
1	Beda River	75 43' 7.470" E	21 57' 58.809" N
2	Beda River	75 42' 16.130" E	21 58' 54.357" N
3	Beda River	75 40' 9.546" E	22 2' 18.578" N
4	Beda River	75 41' 8.989" E	22 3' 9.082" N
5	Beda River	75 42' 15.663" E	22 4' 40.984" N
6	Beda River	75 41' 3.373" E	22 6' 0.147" N
7	Beda River	75 40' 13.488" E	22 7' 22.320" N
8	Beda River	75 40' 16.459" E	22 8' 57.906" N
9	Beda River	75 55' 36.125" E	21 47' 59.226" N
10	Beda River	75 53' 22.981" E	21 46' 52.595" N
11	Beda River	75 51' 54.254" E	21 47' 23.571" N
12	Beda River	75 50' 48.600" E	21 49' 1.759" N
13	Beda River	75 46' 39.614" E	21 54' 9.560" N
14	Beda River	75 44' 13.434" E	21 56' 32.986" N
15	Beda River	75 43' 29.143" E	21 57' 22.937" N
16	Choral River	76 3' 46.080" E	22 14' 24.554" N
17	Choral River	76 3' 7.296" E	22 14' 48.207" N
18	Choral River	76 3' 15.421" E	22 15' 9.319" N
19	Choral River	76 2' 55.896" E	22 15' 41.375" N
20	Choral River	76 3' 24.234" E	22 16' 15.637" N
21	Choral River	76 3' 46.557" E	22 16' 49.418" N
22	Choral River	76 3' 30.844" E	22 17' 20.353" N
23	Choral River	76 3' 35.229" E	22 18' 37.264" N
24	Choral River	76 3' 21.200" E	22 19' 14.821" N
25	Choral River	76 4' 0.009" E	22 20' 14.002" N
26	Choral River	76 3' 14.258" E	22 21' 17.254" N
27	Choral River	76 2' 48.703" E	22 21' 50.132" N
28	Choral River	76 1' 53.083" E	22 22' 2.514" N
29	Choral River	76 1' 24.829" E	22 23' 9.412" N
30	Choral River	76 1' 51.353" E	22 23' 38.789" N
31	Choral River	76 1' 54.742" E	22 24' 6.947" N
32	Choral River	76 1' 13.685" E	22 24' 38.377" N
33	Choral River	76 0' 50.351" E	22 25' 16.098" N
34	Kharka River	75 34' 56.955" E	21 42' 22.048" N
35	Kundi River	75 37' 14.229" E	21 36' 34.962" N
36	Kundi River	75 36' 36.898" E	21 37' 6.444" N
37	Kundi River	75 36' 58.962" E	21 38' 52.309" N
38	Kundi River	75 37' 29.756" E	21 40' 4.193" N
39	Kundi River	75 37' 16.647" E	21 40' 53.468" N
40	Kundi River	75 36' 50.550" E	21 41' 57.909" N
41	Kundi River	75 35' 46.060" E	21 42' 32.624" N

State Level Environment Impact
 Assessment Authority, M.P.
 (E-PCO)
 Parvavaran, Parisar

District Survey Report: Khargone

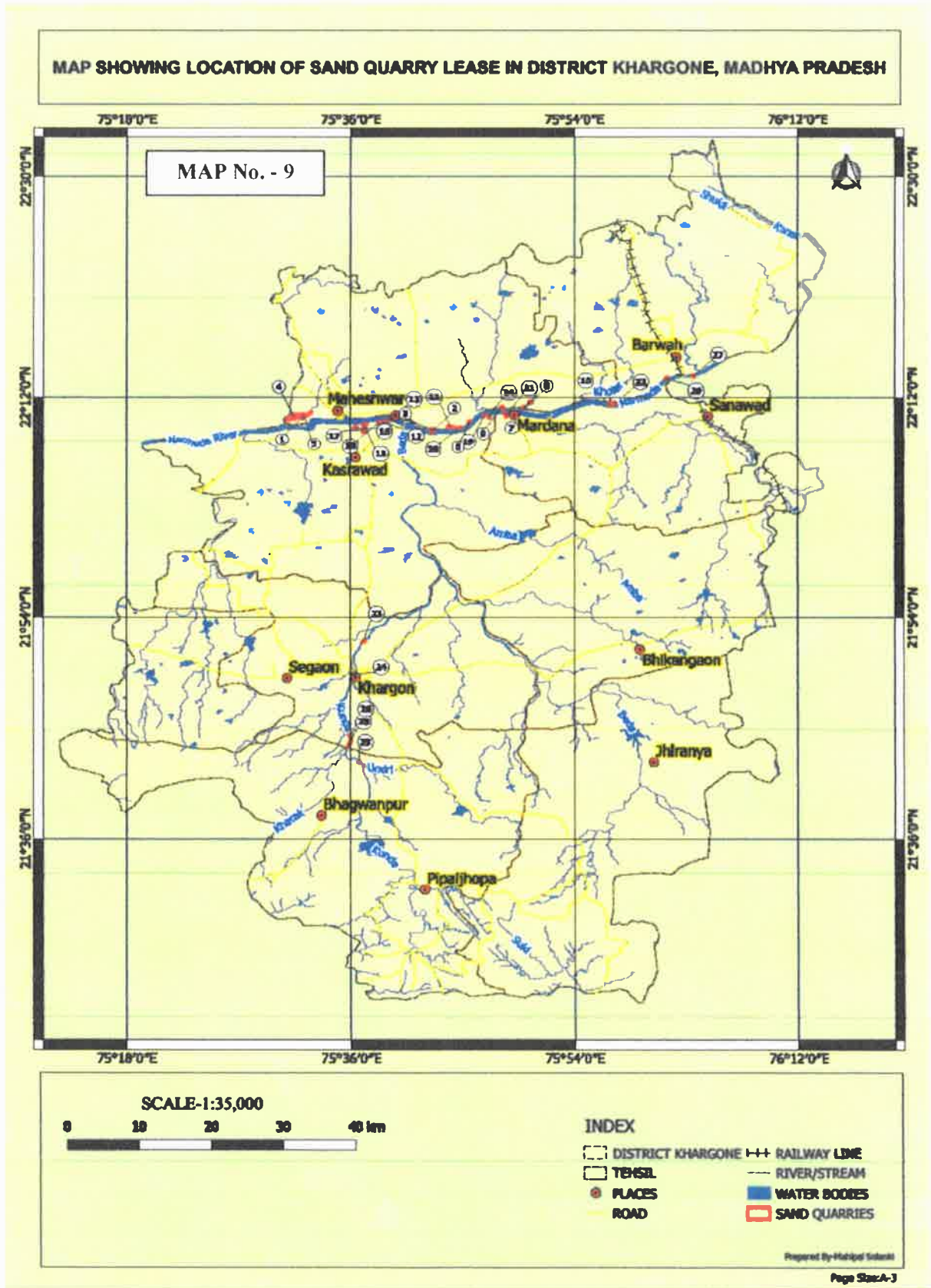
42	Kundi River	75 35' 49.743" E	21 43' 31.942" N
43	Kundi River	75 35' 54.353" E	21 44' 33.741" N
44	Kundi River	75 35' 43.639" E	21 45' 14.764" N
45	Kundi River	75 35' 11.711" E	21 46' 19.236" N
46	Kundi River	75 36' 1.175" E	21 48' 56.045" N
47	Kundi River	75 37' 18.711" E	21 52' 18.439" N
48	Kundi River	75 38' 55.265" E	21 53' 41.682" N
49	Kundi River	75 42' 12.892" E	21 55' 5.337" N
50	Narmada River	76 3' 25.856" E	22 13' 37.380" N
51	Narmada River	75 57' 24.199" E	22 11' 29.853" N
52	Narmada River	75 52' 7.172" E	22 10' 34.331" N
53	Narmada River	75 49' 59.272" E	22 10' 39.577" N
54	Narmada River	75 48' 0.913" E	22 10' 49.202" N
55	Narmada River	75 44' 23.333" E	22 9' 17.576" N
56	Narmada River	75 35' 53.768" E	22 10' 0.598" N
57	Narmada River	75 32' 52.952" E	22 9' 47.750" N
58	Narmada River	75 30' 17.486" E	22 9' 26.850" N
59	Narmada River	75 28' 53.235" E	22 9' 11.372" N
60	Narmada River	75 27' 5.274" E	22 9' 2.467" N
61	Narmada River	75 23' 32.532" E	22 8' 12.109" N
62	Narmada River	75 21' 21.250" E	22 8' 34.270" N
63	Narmada River	75 18' 36.795" E	22 7' 54.166" N
64	Beda River	75°59'20.74"E	21°43'21.58"N
65	Beda River	75°51'18.74"E	21°48'44.95"N
66	Beda River	75°46'40.50"E	21°56'54.99"N
67	Narmada River	75°42'56.13"E	22° 9'3.23"N
68	Narmada River	75°41'6.86"E	22° 9'30.25"N
69	Narmada River	75°52'35.03"E	22°10'41.53"N
70	Narmada River	75°52'43.68"E	22°10'21.93"N
71	Narmada River	75°38'6.31"E	22°10'7.25"N
72	Narmada River	75°21'21.49"E	22° 8'9.27"N
73	Narmada River	75°31'50.16"E	22° 9'24.96"N
74	Narmada River	75°31'14.14"E	22° 9'37.82"N
75	Narmada River	75°19'19.41"E	22° 7'46.83"N
76	Narmada River	75°35'54.27"E	22°09'54.70"N
77	Narmada River	75°35'48.29"E	22°09'58.85"N
78	Narmada River	75°24'28.64"E	22°08'01.71"N
79	Narmada River	75°19'45.14"E	22° 7'32.09"N
80	Narmada River	75°21'36.87"E	22° 8'8.41"N
81	Narmada River	75°19'41.62"E	22° 6'45.44"N

District Environment Impact
 Assessment Authority, M.P.
 (EPCO)
 Paryaveeran Parisar
 E-5, Arera Colony, Bhopal (M.P.)

समिति द्वारा अनुमोदित


 प्रभारी अधिकारी
 खनिज शाखा
 जिला-खरवोन (म.प्र.)

District Survey Report: Khargone



State Level Environment Impact
Assessment Authority (M.P.)
(EPC-2)
Paryavaran Pariksha
E-5, Arera Colony, Bhopal (M.P.)

समिति द्वारा अनुमोदित

प्रभारी अधिकारी
मणिल शर्मा
जिला-प्रत्येक (म.प्र.)

MAP SHOWING LOCATION OF SAND QUARRY LEASE IN DISTRICT KHARGONE, MADHYA PRADESH

75°18'0"E

75°36'0"E

75°54'0"E

76°12'0"E

22°50'0"N

22°42'0"N

21°54'0"N

21°36'0"N

22°50'0"N

22°42'0"N

21°54'0"N

21°36'0"N



75°18'0"E

75°36'0"E

75°54'0"E

76°12'0"E

SCALE-1:35,000

0 10 20 30 40 km



समिति द्वारा अनुमोदित

प्रभारी अधिकारी
मनिज शास्त्र
जिला-खरवोन (म.प्र.)

INDEX

- DISTRICT KHARGONE
- TEHSIL
- PLACES
- ROAD
- RAILWAY LINE
- RIVER/STREAM
- WATER BODIES
- SAND QUARRIES

State Level Environment Impact
Assessment Authority, M.P.
Parvati ...
E.S. Area ...



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: 1628 / SEIAA/2022

Date: 23/9/22

प्रति,

कलेक्टर

जिला - खरगौन (म.प्र.)

विषय: नवीन जिला सर्वेक्षण रिपोर्ट - खरगौन -(रेत खनिज)

संदर्भ: आपका पत्र क्र. 826, दिनांक 25.08.2022।

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 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 592 वीं 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।

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 विग, 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।

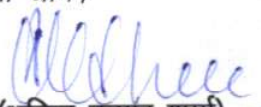
32. जिला सर्वेक्षण रिपोर्ट, जिला - पन्ना -रेत खनिज

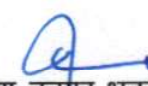
राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 747वी बैठक दिनांक 14.09.2022 में निम्नानुसार निर्णय लिया गया :-

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

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

अधिकारी के साथ उपस्थित रहे ।

समिति ने पाया कि खनि अधिकारी, कार्यालय कलेक्टर, (खनिज शाखा) जिला— सीधी के पत्र क्र० 388 दिनांक 24/08/22 लीज धारकों द्वारा किये गये पांच वर्षों में किये गये वृक्षारोपण की जानकारी प्रस्तुत कर दी गई है। अतः समिति द्वारा सुझाव गई उपरोक्त अनुशंसाओं के साथ धार 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 ।

15. जिला सर्वेक्षण रिपोर्ट, खरगौन –रेत खनिज

Mineral	Sand
Earlier DSR Discussed	SEAC 576 th & 591 th Meeting dated 10.06.22 & 16.08.2022
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 576 वीं बैठक दिनांक 10/06/22 जिला सर्वेक्षण रिपोर्ट, जिला खरगौन (म.प्र.) <u>जिला सर्वेक्षण रिपोर्ट, जिला खरगौन (म.प्र.)</u> ।</p> <p>राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (सिया) ने पत्र क्रमांक 602 दिनांक 27/05/22 के माध्यम से खरगौन जिले की जिला सर्वेक्षण रिपोर्ट राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के परीक्षण हेतु भेजी गई है । कार्यालय कलेक्टर, खनिज शाखा खरगौन के पत्र क्रमांक 7676 दिनांक 27/5/22 के माध्यम से सूचित किया गया है कि जिला सर्वेक्षण रिपोर्ट को जिला सूचना केन्द्र के वेब पोर्टल पर 21 दिन की अवधि हेतु अपलोड किया गया । उक्त अवधि की जिला के सर्वेक्षण रिपोर्ट में कोई आपत्ति/सुझाव प्राप्त नहीं हुए, अतएव गठित समिति द्वारा आवश्यक संशोधन कर जिला सर्वेक्षण रिपोर्ट तैयार की गई और इस कार्यालय के पत्र क्रमांक 7661 दिनांक 24/05/22 को कलेक्टर महोदय से अनुशंसा सहित सदस्य सचिव, सिया/सेक को भेजी गई । उक्त जिला सर्वेक्षण रिपोर्ट, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति के सदस्यों को दिनांक 02/06/22 (सॉफ्टकापी) को प्रेषित की गई थी तथा उस पर चर्चा राज्य स्तरीय मूल्यांकन समिति की 576वीं बैठक दिनांक 10/06/22 में प्रस्तावित की गई । राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की 576वीं बैठक दिनांक 10/06/22 में खरगौन जिले की जिला सर्वेक्षण रिपोर्ट पर चर्चा की गई । चर्चा के दौरान खनिज विभाग, खरगौन की ओर से श्री सावन चौहान, प्रभारी खनिज अधिकारी ऑनलाईन उपस्थित हुए जिसमें पाया गया कि :-</p> <ul style="list-style-type: none"> ➤ जिला सर्वेक्षण रिपोर्ट के पेज नं. 14 एवं 15 में दी गई रेत खदानों की सूची में खसरा नं. एवं क्षेत्रफल की जानकारी नहीं दी गई है । ➤ जिला सर्वेक्षण रिपोर्ट के पेज नं. 27 की तालिका-6 में तीन वर्ष 2019-20, 2020-21 एवं 2021-22 में रेत की मात्र अलग-अलग दर्शाई गई जबकि उन्हीं वर्षों में रॉयल्टी/राजस्व प्राप्ति की राशि (रु. 17,28,00000) बराबर है, स्थिति स्पष्ट करें । ➤ तालिका-11 एवं 12 में प्री-मानसून एवं पोस्ट-मानसून में प्रदाय की गई अनुमानित रेत की मात्रा में लीजवार (60 प्रतिशत टोटल मिनरल पोटेन्शियल) (लम्बाई एवं चौड़ाई के साथ) नहीं दी गई है । ➤ प्रस्तुत जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 में निर्धारित फॉर्मेट अनुसार नहीं बनाई गई है तथा कई जानकारियों वांछित तालिका में नहीं दी गई है जिस कारण रिपोर्ट अपूर्ण है । ➤ बिंदु क्रमांक-26 की जानकारी जो माईनर मिनरल (रेत छोडकर) से संबंधित है, के अवलोकन से ज्ञात होता है

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	<p>कि जिले में हरित क्षेत्र के विकास हेतु खदानों में वृक्षारोपण की जानकारी नहीं दी गई है, जिसको अद्यतन किया जाना चाहिए। साथ ही निर्धारित लक्ष्य के विरुद्ध कितना वृक्षारोपण किस वर्ष किया है, उसको भी अंकित किया जाना चाहिए।</p> <ul style="list-style-type: none"> ➤ इसी प्रकार जिले में स्वीकृत/प्रस्तावित खदानों को को-आर्डिनेट के अनुसार डिजिटार्इज मेप (आर्क व्यू / गूगल अर्थ कम्पेरेवल – सी.डी.में) भी संलग्न किया जाये ताकि पर्यावरण अभिस्वीकृति के समय खदानों की सही स्थिति ज्ञात करने में तथा 500 मीटर के अंदर स्थित अन्य स्वीकृत खदानों की जानकारी प्राप्त करने में सुविधा हो। ➤ प्रायः देखा जा रहा है जिला सर्वेक्षण रिपोर्ट में रेत निर्माण होने की भू-वैज्ञानिक विधि की सामान्य जानकारी दी जाती है जो सभी जिला सर्वेक्षण 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। ➤ 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 सकें। यदि ए-4 साईज में नक्शें नहीं आ पा रहे हों तो ए-3 साईज में नक्शों को बनाना चाहिए। ➤ समिति ने संबंधित जिलों के खनिज अधिकारियों को निर्देशित करती है कि इस बात का भी ध्यान रखा जाये कि नदियों में किसी स्थान पर मछलियों / कछुआ / घड़ियाल / मगरमच्छ आदि जलचरों का ब्रीडिंग ग्राउण्ड तो नहीं है यदि ऐसा कोई स्थानीय 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। ➤ 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। <p>चर्चा उपरांत समिति की यह अनुशंसा है कि खरगौन 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 प्रभारी खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गई तथा पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 के निर्धारित फार्मेट अनुसार जिला सर्वेक्षण रिपोर्ट को अद्यतन कर लें। तदनुसार प्रकरण आगामी कार्यवाही राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर अग्रिम कार्यवाही हेतु प्रेषित है।</p> <p>राज्य स्तरीय मूल्यांकन समिति की 590 वीं बैठक दिनांक 27/08/22</p> <p>जिला सर्वेक्षण रिपोर्ट, जिला (रेत खनिज) खरगोन -</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 सावन सिंग चौहान, खनिज अधिकारी उपस्थित रहे। नवीन जिला सर्वेक्षण रिपोर्ट गौण खनिज हेतु प्रस्तुत की गई, जिसमें पाया :-</p> <ul style="list-style-type: none"> • राज्य स्तरीय विशेषज्ञ ऑकलन समिति (SEAC) की बैठक दिनांक 27/08/2022 में खरगोन जिले की संशोधित जिला सर्वेक्षण रिपोर्ट पर की गई चर्चामें ये पाया गया कि विगत 03 वर्षों में रेत की मात्रा एवं उपलब्ध रेत की मात्रा में भिन्नता पाई गई अतः खनिज अधिकारी द्वारा उक्त तालिका को आवश्यक सुधार करते हुए पुनः प्रस्तुत करने को कहा गया। <p>चर्चा उपरांत समिति की यह अनुशंसा है कि खरगोन 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 जावे तत्संबंध में उपस्थित खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गयी।</p>
Revised DSR received from	Received soft copy vide District Collectorate (Mining) Office, Khargone, No. 826 dated 25.08.2022

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District Collectorate (Mining)	
Hard Copy Soft Copy or both	Hard copy & Soft copy.
SEAC meeting dated 06/09/22	जिले की जिला सर्वेक्षण रिपोर्ट में तालिका क्र० निरंक पेज न०. पेज क्र०. 52 (A) में माइनेबल मिनरल पोर्टेशियल (घनमीटर में) 60% टोटल मिनरल पोर्टेशियल, लीजवार, लंबाई, चौड़ाई एवं गहराई के साथ दर्शाया है एवं विगत 03 वर्षों के उत्खनित रेत की मात्रा का लीजवार पोर्टेशियल दिया गया है। जिससे ज्ञात हो सके कि उस स्थल पर खदान का मिनरल पोर्टेशियल विगत 03 वर्षों में कितना रहा।

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 सांवत चौहान, खनिज अधिकारी। के साथ उपस्थित रहे।

समिति ने पाया कि बड़वानी 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 पोर्टेशियल विगत 03 वर्षों में कितना रहा है भी दर्शाया गया है। खरगोन जिले की जिला सर्वेक्षण रिपोर्ट में आमजन के सुझाव आमंत्रित कर इनका अनुमोदन जिले में गठित समिति द्वारा किया जा चुका है तथा खनि. अधिकारी, कार्यालय कलेक्टर, (खनिज शाखा) जिला – खरगौन ने पत्र क्रमांक 8221 दिनांक 06/09/2022 के माध्यम से “माइनेबल मिनरल पोर्टेशियल” (घनमीटर में) (60 प्रतिशत टोटल मिनरल पोर्टेशियल) लीजवार विवरण की जानकारी भी प्रस्तुत कर दी गई है। तथा मिनरल पोर्टेशियल की गणना दर्शाने वाली टेबल में 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 विगत 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 विगत 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 विगत 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।

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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 हैं। 2. तालिका क्र. 4 फ्लेग स्टोन (पेज न0. 15-30), तालिका क्र. 5 स्टोन गिट्टी (पेज न0. 31-38) एवं तालिका