



राज्य स्तरीय पर्यावरण स्रमाघात निर्धारण प्राधिकरण, म.प्र.  
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)

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

वेबसाईट- <http://www.mpseiaa.nic.in>

दूरभाष नं. - 0755-2466970, 2466859

फैक्स नं. - 0755-2462136

No: 732 / SEIAA/2022

Date: 8/6/22

प्रति,

कलेक्टर,  
जिला झाबुआ (म.प्र.)

विषय :- नवीन जिला सर्वेक्षण रिपोर्ट - जिला झाबुआ के अनुमोदन बावत्।

संदर्भ :- आपका पत्र 519 दिनांक 20/05/22 ।

उपरोक्त विषयान्तर्गत संदर्भित पत्र के संबंध में लेख है कि SEIAA द्वारा 729वी बैठक दिनांक 06.06.2022 में जिला झाबुआ की नवीन जिला सर्वेक्षण रिपोर्ट अनुमोदन हेतु निम्नानुसार निर्णय लिया गया .....

" .....राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत सर्व सम्मति से SEIAA की 711वी बैठक दिनांक 09.03.2022 में नवीन जिला सर्वेक्षण रिपोर्ट हेतु लिये गये नीतिगत निर्णय के अनुसार भारत सरकार के पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय द्वारा जारी अधिसूचना दिनांक 15 जनवरी 2016 एवं 25 जुलाई 2018 तथा Sustainable Sand Mining Guidelines 2016 तथा Enforcement and Monitoring Guidelines for Sand 2020 के परिपालन के साथ ही माननीय NGT (स्पेशल बैंच) नई दिल्ली के आदेश दिनांक 22.02.2022 एवं तदोपरांत माननीय NGT (CZ) के द्वारा ओ.ए. नम्बर 10/2022 में पारित आदेश दिनांक 04.03.2022 में दिये गये दिशा निर्देशों के परिपालन में कार्यालय कलेक्टर (खनिज शाखा) जिला झाबुआ द्वारा गठित जिला स्तरीय/उप सभागीय समिति के परीक्षण एवं अनुशंसा, जिला पोर्टल पर निर्धारित अवधि तक रखे जाने के उपरांत प्राप्त सुझावों के समावेश किये जाने तथा SEAC की 575वीं बैठक दिनांक 30/05/22 की अनुशंसा को मान्य करते हुए सर्व सम्मति से नवीन जिला सर्वेक्षण रिपोर्ट झाबुआ का अनुमोदन किया जाता है। तदनुसार जिला कलेक्टर, झाबुआ एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।"

उपरोक्त निर्णय के परिपालन में कृपया प्राधिकरण द्वारा अनुमोदित नवीन जिला सर्वेक्षण रिपोर्ट को झाबुआ जिले के 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 :-

संचालक, प्रशासन/तकनीकी, संचालनालय, भौमिकी तथा खनिकर्म, 29-ए, खनिज भवन, अरेरा हिल्स, भोपाल (म.प्र.) की ओर सूचनार्थ।

सदस्य सचिव



( रेत खनिज को चोड़कर )  
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: 596 / SEIAA/2022

Date: 26/5/22

प्रति,

सदस्य सचिव,  
राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC),  
अनुसंधान एवं विकास विंग,  
म.प्र. प्रदूषण नियंत्रण बोर्ड,  
पर्यावरण परिसर, ई-5, अरेरा कॉलोनी,  
भोपाल (म.प्र.) - 462016

विषय: जिला झाबुआ की नवीन जिला सर्वेक्षण रिपोर्ट के परीक्षण बावत्।

संदर्भ: कलेक्टर, झाबुआ के पत्र क्र. 599/खनिज/2022 दिनांक 24.05.2022।

उपरोक्त विषयांतर्गत संदर्भ में लेख है कि पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार की अधिसूचना 15 जनवरी 2016 व 25 जुलाई 2018 एवं Sustainable Sand Mining Guidelines 2016 तथा Enforcement and Monitoring Guideline for Sand 2020 ([www.moef.gov.in](http://www.moef.gov.in) पर उपलब्ध) के परिपेक्ष्य में माननीय राष्ट्रीय हरित अधिकरण, नई दिल्ली के ओ.ए. 456/2018, 726/2018 में दिनांक 04.11.2020 में दिये गये दिशा-निर्देशों के परिपालन में जिला कलेक्टर, जिला - झाबुआ की अनुशंसा उपरांत जिला सर्वेक्षण रिपोर्ट उपसंभागीय समिति की अनुशंसा एवं जिला पोर्टल पर 21 दिवस की कार्यवाही पूर्ण कर SEAC समिति के परीक्षण एवं SEIAA कार्यालय को अनुमोदन हेतु प्राप्त हुई है।

हाल ही में माननीय उच्चतम न्यायालय द्वारा अपील क्र. 3661-3662/2020 में पारित आदेश दिनांक 10.11.2021 के परिपालन में खनिज साधन विभाग/जिला स्तर पर जिला सर्वेक्षण रिपोर्ट तैयार करने एवं SEAC द्वारा परीक्षण उपरांत SEIAA से अनुमोदन की निर्धारित प्रक्रिया एवं मापदंडों के परिपालन में उपरोक्त जिलें की जिला सर्वेक्षण रिपोर्ट का यथाशीघ्र परीक्षण कर तदानुसार अनुमोदन हेतु प्रेषित करें।

संलग्न-उपरोक्तानुसार

(श्रीमन् शुक्ला)  
सदस्य सचिव

क्र.. /SEIAA/2022 भोपाल दिनांक

प्रतिलिपि :-

1. संचालक, प्रशासन/तकनीकी, संचालनालय, भौमिकी तथा खनिकर्म, 29-ए, खनिज भवन, अरेरा हिल्स, भोपाल (म.प्र.) की ओर सूचनार्थ।
2. जिला कलेक्टर, जिला झाबुआ की सूचनार्थ।

सदस्य सचिव





Seiaa mp <mpseiaa@gmail.com>

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## जिला सर्वेक्षण रिपोर्ट (डीएसआर) प्रस्तुत करने के सम्बंध में।

1 message

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**District Mining Office Jhabua** <modgmjha@mp.gov.in>  
To: mpseiaa <mpseiaa@gmail.com>

Tue, May 24, 2022 at 5:23 PM

Please Find The Attached File

Regard  
Mining Office Jhabua

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 **DSR Jhabua letter.pdf**  
187K



कार्यालय कलेक्टर खनिज शाखा जिला झाबुआ म.प्र.

कमांक/ 599 / खनिज / 2022 झाबुआ (म.प्र.) झाबुआ, दिनांक:- 24/05/2022

प्रति,

सदस्य-सचिव

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC)

पर्यावरण परिसर, ई-5, अरेरा कॉलोनी

भोपाल - 462016 मध्यप्रदेश

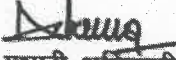
विषय:- जिला सर्वेक्षण रिपोर्ट (डीएसआर) प्रस्तुत करने के सम्बंध में।  
संदर्भ:- कार्यालयीन पत्र कमांक 587 झाबुआ दिनांक 20/05/2022।

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उपरोक्त विषयांतर्गत संदर्भित पत्र के सलंग्न झाबुआ जिले की वर्ष 2021-22 हेतु जिला सर्वेक्षण रिपोर्ट (रेत खनिज को छोड़कर) जिला स्तरीय गठित समिति द्वारा अनुमोदित की जा कर आपकी ओर प्रेषित की गई हैं। उक्त अनुमोदित जिला सर्वेक्षण रिपोर्ट (रेत खनिज को छोड़कर) को पब्लिक डोमेन में सुझाव/आपत्ति/अभिमत प्राप्त करने हेतु जिले की वेबसाईड पर दिनांक 25/04/2022 को अपलोड किया गया था। जिला सर्वेक्षण रिपोर्ट के संबंध में 21 दिवस की निर्धारित समयावधि में कोई सुझाव/आपत्ति/अभिमत प्राप्त नहीं हुआ है।

अतः उपरोक्तानुसार समिति द्वारा वर्ष 2021-22 हेतु अनुमोदित जिला सर्वेक्षण रिपोर्ट (खनिज रेत को छोड़कर) के सम्बंध में आगामी कार्यवाही करने का कष्ट करें।


(कलेक्टर महोदय द्वारा आदेशित)

  
प्रभारी अधिकारी  
(खनिज शाखा)  
जिला झाबुआ

कमांक/ 600 / खनिज / 2022  
प्रतिलिपि:-

झाबुआ, दिनांक:- 24/05/2022

1. प्रमुख सचिव महोदय, म.प्र. शासन खनिज साधन विभाग मंत्रालय भोपाल की ओर सूचनार्थ प्रेषित।
2. संचालक, प्रशासन एवं खनिकर्म, भोपाल की ओर सूचनार्थ प्रेषित।
3. सदस्य-सचिव, राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (सिया) भोपाल की ओर सूचनार्थ प्रेषित।
4. क्षेत्रीय प्रमुख, संचालनालय भूमिकी तथा खनिकर्म, इंदौर की ओर सूचनार्थ प्रेषित।

  
प्रभारी अधिकारी  
(खनिज शाखा)  
जिला झाबुआ



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

कमांक / 587 / खनिज / 2022

झाबुआ, दिनांक: 20/05/2022

प्रति,

सदस्य-सचिव

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC)

पर्यावरण परिसर, ई-5, अरेरा कॉलोनी

भोपाल - 462016 मध्यप्रदेश

विषय:- जिला सर्वेक्षण रिपोर्ट (डीएसआर) प्रस्तुत करने के सम्बंध में।

संदर्भ:- संचालक, प्रशासन एवं खनिकर्म भोपाल का पत्र कमांक 2981/खनिज/विविध/न.क./2022 भोपाल दिनांक 03.03.2022।

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उपरोक्त विषयांतर्गत माननीय सर्वोच्च न्यायालय द्वारा सिविल अपील कमांक 3661-3662/2022 (बिहार राज्य एवं अन्य विरुद्ध पवनकुमार एवं अन्य) में पारित आदेश दिनांक 10.11.2021, भारत सरकार पर्यावरण, वन एवं जलवायु मंत्रालय द्वारा जारी अधिसूचना दिनांक 15.01.2016 तथा अधिसूचना दिनांक 25.07.2018 सस्टेनेबल सेण्ड माईनिंग मेनेजमेण्ट गाईडलाईन 2016 एवं इनफोर्समेंट मानिट्रिंग फार सेण्ड माईनिंग 2020 गाईड लाईन के पालन में संचालक, प्रशासन एवं खनिकर्म भोपाल के संदर्भित पत्र में वर्णित दिशा निर्देशानुसार वर्ष 2021-22 हेतु प्रारूप जिला सर्वेक्षण रिपोर्ट (डीएसआर) तैयार किया जाने हेतु गठित समिति द्वारा वर्ष 2021-22 हेतु जिला सर्वेक्षण रिपोर्ट (रेत खनिज को छोड़कर) तैयार की जाकर अनुमोदित की गई है।

अतः उपरोक्तानुसार समिति द्वारा अनुमोदित वर्ष 2021-22 हेतु जिला सर्वेक्षण रिपोर्ट (खनिज रेत को छोड़कर) अग्रिम कार्यवाही हेतु पत्र के संलग्न सादर प्रेषित है।

(कलेक्टर महोदय द्वारा आदेशित)

संलग्न:- जिला सर्वेक्षण रिपोर्ट (डीएसआर)

एक प्रति

प्रभारी अधिकारी

(खनिज शाखा)

जिला झाबुआ

कमांक /

/ खनिज / 2022

झाबुआ, दिनांक:-

प्रतिलिपि:-

1. प्रमुख सचिव महोदय, म.प्र. शासन खनिज साधन विभाग मंत्रालय भोपाल की ओर सूचनार्थ प्रेषित।
2. संचालक, प्रशासन एवं खनिकर्म, भोपाल की ओर सूचनार्थ प्रेषित।
3. सदस्य-सचिव, राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (सिया) भोपाल की ओर सूचनार्थ प्रेषित।
4. क्षेत्रीय प्रमुख, संचालनालय भौमिकी तथा खनिकर्म, इंदौर की ओर सूचनार्थ प्रेषित।

प्रभारी अधिकारी

(खनिज शाखा)

जिला झाबुआ

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

Receipt No. 510

Date 24/5/22





# **DISTRICT SURVEY REPORT**

**(without sand)**

**OF**

**JHABUA DISTRICT**  
**MADHYA PRADESH**

संचालक, भौमिकी तथा खनिकर्म म.प्र. भोपाल का पत्र क्रमांक 2981/खनिज/विविध/न.क./2022 भोपाल दिनांक 03.03.2022 के पालन में माननीय सर्वोच्च न्यायालय द्वारा सिविल अपील क्रमांक 3661-3662/2020 (बिहार राज्य एं अन्य विरुद्ध पवन कुमार एवं अन्य) में पारित आदेश दिनांक 10.10.2021 के अनुसार एवं सस्टेनेबल सेण्ड माइनिंग मैनेजमेंट गाईडलाईन 2016 एवं इनफोर्समेंट मानिट्रिंग फार सेण्ड माइनिंग 2020 के पालन में डीएसआर तैयार कर समीक्षा/अनुमोदन की जाने हेतु आज दिनांक 20.04.2022 को बैठक आयोजित की गई। बैठक में जिला सर्वेक्षण रिपोर्ट (रैत खनिज को छोड़कर) चर्चा की गई। चर्चा में सदस्यों द्वारा जिला सर्वेक्षण रिपोर्ट का परीक्षण कर अनुमोदन करने का निर्णय लिया गया है तथा जिला सर्वेक्षण रिपोर्ट को सार्वजनिक सूचना पोर्टल (पब्लिक डोमेन) में 21 दिवस हेतु अपलोड करने हेतु सहमति दी गई। जिला सर्वेक्षण रिपोर्ट के सम्बंध में 21 दिवस के भीतर कोई आपत्ति प्राप्त नहीं होने पर कलेक्टर महोदय जिला ज्ञाबुआ से अनुमोदन प्राप्त कर सैक (SEAC) समिति भोपाल को प्रेषित किया जाने का निर्णय लिया गया है। इसी के साथ बैठक का समापन किया गया।

बैठक में उपस्थित सदस्यों के हस्ताक्षर

क.	सदस्य	हस्ताक्षर
01	अनुविभागीय अधिकारी (राजस्व) अनुभाग ज्ञाबुआ	
02	कार्यपालन यंत्री जल संसाधन विभाग ज्ञाबुआ	 SDO, Rampur 20/4/2022
03	श्री आर.आर. भवंर (वैज्ञानिक) प्रदूषण नियंत्रण मण्डल धार (म.प्र.)	 20/4/2022
04	उप वनमण्डलाधिकारी सामान्य वन मण्डल ज्ञाबुआ	 20/4/2022 SDO, Fort
05	प्रभारी अधिकारी (खनि अधिकारी) जिला ज्ञाबुआ	 20/04/22

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

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कार्यालय  
संचालक भौमिकी तथा खनिकर्म  
मध्यप्रदेश  
29-ए, "खनिज भवन", अरेरा हिल्स, भोपाल  
फोन एवं फैक्स : 0755-2551795  
E-mail : dirgeomn@mp.nic.in

क्रमांक 2981 /खनिज/विविध/न.क्र. /2022, भोपाल, दिनांक 03/3/22  
प्रति,

समस्त कलेक्टर  
(खनि शाखा)  
मध्यप्रदेश


विषय : सस्टेनेबल सेण्ड माइनिंग मेनेजमेंट गाईडलाईन 2016 एवं इनफोर्समेंट मानिट्रिंग फार सेण्ड माइनिंग 2020 के अंतर्गत रेत खनिज हेतु जिला सर्वेक्षण रिपोर्ट तैयार किये जाने के संबंध में।

प्रत्येक जिले में सस्टेनेबल सेण्ड माइनिंग मेनेजमेंट गाईडलाईन 2016 एवं इनफोर्समेंट मानिट्रिंग फार सेण्ड माइनिंग 2020 गाइडलाईन के तहत जिला सर्वेक्षण रिपोर्ट (डीएसआर) तैयार की जानी है। जिले की डीएसआर तैयार किये जाने की प्रक्रिया प्रचलन में है। माननीय सर्वोच्च न्यायालय द्वारा सिविल अपील क्रमांक 3661-3662/2020 (बिहार राज्य एवं अन्य विरूद्ध पवन कुमार एवं अन्य) में पारित आदेश दिनांक 10.11.2021 के अनुसार एवं सस्टेनेबल सेण्ड माइनिंग मेनेजमेंट गाईडलाईन 2016 एवं इनफोर्समेंट मानिट्रिंग फार सेण्ड माइनिंग 2020 के पालन में प्रारूप डीएसआर बिम्बन समिति द्वारा तैयार की जानी है :-

1. अनुविभागीय अधिकारी (राजस्व)
  2. जल संसाधन विभाग के अधिकारी
  3. राज्य प्रदूषण नियंत्रण मण्डल के नामांकित अधिकारी
  4. वन विभाग के अधिकारी
  5. जिले के खनि अधिकारी/संचालनालय भौमिकी तथा खनिकर्म द्वारा पदस्थ अधिकारी
- उपरोक्तानुसार तैयार प्रारूप डीएसआर को जिला कलेक्टर द्वारा सिएक (SEAC) को अद्योषित की जायेगी। सिएक (SEAC) द्वारा इसे सिया (SEIAA) को प्रेषित किया जायेगा।

उपरोक्त निर्देशों का पालन सुनिश्चित किया जाये।

(राकेश कुमार श्रीवास्तव)  
भा.प्र.से.  
संचालक  
(प्रशासन एवं खनिकर्म)


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



2982-86  
पु.क्रमांक /खनिज विविध/न.क्र. 2022 भोपाल, दिनांक 03/3/22  
प्रतिलिपि :-

1. प्रमुख सचिव, मध्यप्रदेश शासन, खनिज साधन विभाग की ओर।
2. प्रमुख सचिव, मध्यप्रदेश शासन, जल संसाधन, वन विभाग, पर्यावरण विभाग की ओर सूचनाथ।
3. सदस्य सचिव, मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड, ई-5 पर्यावरण परिसर, अरेरा कालोनी भोपाल।
4. खनि अधिकारी जिला ..... मध्यप्रदेश की ओर संचालनालय द्वारा डीएसआर तैयार किये जाने हेतु नियुक्त एजेंसी द्वारा यदि प्रारूप डीएसआर तैयार किया जा चुका है तब इस प्रारूप डीएसआर का परीक्षण उपरोक्तानुसार गठित समिति से कराया जाये। समिति द्वारा इस प्रकार तैयार प्रारूप का अनुमोदन कर जिले के कलेक्टर को प्रस्तुत किया जायेगा।
5. प्रभारी अधिकारी, भौमिकी शाखा, संचालनालय भौमिकी तथा खनिकर्म मध्यप्रदेश भोपाल की ओर पलनाथ।

संचालक  
(प्रशासन एवं खनिकर्म)

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



**कार्यालय कलेक्टर (खनिज शाखा) जिला झाबुआ म.प्र.**

क्रमांक / 425 / खनिज / 2022  
प.सि.

झाबुआ, दिनांक: 06/04/2022

1. अनुविभागीय अधिकारी (राजस्व) अनुभाग झाबुआ
2. कार्यपालन यंत्री जल संसाधन विभाग झाबुआ
- ✓ 3. राज्य प्रदूषण नियंत्रण मण्डल के नामांकित अधिकारी
4. उप वनस्पतलाधिकारी सामान्य वन मण्डल झाबुआ
5. प्रभारी अधिकारी (खनिज शाखा) जिला झाबुआ

**विषय-** सस्टेनेबल सोलर माइनिंग नेक्जेंसिव माईकलाईन 2016 एवं इनफोर्सेमेंट माण्डिरिंग फार सोलर माइनिंग 2020 के अंतर्गत रेल खनिज हेतु जिला सर्वेक्षण रिपोर्ट तैयार किये जाने के सम्बन्ध में।

**संदर्भ-** संभालक, भौगिकी तथा खनिकर्ष भोपाल के पत्र क्रमांक 2981/खनिज/विधिष / न.क. / 2022 दिनांक 03.03.2022।

-00-

उपरोक्त विषयवार्तागत संदर्भित पत्र का अवलोकन करे। जिले में सस्टेनेबल सोलर माइनिंग नेक्जेंसिव माईकलाईन 2016 एवं इनफोर्सेमेंट माण्डिरिंग फार सोलर माइनिंग 2020 के तहत जिला सर्वेक्षण रिपोर्ट तैयार की जा रही है। जिले की डीएसआर तैयार किये जाने की प्रक्रिया प्रचलन में है। इस डीएसआर की समीक्षा/चुष्टि सुधार हेतु संदर्भित पत्र/माननीय सचिव जल संसाधन विभाग द्वारा किये गए अधीन क्रमांक 3561-3002/2020 (विहार राज्य ए अन्य विरुद्ध पवन कुमार एवं अन्य) में पारित आदेश दिनांक 10.10.2021 के अनुसार एवं सस्टेनेबल सोलर माइनिंग नेक्जेंसिव माईकलाईन 2016 एवं इनफोर्सेमेंट माण्डिरिंग फार सोलर माइनिंग 2020 के पालन में प्रस्तुत डीएसआर को निम्न गठित समिति द्वारा तैयार कर समीक्षा की जाय।

1. अनुविभागीय अधिकारी(राजस्व) अनुभाग जिला झाबुआ
2. कार्यपालन यंत्री जल संसाधन विभाग जिला झाबुआ
3. राज्य प्रदूषण नियंत्रण मण्डल के नामांकित अधिकारी
4. उप वनस्पतलाधिकारी सामान्य वन मण्डल जिला झाबुआ
5. प्रभारी अधिकारी (खनिज शाखा) जिला झाबुआ

जिले की डीएसआर की समीक्षा संपरोक्त गठित समिति द्वारा की जाकर अग्रोइस्तासहकारता को अनुमोदन हेतु प्रेषित किया जाना है।

अतः उपरोक्तानुसार प्रभारी अधिकारी (खनिज शाखा) जिला झाबुआ से सहायक संभालक भौगिकी तथा खनिकर्ष भोपाल से प्राप्त निर्देशों के पालन में डीएसआर की तैयार कर अनुमोदन हेतु प्रस्तुत करें। ताकि समय सीमा में अनुमोदित डीएसआर सिटक (Seac) को अंग्रेजित की जा सके। इसे सर्वोच्च प्राथमिकता देने।

*[Signature]*  
कलेक्टर  
जिला झाबुआ

पृष्.क्रमांक/  
पतिविधि-

/ खनिज / 2022

झाबुआ, दिनांक-

1. संभालक (प्रशासन एवं खनिकर्ष) कार्यालय संभालक, भौगिकी तथा खनिकर्ष भोपाल की ओर सूचनाओं।

*[Signature]*  
कलेक्टर  
जिला झाबुआ

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

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Details of Royalty or Revenue

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



## Chapter: - 1. Introduction

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A mineral wise district survey report (DSR) of Jhabua district for sand mining and mining for other minor minerals has prepared as mentioned in the In pursuance to the Gazette Notification, Ministry of Environment, Forest and Climate Change (MoEF& CC), the Government of India Notification No S.O. 141 (E) Appendix-X, Dated 15.01.2016 & S.O. 3611 (E) New Delhi, 25th July 2018 laid procedure for preparation of District Survey Report of sand mining or river bed mining. The main purpose of preparation of District Survey Report (DSR) is to identify the Sand resources and developing the sand mining activities along with other relevant data of the district.

Jhabua is a predominantly tribal district located in the western part of Madhya Pradesh. It is surrounded by south western part of Panchmahal and Baroda District of Gujarat, Banswara district of Rajasthan, and Alirajpur, Dhar and Ratlam districts of Madhya Pradesh.


The Bhil and Bhilala peoples inhabit the interior of the district. The Bhil tribe is one of the most important and the third largest tribe of India. The name has been derived from Dravidian word bil or vil meaning bow because they always keep bow & arrow for hunting. It has extends from North latitudes  $21^{\circ} 55' 23''$  to  $23^{\circ} 17' 18''$  and between the East longitudes  $74^{\circ} 01' 52''$  and  $75^{\circ} 00' 52''$  and cover by the parts of Survey of India degree sheet no. 46 I, 46 J and 46 K .

The Jhabua district occupies 45th rank in the state in terms of area having 3,782 km<sup>2</sup> which is 1.16 percent of the total area of Madhya Pradesh.

### Objective of District Survey Report

*The District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects.*

- The District Survey Report (DSR) shall be prepared for each minor mineral in the district separately.
- The Report shall be updated once every five years.

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

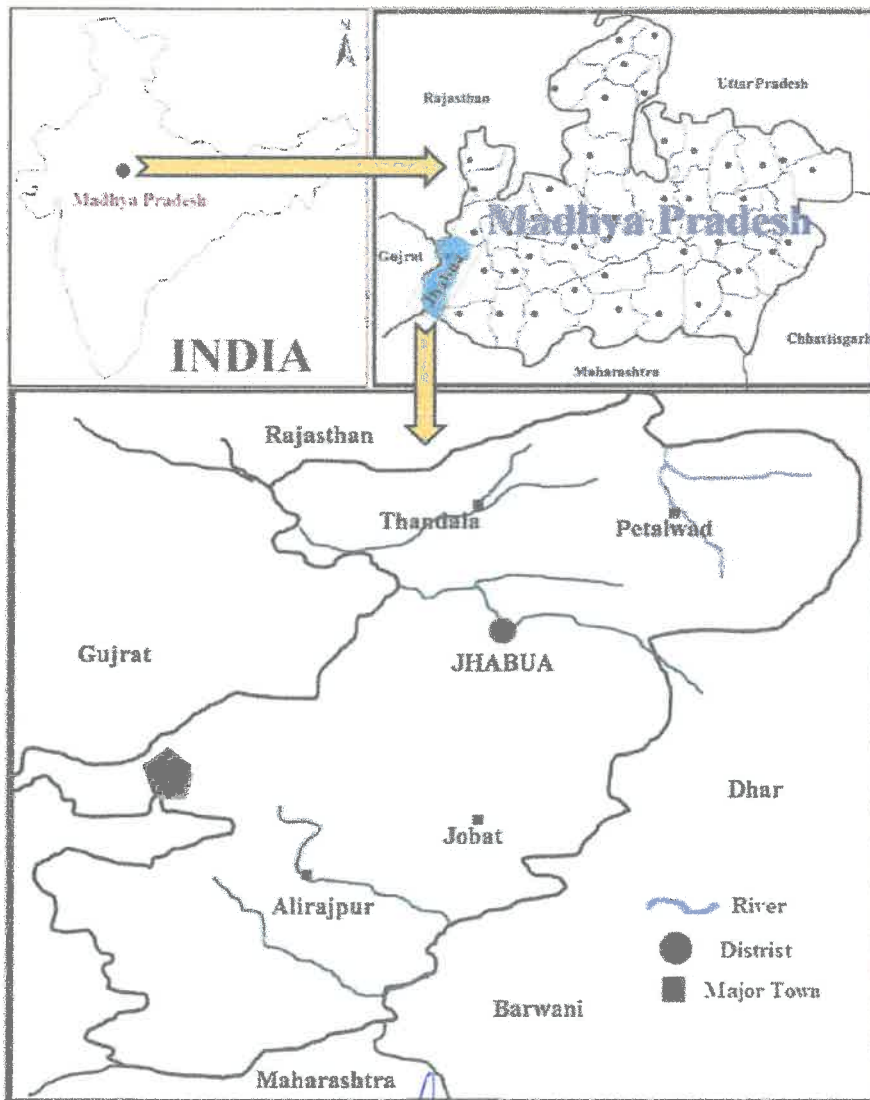
Sustainable Sand Mining Guideline is to ensure the following:

1. Identification of areas of aggradations or deposition where mining can be allowed;
2. identification of areas of erosion and proximity to infrastructural structures
3. Installations where mining should be prohibited and
4. Calculation of annual rate of replenishment and

Allowing time for replenishment after mining in that area.

### 1.1 Connectivity of District

Jhabua is well connected through national highway (NH-59) from Ahmadabad and Indore, which passes in the central and east west part of district. Two state highways passes through Jhabua district 1) SH-26 and 2) SH-39.



Connectivity through different modes of transportation are given below :-

**By bus**

Regular bus service is available to Jhabua from other major cities of the State.

**By train**

Jhabua does not have any Railway station. Nearest station is Meghnagar.

City	Nearest Railway Station	Distance
Jhabua	Meghnagar (MGN), Meghnagar, Madhya Pradesh	16 km away
Jhabua	Thandla Road (THDR), Thandla Rd, Madhya Pradesh	22 km away

**By flight**

There are no regular flights from other major cities of the country to Jhabua. Nearest airport is Indore Airport.

City	Nearest Airport	Distance
Jhabua	Indore Airport (IDR), Indore, Madhya Pradesh	127 km away
Jhabua	Vadodara Airport (BDQ), Vadodara, Gujarat	154 km away

**1.2 Flora and Fauna**

Bhil and Bhilala primarily depend upon medicinal plants of their surrounding for treatment of their ailments. Living close to nature these tribal communities have acquired unique knowledge about the uses of wild flora and fauna. These communities have selected useful and harmful members of the surrounding vegetation. The tribal medicinemen of Jhabua, called Barwas in Bhilli language, enormously knowledgeable about the economically useful plant, know about the major sites where such plants can be found, the collection methods, time of collection as also methods of preservation for use during off season. Barwas gives traditional treatment with medicinal herbs for a wide variety of ecological diseases and ailments ranging from Rheumatism, Paralysis, Epilepsy, Leprosy, Jaundice, Diabetes and Malaria to Syphilis, Gonorrhoea, Chronic constipation, Dysentery and Diarrhoea. They also treat various skin diseases, women's diseases and bone ailments. And above all, one interesting thing is that they claim to use some kind of a 'herbal oral contraceptive' for the females to regulate their fertility

The plants, which are commonly used by Bhil adivasi community for preparation of herbal drugs frequently, grow in their own geographical area. Some important

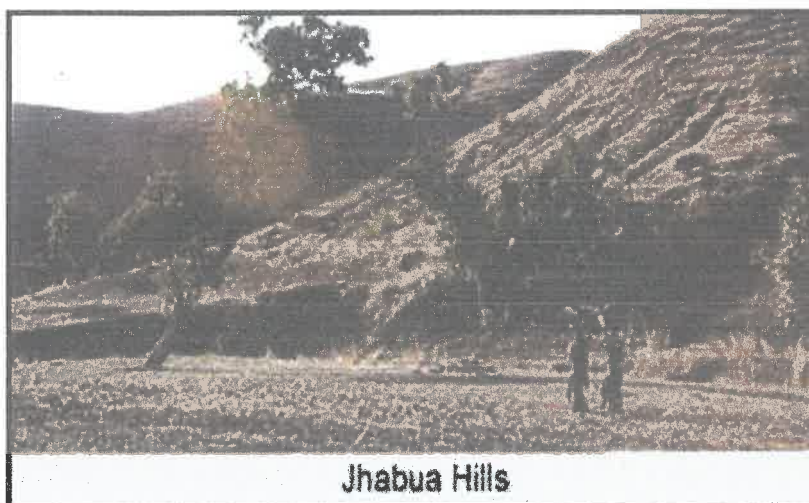


medicinal plants used by them are: *Sarpagandha (Rawolfia serpentina)* *Sanai (Cassia angustifolia)* *Asvagandha (Withania somnifera)* *Satavari (Asparagus racemosus)* *Giloy (Tinospora cordifolia)* *Mulethee (Glycyrrhiza glabra)* *Brahmi Buti (Centella asiatica)* *Shankpushpi (Evolvulus alsinoides)* *Sanjiwani (Selaginella bryopteris)* *Amaltas (Cassia fistula)* *Amla (Phyllanthus emblica)* *Bahera (Terminalia bellerica)* *Kutki (Picrorhiza kurroa)* *Dhak (Butea monosperma)* *Castor (Ricinus communis)* *Lajwanti (Mimosa pudica)* *Barahmi (Bacopa monniera)* and *Poppy (Papaver somniferum)*.

### 1.3 Topography


The terrain is hilly, undulating typically known as 'Jhabua hills topography'. Most of the cultivated area is trapped between the hills forming the valleys. The maximum elevation of 777 m. amsl is recorded near Mathwar village in Sondwa block. The area is well water divided and criss-crossed by a number of streams, rivers and rivulet.

The perennial river Narmada flows through the area and the important tributaries are Anas and Hoandi (of Mahi).



### 1.4 Geomorphology

Geomorphic surface in the Jhabua terrain is formed by Vindhyan hills and Malwa plateau. The terrain is hilly and undulating due to differential erosion of hard rock especially weathering of basalt. The general trends of the hills are in east-west direction. The erosional characteristics of plateau in the area of basaltic terrain are comprised of dissected plateau, moderate dissected plateau, highly dissected plateau and relict dissected.

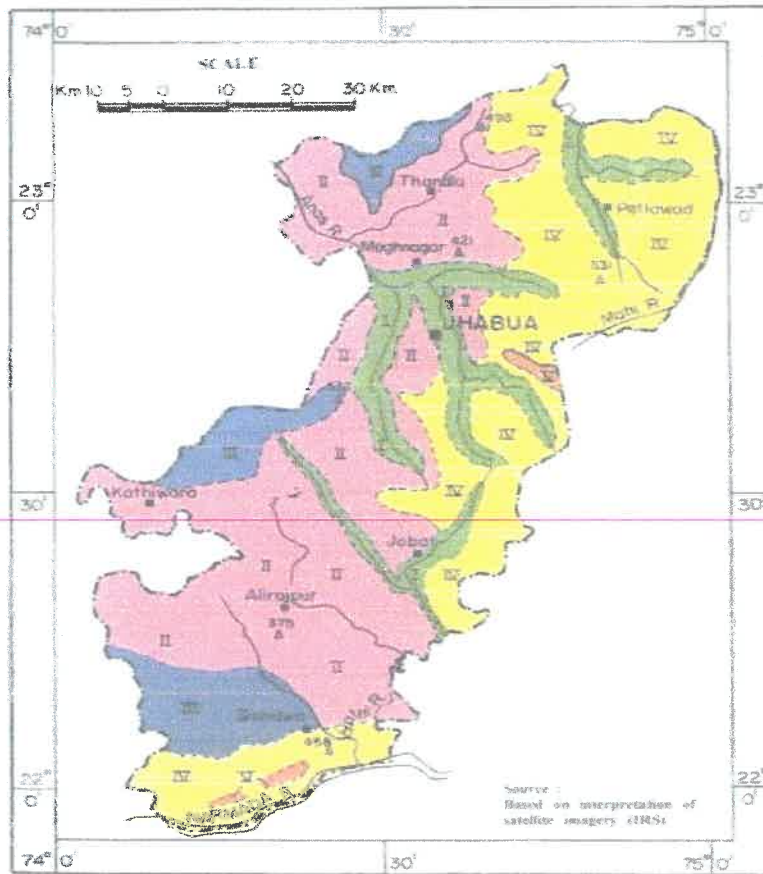
  
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## Geomorphology of Jhabua District

Geomorphic Surface	Area in hundred hectare
Plateau	1358.79
Hills	1982.65
Semi Plain	1299.24
Pediment	8
Alluvial Plain	5.88
Reservoir	147

### II GEOMORPHOLOGY



- Valley fill/valley fans  
(200-300m. above msl)
- Dissected pediment  
(500-400m. above msl)
- Moderately dissected plateau  
(400-500m. above msl)
- Highly dissected plateau  
(500-600m. above msl)
- Residual plateau  
(600-750m. above msl)

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## 1.5 Drainage System

Jhabua district lies in the major basins, the Mahi in the north. The major tributaries having their confluence with the Mahi River forms northern and northeastern boundary of the district.

### 1.5.1 Mahi River

The word "Mahi" may have been derived from Mahi the daughter of the Earth. It may have derived its name alternatively from Muhi. It flows in the north-eastern and east-northern boundaries of the District in Petlawad tehsil. The Pampawati of Petlawad, combined with the Ladki, joins it near Bhairongarh Railway Station.

It has a length of 67 Km. Within the district limits and along with its left bank tributaries. The Anas and Pampawati drains 52% of the geographical area of the district. The Anas river with its tributaries Like *Mod, Sapan and Sunar, Negaria and Pat* covers 38% of the geographical area of the district.

#### 1.5.1.1 Anas River

The Anas River is a large tributary of the Mahi River. It rises from the south-eastern part of Jhabua tehsil. The northern off shoot of the Vindhya Range bifurcates at Phurtalao hill (1770 ft.) into the northern and western branches. It flows 37km towards north. It also flows 9 km towards west and 44 km north-west within the District. Most of the later course lies in Gujarat. It turns to the west and joins the left bank of the Mahi river.

The Kali river and the Khan river flow mostly in the Panchmahals district of Gujarat but join the Anas in Jhabua, near Guwali village. (behaviour of drainage system, ordering of river)

#### 1.5.1.2. Kunda River

Kunda is a sacred river at Devjhiri which is 6 km east of Jhabua on Dhar road. In his old age he prayed the mother goddess Narmada and created this Kunda which is believed to be equally sacred. A certain sadhu lived here who used to bath in the Narmada every day. (Behaviour of drainage system, ordering of river)

### 1.5.1.3. Tank River

A very old tank exists in village Bhagore. An inscribed victory pillar on its bank is dated V.S.1336 (A.D. 1279). It is said that a Bhairava, named Bagga got the tank dug with the assistance of a nymph, on the occasion of a famine. The head of a broken image is believed to be that of Bagga. Some other temples of Antiquity, dedicated to Lord Shiva, Ram and Hanuman are located on the bank of the tank. A tank at Petlawad was constructed by Tukoji Rao..(behaviour of drainage system, ordering of river)



Map No. 2 Drainage map of Jhabua

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## 1.6 Rainfall

Climate is generally moderate and seasons are well defined. The summers are hot, winters are short and the monsoon season is generally pleasant. Most of the rainfall occurs during the monsoon season while there is also little rainfall in winter season. The normal annual rainfall of Jhabua district is 855.5 mm. Jhabua district receive maximum rainfall during southwest monsoon period i.e. June to November. About 92.8% of annual rainfall is received during monsoon season. Only 7.2% of annual rainfall takes place between October to May period. The surplus water for ground water recharge is available only during the southwest monsoon period.

## 1.5 Temperature

The period from March to about middle of June is the hot summer season. May is the hottest month of the year. The temperature starts rising from the beginning of February and reaching maximum in the month of May. The normal annual mean maximum temperature is 32.80°C and normal annual mean minimum temperature is 19.10°C. The individual day maximum temperature in May goes up to 39.50°C. The individual day minimum temperature is recorded 11°C in the month of January. The march is the driest month of the year. Jhabua District summer highest day temperature is in between 32 ° C to 44° C.

The humidity comes down lowest in April. It varies between 41 % and 89 % at different during April and August.

The wind velocity is high during the pre-monsoon period as compared to post monsoon period. The wind velocity is highest in June around 15.9 km/hr and lowest is 3.2 km/hr in November. The average normal annual wind velocity of Jhabua district is 7.8 km/hr.

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## Chapter:- 2 Overview of Mining Activity in the District

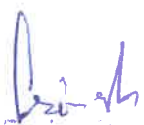
Status of Mining in the district can be considered good, as there are some major mineral mines along with minor mineral mines.

Stone crusher mines for Gitti, Quartzite deposits for Building Material and gitti, manganese ore deposit and rock phosphate mines are available, apart from these there is a possibility of dolomite deposits in the district.

## Chapter:-3 Mining Leases in the District

### Major Mineral (Mining Leases) Industries in the District

S. No.	Mine Name	Name Of Minerals	Type Of Minerals	Area (Ha)	End Use (Captive/Non-Captive)	Method Of Mining	Name Of Leases
1	3	4	5	6	7	8	9
1	Kajli Dongri	Manganese	Major	30.86	Non-Captive	Oc	S.R. Ferro Alays
2	Guvali	Rock Phosphat	Major	9.12	Non-Captive	Oc	Mp State Mining Ltd.
3	Guvali	Rock Phosphat	Major	2.29	Non-Captive	Oc	Mp State Mining Ltd.
4	Julwaniya	Dolomitic Lime Stone	Major	9	Non-Captive	Oc	Shree Nilesh Upadhyay
5	Kachaldar	Rock Phosphat	Major	37.7	Non-Captive	Oc	Mp State Mining Ltd.
6	Amliyamal	Manganese	Major	6.39	Non-Captive	Oc	A.V. Mines Pvt. Ltd.
7	Kajli Dongri	Manganese	Major	2.42	Non-Captive	Oc	Shree Daulal Vyas
8	Talavli	Dolomite	Major	4.46	Non-Captive	Oc	Shree Nirmal Agrawal

  
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Quarry lease for stone & gitti list:-

S. No	Mine Type	Date_From	Date_To	Village	Syrvay No.	Lease Area	End_Use	Minet ho	Lessee_Nam	GPS Co-Ordinates
1	QI	2019/08/11	2029/08/10	Pipaldehla	103	0.9	Non Capative	OC	Rajkumar Jain	22°46'31.93" 74°39'20.55" 22°46'33.41" 74°39'23.74" 22°46'36.33" 74°39'23.10" 22°46'36.04" 74°39'20.05"
2	QI	2018/04/18	2028/04/17	Pipaldehla	107	2.0	Non Capative	OC	Ravi Mistri	22°46'36.76" 74°39'29.54" 22°46'41.30" 74°39'22.04" 22°46'39.76" 74°39'21.01" 22°46'35.87" 74°39'19.89" 22°46'35.79" 74°39'24.86" 22°46'34.51" 74°39'26.58"
3	QI	2014/11/14	2024/11/13	Pipaldehla	119	2.0	Non Capative	OC	Dinesh Bhamnia	22°46'24.08" 74°39'34.25" 22°46'22.68" 74°39'37.89" 22°46'27.02" 74°39'39.90" 22°46'28.06" 74°39'35.00"
4	QI	2011/07/23	2021/07/22	Pipaldehla	83, 84/1,103	2.0	Non Capative	OC	Sanjay Gupta	22°46'40.64" 74°39'06.64" 22°46'40.92" 74°39'10.51" 22°46'34.24" 74°39'12.08" 22°46'36.48" 74°39'05.80" 22°46'38.82" 74°39'07.24"
5	QI	2017/12/12	2027/12/11	Chhapri, Pipaldehla		2.50	Non Capative	OC	Hada Construction	22°46'42.74" 74°39'38.71" 22°46'40.19" 74°39'43.96" 22°46'238.01" 74°39'42.94" 22°46'40.83" 74°39'37.49"
6	QI	2011/06/07	2021/06/06	Deojharipanda	502, 505	0.9	Non Capative	OC	Krishna Stone Crusher	22°47'20.12" 74°38'57.93" 22°47'15.75" 74°38'58.00" 22°47'14.81" 74°38'59.27" 22°47'18.36" 74°39'02.47" 22°47'20.09" 74°39'01.85"
7	QI	2020/06/30	2030/06/29	Deojharipanda	581, 587/1, 587/2, 587/3, 588/1, 588//2, 590	2.0	Non Capative	OC	Sushil Sharma	22°47'14.81" 74°38'59.27" 22°47'15.75" 74°38'58.00" 22°47'20.12" 74°38'57.39" 22°47'20.09" 74°39'01.85" 22°47'18.36" 74°39'02.47"
8	QI	2017/11/17	2027/11/16	Hadmantiy a	494, 495, 461	2.0	Non Capative	OC	Nialm Asada	22°47'24.79" 74°38'46.91" 22°47'25.59" 74°45'33.35" 22°46'238.01" 74°39'42.94" 22°46'40.83" 74°39'37.49"
9	QI	2011/07/24	2021/07/23	Devjhiri Panda	605, 606, 613 to 618, 620, 622	3.95	Non Capative	OC	Manohrlal Bhandari	24°47'10.19" 74°39'03.28" 24°47'08.91" 74°39'09.31" 24°47'16.53" 74°39'03.45" 24°47'13.02" 74°39'02.96"
10	QI	2018/08/23	2028/08/22	Ranapur	313/1	2.0	Non Capative	OC	Jitendra Rathore	22039'19.18" 74032'12.47" 22039'20.17" 74032'13.86" 22039'22.80" 74032'10.27" 22039'21.48" 74032'08.97"
11	QI	2010/04/07	2020/04/06	Ranapur	313/1	2.0	Non Capative	OC	Manoj Pawar	22039'11.00" 74032'03.00" 22039'15.02" 74031'58.61" 22039'17.63" 74032'01.29" 22039'13.43" 74032'05.73"
12	QI	2011/07/15	2021/07/14	Chapri	324/6, 334/2	0.54	Non Capative	OC	Sumersingh Ajnar	22°46'34.54" 74°39'51.97" 22°46'36.95" 74°39'59.74" 22°46'37.15" 74°39'55.98" 22°46'35.11" 74°39'51.84"
13	QI	2011/09/29	2021/09/28	Chapri	327, 328, 333	1.0	Non Capative	OC	Sumersingh Ajnar	22°46'35.45" 74°39'53.42" 22°46'36.03" 74°39'56.05" 22°46'36.79" 74°39'55.89" 22°46'36.77" 74°39'53.09" 22°46'36.32" 74°39'59.92" 22°46'36.89" 74°40'01.66" 22°46'37.38" 74°40'01.49" 22°46'36.79" 74°39'59.75"

14	QI	2014/09/22	2024/09/21	Deojharipanda	212 to 215, 266 to 268, 276, 293 to 295, 96/2, 300, 301	3.08	Non Capative	OC	Sumersingh Ajnar	22°46'15.88" 74°39'49.65" 22°46'16.04" 74°39'53.69" 22°46'25.48" 74°39'54.29" 22°46'25.80" 74°39'49.95"
15	QI	2011/01/27	2021/01/26	Jhakela	851	1.0	Non Capative	OC	Raghnandan Bhadoriya	22°42'56.89" 74°40'30.08" 22°42'55.43" 74°40'32.62" 22°42'54.98" 74°40'35.35" 22°42'57.93" 74°40'34.54"
16	QI	2014/07/10	2024/07/09	Sajvani Chhoti	339/2	2.0	Non Capative	OC	Aditya Singh Rathore	22°41'29.99" 74°35'42.74" 22°41'32.51" 74°35'44.37" 22°41'30.57" 74°35'46.72" 22°41'30.74" 74°35'47.37" 22°41'23.34" 74°35'47.16" 22°41'23.15" 74°35'43.20"
17	QI	2010/08/03	2020/08/02	Bhimfaliya	38	2.0	Non Capative	OC	Lata Meravat	22°47'24.29" 74°26'49.01" 22°47'24.05" 74°26'51.59" 22°47'26.39" 74°26'53.84" 22°47'29.78" 74°26'52.60"
18	QI	2018/05/30	2029/05/29	Dudhi(Umarkot)	123	1.0	Non Capative	OC	Bhurelal Gehlot	22°45'36.89" 74°50'10.85" 22°45'37.18" 74°50'12.16" 22°47'26.39" 74°26'53.84" 22°47'29.78" 74°26'52.60"
19	QI	2010/06/20	2020/06/19	Gadwada	126	1.0	Non Capative	OC	Alkesh Baklia	22°55'46.75" 74°36'14.61" 22°55'44.20" 74°36'19.10" 22°55'41.30" 74°36'14.80" 22°55'45.09" 74°36'14.12"
20	QI	2009/07/05	2019/07/19	Mahuda	366	2.5	Non Capative	OC	Nitesh Porval	22°59'57.80" 74°37'42.70" 22°59'58.60" 74°37'44.10" 22°00'00.60" 74°37'46.40" 22°00'00.50" 74°37'42.70"
21	QI	2015/05/09	2020/05/08	Semal Pada	265	0.9	Non Capative	OC	Nitesh Porval	22°59'45.63" 74°37'50.16" 22°59'48.67" 74°37'53.59" 22°59'46.57" 74°37'59.39" 22°59'45.23" 74°37'56.82" 22°59'46.36" 74°37'55.16" 22°59'45.30" 74°37'52.22" 22°59'43.70" 74°37'54.30"
22	QI	2015/07/01	2025/06/30	Gadwada	194/1	1.40	Non Capative	OC	Rekha Meravat	22°55'46.15" 74°036'24.71" 22°55'45.63" 74°036'25.32" 22°55'41.93" 74°036'24.10" 22°55'41.32" 74°036'19.77" 22°055'38.52" 74°036'19.86" 22°055'37.72" 74°036'18.07" 22°055'39.27" 74°036'17.04"
23	QI	2020/01/24	2030/01/23	Gadwada	224, 225	1.43	Non Capative	OC	Rekha Meravat	22°55'40.0" 74°36'16.0" 22°55'46.0" 74°36'23.0" 22°55'45.0" 74°36'24.0" 22°55'38.0" 74°36'20.0"
24	QI	2014/03/04	2024/03/03	Khajuri	5, 10, 11	2.0	Non Capative	OC	Prakashchandra Patidar	23002'40.50" 74033'16.86" 23002'43.23" 74033'23.09" 23002'47.14" 74033'20.84" 23002'44.22" 74033'17.10"
25	QI	2019/07/22	2029/07/21	Khajuri	48, 91	3.52	Non Capative	OC	Omprakash Yadav	22°55'41.32" 74°036'19.77" 22°055'38.52" 74°036'19.86" 22°055'37.72" 74°036'18.07" 22°055'39.27" 74°036'17.04"
26	QI	2010/11/22	2020/11/21	Morjhari	1043	2.0	Non Capative	OC	Shiv Shakti Minerals	23001'29.04" 74027'00.64" 23001'28.04" 74027'07.64" 23001'25.63" 74027'07.34" 23001'25.64" 74027'00.52"
27	QI	2018/03/13	2028/03/12	Bhamal	2080 to 2084	1.0	Non Capative	OC	Kantilal Vagreacha	23008'45.47" 74042'23.27" 23008'44.61" 74042'27.14" 23008'48.67" 74042'28.29" 23008'50.76" 74042'26.52"



28	QI	2017/12/13	2027/12/12	Khedaanda rwad	44/1	4.0	Non Capative	OC	Dinesh Parmar	22039'11.00" 74032'03.00" 22039'15.02" 74031'58.61" 22039'17.63" 74032'01.29" 22039'13.43" 74032'05.73"
29	QI	2017/12/11	2027/12/10	Kanjawanik has	3288	4.0	Non Capative	OC	Samir Singad	22039'19.18" 74032'12.47" 22039'20.17" 74032'13.86" 22039'22.80" 74032'10.27" 22039'21.48" 74032'08.97"
30	QI	2017/12/13	2027/12/12	Talai	129/5	5.0	Non Capative	OC	Gurukripa Mines And Minerals	22059'22.80" 74048'15.70" 22059'24.50" 74048'19.50" 22059'23.30" 74048'19.80" 22059'23.10" 74048'20.40"
31	QI	2018/05/30	2028/05/29	Anant Khedi	427	2.0	Non Capative	OC	Ambe Stone Crusher	22059'35.36" 74049'14.83" 22059'33.83" 74049'20.44" 22059'38.12" 74049'23.15" 22059'41.36" 74049'16.65"
32	QI	2015/06/26	2025/06/25	Dula Khedi	235	2.0	Non Capative	OC	Lakhan Singh Solanki	23003'12.22" 74046'54.24" 23003'13.10" 74046'57.00" 23003'08.60" 74047'02.60" 23003'08.90" 74046'59.70" 23003'07.22" 74046'59.02" 23003'09.00" 74046'55.50"
33	QI	2014/02/22	2024/02/21	Kalighati	33/1	2.0	Non Capative	OC	Charbhujia Stone Crusher	22059'35.2" 74057'41.4" 22059'35.2" 74057'45.8" 22059'30.4" 74057'45.1" 22059'31.2" 74057'41.5"
34	QI	2011/05/05	2021/05/04	Anant Khedi	507	2.0	Non Capative	OC	Shrenik Kothari	22059'19.10" 74048'18.30" 22059'19.80" 74048'17.20" 22059'19.90" 74048'14.60" 22059'24.90" 74048'14.20" 22059'25.40" 74048'14.70" 22059'22.80" 74048'15.70" 22059'24.50" 74048'19.50" 22059'23.30" 74048'19.80" 22059'23.10" 74048'20.40"
35	QI	2011/05/05	2021/05/04	Anant Khedi	507	1.5	Non Capative	OC	Shrenik Kothari	22059'19.10" 74048'18.30" 22059'19.80" 74048'17.20" 22059'19.90" 74048'14.60" 22059'24.90" 74048'14.20"
36	QI	2015/07/24	2025/07/23	Khoriya	277	1.0	Non Capative	OC	Arvind Sunda	23001'03.85" 74045'56.92" 23001'05.39" 74045'59.00" 23001'01.33" 74046'03.63" 23001'59.50" 74046'58.55" 23001'01.96" 74045'53.55" 23001'03.44" 74045'57.19"
37	QI	2016/02/04	2026/02/03	Matapada	10/1, 10/2	2.0	Non Capative	OC	Mohan Singh Solanki	22058'49.59" 74048'20.70" 22058'48.36" 74048'27.10" 22058'45.67" 74048'26.75" 22058'44.81" 74048'21.67"
38	QI	2010/08/25	2020/08/24	Rampuriya	793/4	2.0	Non Capative	OC	H.S. Mehta	22059'19.10" 74048'18.30" 22059'19.80" 74048'17.20" 22059'19.90" 74048'14.60" 22059'24.90" 74048'14.20"
	QI	2017/12/13	2027/12/12	Dhaturiya	533	4.0	Non Capative	OC	Ramnik Patel	22°45'36.89" 74°50'10.85" 22°45'37.18" 74°50'12.16" 22°47'26.39" 74°26'53.84" 22°47'29.78" 74°26'52.60"
	QI	2018/02/25	2028/02/24	Dula Khedi	204, 205	1.0	Non Capative	OC	Lakhan Singh Solanki	23003'08.60" 74047'02.60" 23003'08.90" 74046'59.70" 23003'07.22" 74046'59.02" 23003'09.00" 74046'55.50"
	QI	2017/09/18	2027/09/17	Kalyanpura	662, 664, 665, 669, 671	2.0	Non Capative	OC	Ashok Yadav	22°39'44.06" 74°39'44.93" 22°39'44.59" 74°39'49.49" 22°39'41.30" 74°39'47.85" 22°39'41.30" 74°39'44.80"
	QI	2008/06/28	2018/06/27	Gadwada	193	2.0	Non Capative	OC	Babusingh Katara	22055'44.62" 74036'27.15" 22055'47.36" 74036'23.94" 22055'51.67" 74036'28.39"



QI	2010/07/16	2020/07/15	Gadwada	137/1, 137/2	1.0	Non Capative	OC	Alkesh Bakliya	22055'61.80" 22055'52.00" 22055'50.50" 22055'47.00" 22055'50.20"	74036'17.10" 74036'21.30" 74036'23.40" 74036'20.80" 74036'17.50"
QI	2017/01/12	2027/01/11	Gadwada	137/1, 137/2	1.0	Non Capative	OC	Alkesh Bakliya	22055'46.75" 22055'44.20" 22055'41.30" 22055'45.09"	74036'14.61" 74036'19.10" 74036'14.80" 74036'14.12"
QI	2017/12/29	2027/12/28	Hatyadeli	150	2.0	Non Capative	OC	Maa Bhavani Stone Crusher	23002'40.50" 23002'43.23" 23002'47.14" 23002'44.22"	74033'16.86" 74033'23.09" 74033'20.84" 74033'17.10"
QI	2009/11/06	2019/11/05	Para	133, 134, 135, 136, 137	1.0	Non Capative	OC	Nilesh Katara	22°39'43.58" 22°39'44.06" 22°39'44.59" 22°39'41.30" 22°39'41.30"	74°39'44.16" 74°39'44.93" 74°39'49.49" 74°39'47.85" 74°39'44.80"
QI	2009/10/19	2019/10/18	Khajuri	210	0.5	Non Capative	OC	Manjula Bhabhar	23002'29.89" 23002'28.98" 23002'27.06" 23002'27.41"	74034'17.62" 74034'20.15" 74034'19.80" 74034'16.89"
QI	2005/01/11	2015/01/10	Anant Khedi	512	3.0	Non Capative	OC	Mul Shankar Lohar	22059'07.51" 22059'08.80" 22059'04.66" 22059'03.02"	74048'14.72" 74048'26.30" 74048'27.00" 74048'19.62"
QI	2015/07/04	2025/07/03	Bawdi	306	2.0	Non Capative	OC	Rajesh Patidar	22059'03.15" 22059'02.51" 22059'01.02" 22058'57.07" 22058'57.26" 22059'00.09"	74052'59.37" 74053'02.24" 74053'01.64" 74053'04.53" 74052'58.48" 74053'04.31"
QI	2007/10/12	2017/10/11	Asalya	882	2.0	Non Capative	OC	Balkrishna Rathore	23001'48.28" 23001'48.79" 23001'45.32" 23001'44.76"	75045'41.13" 75045'47.41" 75045'47.99" 75045'41.50"
QI	2009/09/17	2019/09/16	Khardubadi	8, 10, 14	2.0	Non Capative	OC	Arpit Goud	22°42'29.88" 22°42'26.69" 22°42'26.78" 22°42'25.71" 22°42'24.73" 22°42'22.44" 22°42'28.62"	74°38'18.97" 74°38'23.53" 74°38'21.48" 74°38'20.68" 74°38'22.53" 74°38'17.55" 74°38'15.80"
QI	2010/04/12	2020/04/11	Futiya	554	2.0	Non Capative	OC	Kishore Borse	22°48'39.12" 22°48'37.76" 22°48'31.12" 22°48'31.92" 22°48'38.00"	74°37'46.43" 74°37'47.49" 74°37'45.63" 74°37'39.82" 74°37'43.97"
QI	2011/06/30	2021/06/29	Devjhiripan da, Gadwadi	662/2, 519/1	0.9	Non Capative	OC	Krishna Stone Crusher	22°47'20.12" 22°47'15.75" 22°47'14.81" 22°47'18.36" 22°47'20.09"	74°38'57.93" 74°38'58.00" 74°38'59.27" 74°39'02.47" 74°39'01.85"
QI	2005/01/05	2015/01/04	Deojharipa nda	507	1.0	Non Capative	OC	Manoharlal Bhandari	22°46'34.11" 22°46'34.91" 22°46'36.16" 22°46'36.80"	74°39'15.50" 74°39'19.29" 74°39'18.84" 74°39'15.98"
QI	2008/05/02	2018/05/01	Deojharipa nda	103	0.6	Non Capative	OC	Manoharlal Bhandari	22°46'35.43" 22°46'35.72" 22°46'37.32" 22°46'37.05"	74°39'24.57" 74°39'27.64" 74°59'27.59" 74°39'24.44"
QI	2018/08/23	2028/08/22	Madalda	1191	4.0	Non Capative	OC	Anil Yadav	23002'29.89" 23002'28.98" 23002'27.06" 23002'27.41"	74034'17.62" 74034'20.15" 74034'19.80" 74034'16.89"
QI	2015/07/02	2025/07/01	Petlawad	2415, 2416	1.0	Non Capative	OC	Sangeeta Parmar	22059'28.54" 22059'28.70" 22059'26.57" 22059'26.39"	74048'04.07" 74048'12.54" 74048'12.17" 74048'09.30"


QI	2009/04/09	2019/04/08	Sajawani Choti	48	2.0	Non Captive	OC	Nagin Meda Bhura	22°41'29.99" 74°35'42.74" 22°41'32.51" 74°35'44.37" 22°41'30.57" 74°35'46.72" 22°41'30.74" 74°35'47.37" 22°41'23.34" 74°35'47.16" 22°41'23.15" 74°35'43.20"
QI	2017/12/13	2027/12/12	Talai	129/5	5.0	Non Captive	OC	Omprakash Yadav	22059'22.80" 74048'15.70" 22059'24.50" 74048'19.50" 22059'23.30" 74048'19.80" 22059'23.10" 74048'20.40"
QL	20-04-2022	21-04-2032	Bhesguada	327, 328, 337	2.0	Non Captive	OC	Lakhansingh Solanki	23003'08.60" 74047'02.60" 23003'08.90" 74046'59.70" 23003'07.22" 74046'59.02" 23003'09.00" 74046'55.50"
QL	15-09-2021	14-09-2031	Kaldela	574 min 2	4.00	Non Captive	OC	Ravindra Padwal	23002'40.50" 74033'16.86" 23002'43.23" 74033'23.09" 23002'47.14" 74033'20.84" 23002'44.22" 74033'17.10"
QL	15-09-2021	14-09-2031	Sater	365	2.00	Non Captive	OC	Ravindra Padwal	22058'49.59" 74048'20.70" 22058'48.36 74048'27.10" 22058'45.67" 74048'26.75" 22058'44.81" 74048'21.67"

### Auctionable blocks at District

S.No.	Minerals	Village	Tehsil	Area (hect.)
<b>Major Minerals</b>				
01	Manganese	Naganvat	Meghnagar	9.44
02	Manganese	Naganvat badi, Chhoti	Meghnagar	54.01
03	Manganese	Dhamninana	Ranapur	4.70
04	Rock Phosphat	Gvali	Meghnagar	4.61
05	Rock Phosphat	Rupakheda, Piploda, Dharniya	Meghnagar	50
06	Manganese, Rock Phosphat, Dolomite	Palasdor	Thandla	7.688
<b>31 Minor Minerals</b>				
01	Quartzite	Devigad	Meghnagar	16.86

### 3.2 Sand Mines list

No any sand mine/quarry sanction in the District

  
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#### Chapter 4:- Details of Royalty or Revenue received in last three years

##### *Information about the Target and Achievement of Royalty/Revenue in the last 3 years*

Sr. No.	Year	Target	Revenue from Major Minerals	Revenue from Minor Minerals	Total	Percentage
1	2018-19	06 Cr.	19185001	69203955	88388956	147.31%
2	2019-20	10 Cr.	17840413	38314265	56154678	56.15%
3	2020-21	10 Cr.	15224295	102604392	117828687	117.82%

##### *Information about the Target and Achievement of rural infrastructure in the last 3 years*

Sr. No.	Year	Target	Achieved	Percentage
1	2018-19	26 L.	2728526	104.94%
2	2019-20	30 L.	5757772	191.32%
3	2020-21	50 L.	5666775	113.33%

#### Chapter 5:- Production of minerals in last three year

Year	Mineral Name	Production
2018-19	Sand or Bajari	-Nil-
2019-20	Sand or Bajari	-Nil-
2020-21	Sand or Bajari	-Nil-

Year	Mineral Name	Production ( in Cubic Meter)
2018-19	Gitti (Stone)	132618.10
2019-20	Gitti (Stone)	130119.10
2020-21	Gitti (Stone)	210342.30

Year	Mineral Name	Production (M.T.)
2018-19	Manganese	66511.84
2019-20	Manganese	58907.53
2020-21	Manganese	55954.44

Year	Mineral Name	Production (M.T.)
2018-19	Rock Phosphate	-Nil-
2019-20	Rock Phosphate	-Nil-
2020-21	Rock Phosphate	-Nil-

## Chapter 6:- Replenishment Report /Process of Deposition of Sediments in the Rivers of the District.

### 6.1 Introduction:-

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. Rivers flow has a lot of energy to transport



load, erode load and erode the channel through which they flow. GIS are applied in the identification and demarcation of sedimentation areas in the watersheds. Remote sensing is used as a tool for data acquisition whereas GIS a tool for data analysis. The area of present Jhabua district has been studied on land sat imagery in 1:50000 scale. The process of sedimentation in a river can be explained by the following criteria's:-

### 6.1.1 Erosion

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

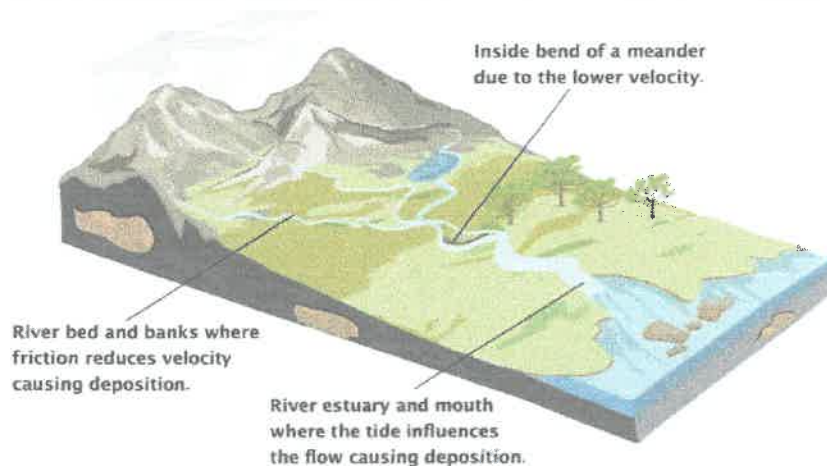
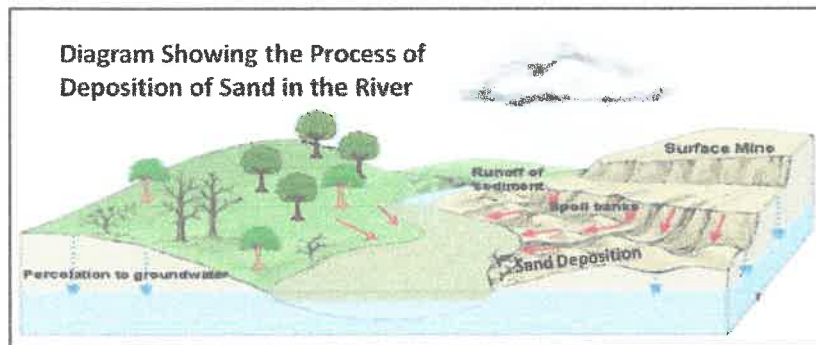
A river's channel is eroded laterally and vertically making the channel wider and deeper. The intensity of lateral and vertical erosion is dictated by the stage in the river's course, discussed in more detail here but essentially, in the upper stage of the river's course (close to the source of the river) there is little horizontal erosion and lots of vertical erosion. In the middle and lower stages vertical erosion is reduced and more horizontal erosion takes place.

There are several different ways that a river erodes its bed and banks. The first is *hydraulic action*, where the force of the water removes rock particles from the bed and banks. This type of erosion is strongest at rapids and waterfalls where the water has a high velocity. The next type of erosion is *corrasion*<sup>1</sup>. This is where the river's load acts almost like sandpaper, removing pieces of rock as the load rubs against the bed & banks. This sort of erosion is strongest when the river is transporting large chunks of rock or after heavy rainfall when the river's flow is turbulent.

*Corrosion* is a special type of erosion that only affects certain types of rocks. Water, being ever so slightly acidic<sup>2</sup>, will react with certain rocks and dissolve them. Corrosion is highly effective if the rock type of the channel is chalk or limestone (anything containing calcium carbonate) otherwise, it doesn't have much of an effect.

*Cavitation* is an interesting method of erosion. Air bubbles trapped in the water get compressed into small spaces like cracks in the river's banks. These bubbles eventually implode creating a small shockwave that weakens the rocks. The shockwaves are very weak but over time the rock will be weakened to the point at which it falls apart.

The final type of erosion is *attrition*. Attrition is a way of eroding the river's load, not the bed and banks. Attrition is where pieces of rock in the river's load knock together, breaking chunks of rock off of one another and gradually rounding and shrinking the load.



### 6.1.2 Transportation

When a river erodes the eroded material becomes the river's load and the river will then transport this load through its course until it deposits the load. There are a few different ways that a river will transport load depending on how much energy the river has and how big the load is.

The largest of particles such as boulders are transported by *traction*. These particles are rolled along the bed of the river, eroding the bed and the particles in the process, because the river doesn't have enough energy to move these large particles in any other way.

Slightly smaller particles, such as pebbles and gravel, are transported by *saltation*. This is where the load bounces along the bed of the river because the river has enough energy to lift the particles off the bed but the particles are too heavy to travel by suspension.

Fine particles like clay and silt are transported in *suspension*; they are suspended in the water. Most of a river's load is transported by suspension.

*Solution* is a special method of transportation. This is where particles are dissolved into the water so only rocks that are soluble, such as limestone or chalk, can be transported in solution.

### 6.1.3 Capacity & Competence

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

### 6.1.4 Deposition

To transport load a river needs to have energy so when a river loses energy it is forced to deposit its load. There are several reasons why a river could lose energy. If the river's discharge is reduced then the river will lose energy because it isn't flowing as quickly anymore. This could happen because of a lack of precipitation or an increase in evaporation. Increased human use (abstraction) of a river could also reduce its discharge forcing it deposit its load.

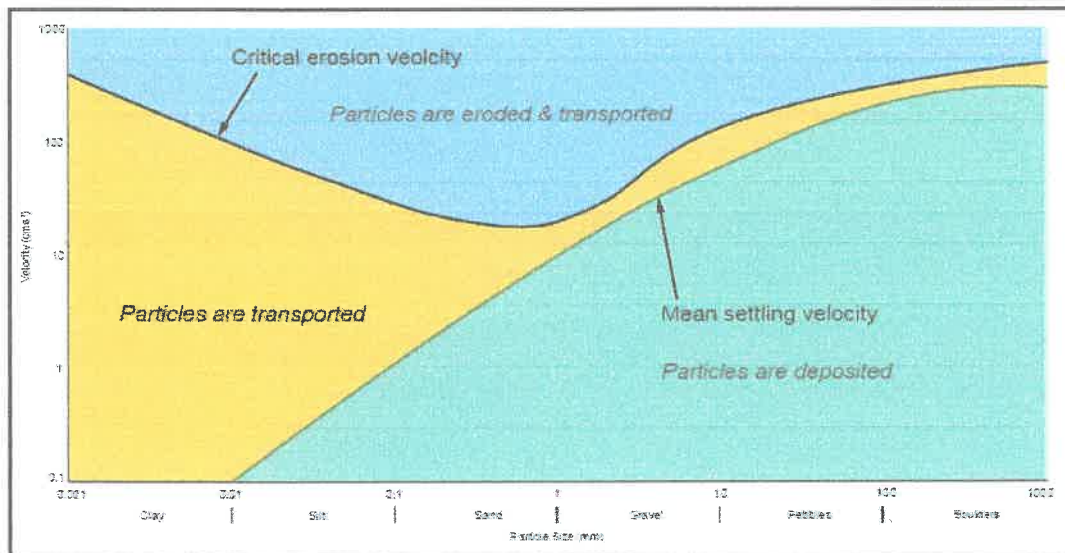
If the gradient of the river's course flattens out, the river will deposit its load because it will be travelling a lot slower. When a river meets the sea a river will deposit its load because the gradient is generally reduced at sea level and the sea will absorb a lot of energy.

### 6.1.5 The Hjulström Curve

A Hjulström curve is a special type of graph that shows how a river's velocity affects its competence and its ability to erode particles of different sizes. There's a lot going on on the graph but it's fairly easy to read once you get the hang of it:

  
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There are two curves on the Hjulström Curve, a *critical erosion velocity* curve and a *mean settling velocity* curve. The critical erosion curve shows the minimum velocity needed to transport and erode a particle. The mean settling velocity shows the minimum speed that particles of different sizes will be deposited by the river. The shaded areas between the curves show the different process that will be taking place for particles that lie in those shaded areas.

As an example, a river flowing at 10cm s<sup>-1</sup> will transport clay, silt and sand particles but will deposit gravel, pebble and boulder particles. Conversely, a river flowing at 100cm s<sup>-1</sup> will erode and transport large clay particles, silt particles, sand particles and most gravel particles. It will transport all but the largest of pebbles and will deposit boulders.

The easiest way to read the curve is to draw a horizontal line from the velocity you're trying to read and seeing which shaded area it crosses the particle size you're interested in in. This will tell you whether that particle is eroded, transported or deposited at that velocity.

There's a few interesting things to note about the Hjulström Curve. The first is that clay sized particles don't appear to have a mean settling velocity. This is because these particles are so fine that a river would have to be almost perfectly stationary in order for them to fall out of solution. In addition, the small particles seem to have an erosive velocity that's the same as the velocity for larger particles. This is because smaller particles are cohesive, they stick together, making them harder to dislodge and erode without high velocities.



## 6.2 Watershed and Catchment area

Type of drainage and size of basin area the fundamental units of watershed. These factors are important to study the hydrology of an area. Development of drainage system is responsible for watershed.

GIS is designed to store information about the location, topography and identification of various characteristics of land features and sub surface features. The factors of watershed affecting runoff are size shape orientation, topography, geology natural and extend of vegetation cover of the surface. Volume of runoff and rate increase with size of watershed. Volume decrease as the runoff area increase. Runoff from watershed can be divided into two categories.


The demarcation of watershed in 3782 sq km area Jhabua district has been studied. 6 watersheds have been identified. They are of follows:-

The catchment area of main basin of Mahi River in the district is 795.34155sq km (21.025% of total area of district) and length of river is 88.7 km. The other rivers of the district are Pat River, Negari River, Mod River and Anas River, they jointly forms catchments area 2987.54 sq km ( i.e. 79 % of total area of district) .The total length of all drainage in the area are 246 km.

S No.	Watershed	Catchment Area (sqkm)	% of area in District	Length in District (km)
1	Mahi River	795.34155	21.025	88.7
2	Pat River	889.83347	23.523	47.43
3	Negari River	437.83332	11.574	40.8
4	Mod River	497.18989	13.143	44.87
5	Anas River	690.85697	18.263	63.18
6	JHW2	471.82654	12.473	50
	<b>Total</b>	<b>3782.88174</b>	<b>100</b>	<b>334.98</b>

## 6.3 Calculation of Sediments

Estimation of sedimentation index for prioritization of watershed has been calculated for each 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).

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

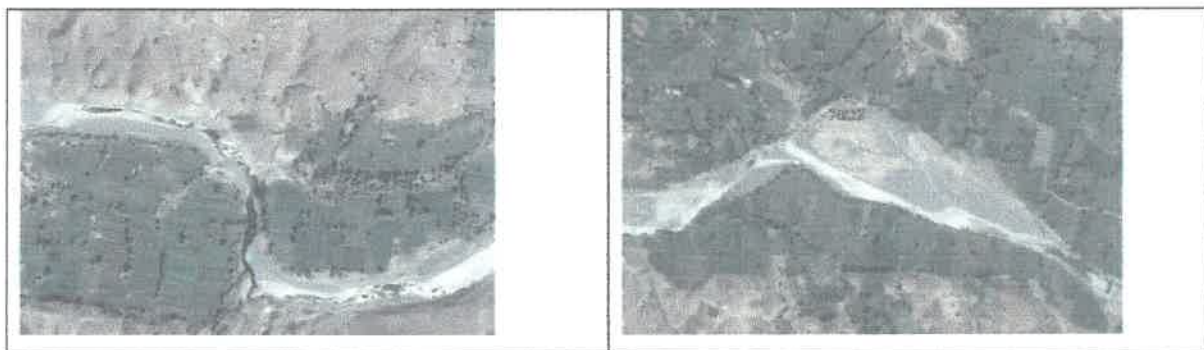
- a) Potential soil detachment (P)
- b) Transportability of the detachment material (T)
- c) Area of the hydrological unit (A)

<b>Sediment deposition = P x T x A</b>
--

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

Watershed	Area (sqkm)	weightage value	delivery ratio	gross yeild	SYI Value	Category
Mahi River	697.34	16	0.63	527190.23	1158	Medium
Pat River	808.83	16	0.65	630890.10	1040	Medium
Negari River	387.83	16	0.65	302510.03	1020	Medium
Mod River	497.19	16	0.63	375875.55	1108	Medium
Anas River	650.86	15	0.6	439328.48	900	Low
JHW2	341.83	16	0.63	258420.90	1048	Medium

**6.4 Demarcation of sand deposition Areas**



  
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## Chapter 7:- General Profile of the District

Jhabua district lies in the western part of Madhya Pradesh. It is surrounded by Panchmahal and Dahod districts of Gujarat, Banswara district of Rajasthan, Alirajpur, Dhar and Ratlam districts of Madhya Pradesh. Founded in the 16th century, Jhabua is situated along the Bahadur Shah lake. Jhabua district is a district of Madhya Pradesh state in central India. The town of Jhabua is the administrative headquarters of the district.

Country	India
State	Madhya Pradesh
Administrative division	Indore
Headquarters	Jhabua
<b>Government</b>	
• Lok Sabha constituencies	Ratlam
<b>Area</b>	
• Total	3,782 km <sup>2</sup> (1,460 sq mi)
<b>Population (2011)</b>	
• Total	1,024,091
• Density	270/km <sup>2</sup> (700/sq mi)



Demographics	
• Literacy	44.45 per cent
• Sex ratio	989
Average annual precipitation	800 mm
Website	Official website

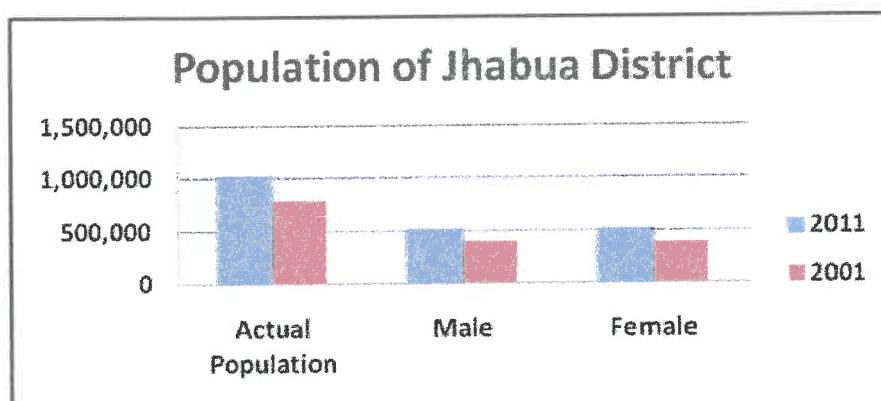
### 7.1 Population

According to the 2011 census Jhabua District has a population of 1,024,091, roughly equal to the nation of Cyprus or the US state of Montana. This gives it a ranking of 440th in India (out of a total of 640). The district has a population density of 285 inhabitants per square kilometer (740/sq mi). Its population growth rate over the decade 2001–2011 was 30.58%. Jhabua has a sex ratio of 989 females for every 1000 males, and a literacy rate of 44.45%.

Description	2011	2001
Actual Population	1,025,048	784,286
Male	515,023	396,141
Female	510,025	388,145
Population Growth	30.70%	21.20%
Area Sq. Km	3,600	3,600
Density/km2	285	218
Proportion to Madhya Pradesh Population	1.41%	1.30%
Sex Ratio (Per 1000)	990	980
Child Sex Ratio (0-6 Age)	943	967
Average Literacy	43.3	41.37
Male Literacy	52.85	53.95
Female Literacy	33.77	28.58
Total Child Population (0-6 Age)	211,869	177,931

Male Population (0-6 Age)	109,040	90,441
Female Population (0-6 Age)	102,829	87,490
Literates	352,081	250,847
Male Literates	214,582	164,916
Female Literates	137,499	85,931
Child Proportion (0-6 Age)	20.67%	22.69%
Boys Proportion (0-6 Age)	21.17%	22.83%
Girls Proportion (0-6 Age)	20.16%	22.54%

As per the 2001 census Jhabua district (considering the separation of Alirajpur) had a total population of 784,286, out of which 396,141 were males and 388,145 were females. 91 per cent of the population was rural. 85.60 per cent of the population was tribal and 3 per cent belonged to scheduled castes. Before the separation of Alirajpur, Jhabua district had a sex ratio of 990 and density of population stood at 206 / km<sup>2</sup>.



Jhabua is a predominantly *Adivasi* district, and suffers from high rates of illiteracy and poverty. Almost half of the population lives below the poverty line. The Bhil and Bhilalapeoples inhabit the interior of the district.

## 7.2 Education

With a literacy rate of 36.9 per cent Jhabua district had the lowest literacy rate amongst districts of Madhya Pradesh. The list of government collages and schools has been shown below:-

  
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**List of Collages:-**

Sl.No.	Name of College	Phone	City
1	Govt. Degree College	243349	Jhabua
2	Girls Degree College	244420	Jhabua
3	Govt. Polytechnic College	243352	Jhabua
4	Govt. College	261451	Petlawad
5	Govt. College		Thandla

**List of Schools:-**

Sno.	Name of Block	No. of Higher School	No. of High School	No. of Middle School	No. of Primary School
1	Thandla	7	6	52	322
2	Petlawad	8	11	99	427
3	Meghnagar	5	10	57	242
4	Jhabua	7	8	60	316
5	Rama	4	7	59	293
6	Ranapur	5	6	50	279
	Total	36	48	377	1879

**7.3 Labor**

**7.4 Major Cities**

**7.4.1 JHABUA**

Jhabua is a town and a municipality in Jhabua district in the Indian state of Madhya Pradesh. It is the administrative headquarters of Jhabua District.

**7.4.1.1 GEOGRAPHY**

Jhabua has an average elevation of 318 metres (1043 feet).

**7.4.1.2 DEMOGRAPHICS**

As of 2001 India census, Jhabua had a population of 30,577. Males constitute 52% of the population and females 48%. Jhabua has an average literacy rate of 75%, higher than the national average of 74.04%. Male literacy is 80% and female literacy is 69%. In Jhabua, 14% of the population is under 6 years of age.

Jhabua city is famous for its black cotton soil commonly known as "White Gold". There are many interesting places in Jhabua Thasil.

### 7.4.1.3 EDUCATION

There is one government college SCAMV which imparts post graduate education. English schools are Kendriya Vidyalaya, New Catholic Mission Tribal School and Oxford Eminent Academy School.

The Tehsil of Jhabua i.e. Thandla has developed very fast with many functional industries. It has given employment to people residing in nearby villages.

### 7.4.2 Petlawad

Petlawad is a town and a Nagar Panchayat (not to be confused with Gram Panchayat or Panchayat Samiti) in the Jhabua district in the Indian state of Madhya Pradesh, formerly the Central Provinces. Major towns in the region are Raipuria, Sarangi, Bamnia and Karwad. The town was in the news when an explosion on 12 September 2015 approx 100 people killed and over 150 people get Non-fatal injuries in Petlawad explosion . India's national bird, the peacock, is well-adapted to climate conditions prevailing in Petlawad.tents.

Petlawad is a part of the Malwa (Malwa) region of Madhya Pradesh. It is 310.2 km from Bhopal and 147.9 km from Indore. Petlawad is located at 23.0°N 74.8°E. It has an average elevation of 388 metres (1272 feet).

#### 7.4.2.1 Demography

In the 2011 census, Petlawad had a population of 15,174 of which 7,791 were males while 7,383 were females. The average sex ratio is 948 which is higher than the Madhya Pradesh state average of 931. The literacy rate is 84% compared to 69.3% for Madhya Pradesh. The male literacy rate is 92.5% while the female literacy rate is 74.8%. Schedule Caste (SC) constitutes 7% of the population while Schedule Tribe is 24%.

#### 7.4.2.2 Economy

Agriculture is the main occupation of the people. The region is part of important wheat-growing area of the country.



### Important Crops:-

- Wheat
- Maize
- Soyabean
- Groundnut
- Garlic

Other than Agriculture, cloth and jewellery selling is the famous occupation in petlawad.

#### 7.4.2.3 Culture

Petlawad is famous for its Adivasi (ethnic and tribal) traditions, owing to its location in the Jhabua district. The Adivasi festival Bhagoriya is celebrated in many parts of the Petlawad Nagar Panchyat. The Nilkantheshwar temple is located in Petlawad. India's national bird, the peacock, is well-adapted to climate conditions prevailing in Petlawad. Petlawad was selected for a residential-colony for the Mahi River dam project. The residential-colony is located 1.5 Kilometres from Petlawad.

#### 7.4.3 Thandla

Thandla is a town and a Nagar Parishad in Jhabua district in the Indian state of Madhya Pradesh.

##### 7.4.3.1 Geography

Thandla is located at 23.0°N 74.57°E. It has an average elevation of 271 metres (889 feet).

##### 7.4.3.2 Demographics

As of 2001 India census, Thandla had a population of 12,685. Males constitute 52% of the population and females 48%. Thandla has an average literacy rate of 73%,

higher than the national average of 59.5%: male literacy is 80%, and female literacy is 66%. In Thandla, 14% of the population is under 6 years of age.

#### 7.4.4 Meghnagar

Meghnagar is a census town in Jhabua district in the Indian state of Madhya Pradesh.

##### 7.4.4.1 Demographics

As of 2001 India census, Meghnagar had a population of 10,316. Males constitute 52% of the population and females 48%. Meghnagar has an average literacy rate of 62%, higher than the national average of 59.5%: male literacy is 69%, and female literacy is 54%. In Meghnagar, 18% of the population is under 6 years of age.

#### 7.5 Town and Villages

Jhabua District of Madhya Pradesh is sparsely populated and most of the population of the region is a tribal population. But the district has importance in terms of tourist spots. Certain regions in Jhabua District of Madhya Pradesh have added to the value of the district. The Tourist spots of Jhabua have religious, historical and natural importance as well. Some of the prominent tourist destinations of Jhabua are Bhabhara, Deojhiri, Lakhmani Gram, Malwai and Amkhut.

#### Towns and Villages



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TAHSILS				CD BLOCKWISE NO. OF VILLAGES
	CD BLOCKS	STATUTORY TOWNS	CENSUS TOWNS	
1	2	3	4	5
Thandla	Thandla	Thandla (NP)	Nil	112
Petlawad	Petlawad			
	Petlawad	Petlawad (NP)	Nil	240
Meghnagar	Meghnagar		Meghnagar (CT)	110
Jhabua	Jhabua	Jhabua (M)	Nil	132
	Rama			124
Ranapur	Ranapur	Ranapur (NP)	Nil	95

### 7.5.1 Deojhiri

Deojhiri as the name of the village denotes there is an ancient temple of Lord Shiva (Deo, a diety) and jhiri or a perennial spring. The spring has been built up into a kund. A samadhi is held on Baisakh Poornima, which falls mostly in the month of April according to Gregarian calender.

### 7.5.2 Lakhmani Gram

Lakhmani gram is a small village located on the bank of the Sukar River. There is a newly constructed Jain temple in this village. The village has come in to prominence among archaeologists, historians and lovers of plastic art in about 1925 when the Jain images enshrined in this temple were unearthed accidentally from a field. The images have been carved out of milky-white marble and black marble called sanmoosa. In addition images of Hindu deities and remains of Hindu temple have also been found. The sculptures belong to the style of 10th-11th century. Since the recovery of the images the place is held as a tirth (Holy place) and an annual fair is held.

  
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### 7.5.3 Malwai

Malwai settles on the northern foothills of the Vindhya Range in Alirajpur Tahsil. There is an ancient but small Shiva temple in ruinous condition. The platform of the temple is rectangular but several conical columns rising from the base reach up to the kalash, which has presently fallen. The front portion of the cone has also fallen. Many beautiful carvings and images in the row of Panels are visible which can be assigned to 12th-13th century.

### 7.6 Administrative block of District

For administrative purpose the district is divided into five tahsils, According to 2011 census, the total number of villages are 813 out of which 783 villages are inhabited and 30 un-inhabited. Tahsilwise number of villages are, Thandla (112), Petlawad (240), Meghnagar (110), Jhabua (256), and Ranapur (95). In the district there are 6 C.D. blocks, namely, Thandla, Petlawad, Meghnagar, Jhabua, Rama, and Ranapur. There are 5 towns in the district. As per urban classification, Thandla, Petlawad, and Ranapur are Nagar Panchayats, whereas Jhabua is (M.). Meghnagar is the only Census Town in the district. Under the revenue administration there are 380 patwaris.

#### Administrative units

The district is divided into five tehsil - Jhabua, Meghnagar, Petlawad, Ranapur and Thandla and six community development blocks Jhabua, Meghnagar, Petlawad, Ranapur, Rama and Thandla.

#### Administrative units of Jhabua District

Sub-Division	Tehsil	Block	Area (sq.km.)
Jhabua	Jhabua	Jhabua Rama	1043.60
	Ranapur	Ranapur	399.97
Thandla	Meghnagar	Meghnagar	320.58
	Petlawad	Petlawad	891.04
	Thandla	Thandla	447.93
Jhabua District			3103.12



The district is the basic territorial unit of administration in the state as well as in India. The Collector, as the head of the district administration is the lay functionary of the Government, having vast powers and wide responsibilities. In many ways he is the link between the state Government and the people. He is the custodian of law and order and the pivot of local administration.<sup>12</sup> He is the Chief Executive Officer of the district and as such he exercises general supervision over various departments in regard to their non-technical work. Coordination of the activities of various departments, control over local-self governing bodies, execution of Government schemes and miscellaneous functions, such as Panchayats, Census, election and relief measures during natural calamities like floods, famine and epidemics, etc. also come within his preview. The narrative on the organisational set-up of the collectorate may be divided into three main functions, viz. (i) land revenue, land-records including consolidation of land and other allied matters. (ii) Law and order and (iii) Development. The Collector is assisted by deputy Collectors, Tahsildars, Naib Tahsildars, revenue inspectors and Patwaris. The Collector is also associated with a number of other committees, the most important being the District Advisory Committee. The Collector is also vested with statutory powers under excise act to implement the excise and prohibition policy of the Government. Superintendent of Police is the head of police department at the district headquarters, The Judiciary is independent. At the district level, there is district court headed by District and Session Judge. District and Session Judge is assisted by Civil Judges posted at tahsil level.

### 7.7 Economy

The district is highly drought-prone and degraded waste lands form the matrix of Jhabua. The women make lovely ethnic items including bamboo products, dolls, bead-jewellery and other items that have for long decorated the living rooms all over the country. The men have for ages adorned "Teer-Kamthi", the bow and arrow, which has been their symbol of chivalry and self-defence.

In 2006 the Ministry of Panchayati Raj named Jhabua one of the country's 250 most backward districts (out of a total of 640). It is one of the 24 districts in Madhya Pradesh currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).



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## 7.8. Demographics

## 7.9. Languages

Languages spoken include Bareli Rathwi, a Bhil language with approximately 64 000 speakers, written in the Devanagari script; and Bhilali, with 1 150 000 speakers.

## 7.10. Literacy

Average literacy rate of Jhabua in 2011 were 43.30 compared to 41.37 of 2001. If things are looked out at gender wise, male and female literacy were 52.85 and 33.77 respectively. For 2001 census, same figures stood at 53.95 and 28.58 in Jhabua District. Total literate in Jhabua District were 352,081 of which male and female were 214,582 and 137,499 respectively. In 2001, Jhabua District had 250,847 in its district.

## 7.11. Culture

A small village of 320 people in 1971, Deojhiri is 8 km north-east of Jhabua on the Ahmedabad-Indore State Highway No.22. It is at a distance of 1 km on the western side of the road, on the Sunar river. As the name of the village denotes there is an ancient temple and (*Jhiri*) or a perennial spring. The spring has been built up into a *Kund*. A festival is held on Baisakh Poornima, which falls mostly in the month of April according to the Gregorian calendar. Katthivada in Jhabua district is noted for its large mangoes.

## Chapter 8:- Land Utilization Pattern in the district:

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Forest, Agriculture, Horticulture, Mining etc.

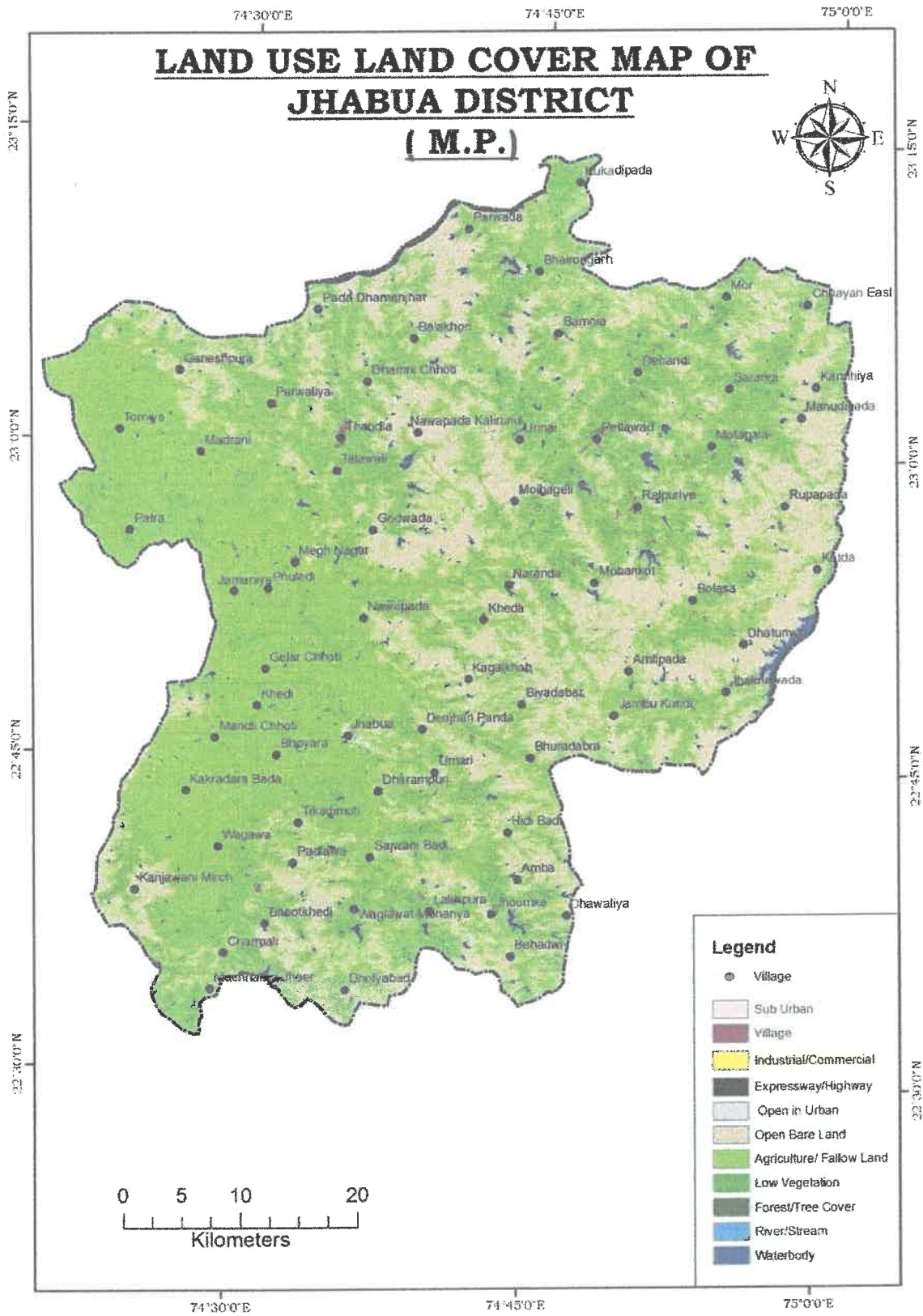
Land cover is the physical material at the surface of the earth. Land covers include grass, asphalt, trees, bare ground, water, etc. Earth cover is the expression used by ecologist Frederick Edward Clements that has its closest modern equivalent being vegetation. The expression continues to be used by the Bureau of Land Management.

There are two primary methods for capturing information on land cover: field survey and analysis of remotely sensed imagery.

One of the major land cover issues (as with all natural resource inventories) is that every survey defines similarly named categories in different ways. For instance, there are many definitions of "forest"—sometimes within the same organisation—that may or may not incorporate a number of different forest features (e.g., stand height, canopy cover, strip width, inclusion of grasses, and rates of growth for timber production). Areas without trees may be classified as forest cover "if the intention is to re-plant" (UK and Ireland), while areas with many trees may not be labelled as forest "if the trees are not growing fast enough".

Land use involves the management and modification of natural environment or wilderness into built environment such as settlements and semi-natural habitats such as arable fields, pastures, and managed woods. It also has been defined as "the total of arrangements, activities, and inputs that people undertake in a certain land cover type."

  
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## Chapter 9:- Physiographic division of the District

Physiography is characterized by chain of hills Vindhya Ranges in the south and Malwa plateau in the north with river flows of Mahi and Anas and its tributaries. The area comes under Agro climatic zone No. 12 namely Jhabua hills. The district has three distinct sub zones namely Petlawad (Malwa), Jhabua (Low rainfall) and Katthiwada (High rainfall) zones.

Vindhyan's ranges from a width of 23 km in the east and 52 km in the west. The maximum elevation of 777 m. amsl is recorded near Mathwar village in Sondwa block. These ranges have high elevation near Katthiwada. The general trends of the hills are in east-west direction. The average elevation of malwa plateau (365m) is in the eastern part of the area especially in the east of Thandla Maghnagar and Petlawaad. The anas river valleys with its tributaries are formed in the north west of the area in the low lying plateau. The flood plain is formed by mahi and anas river.

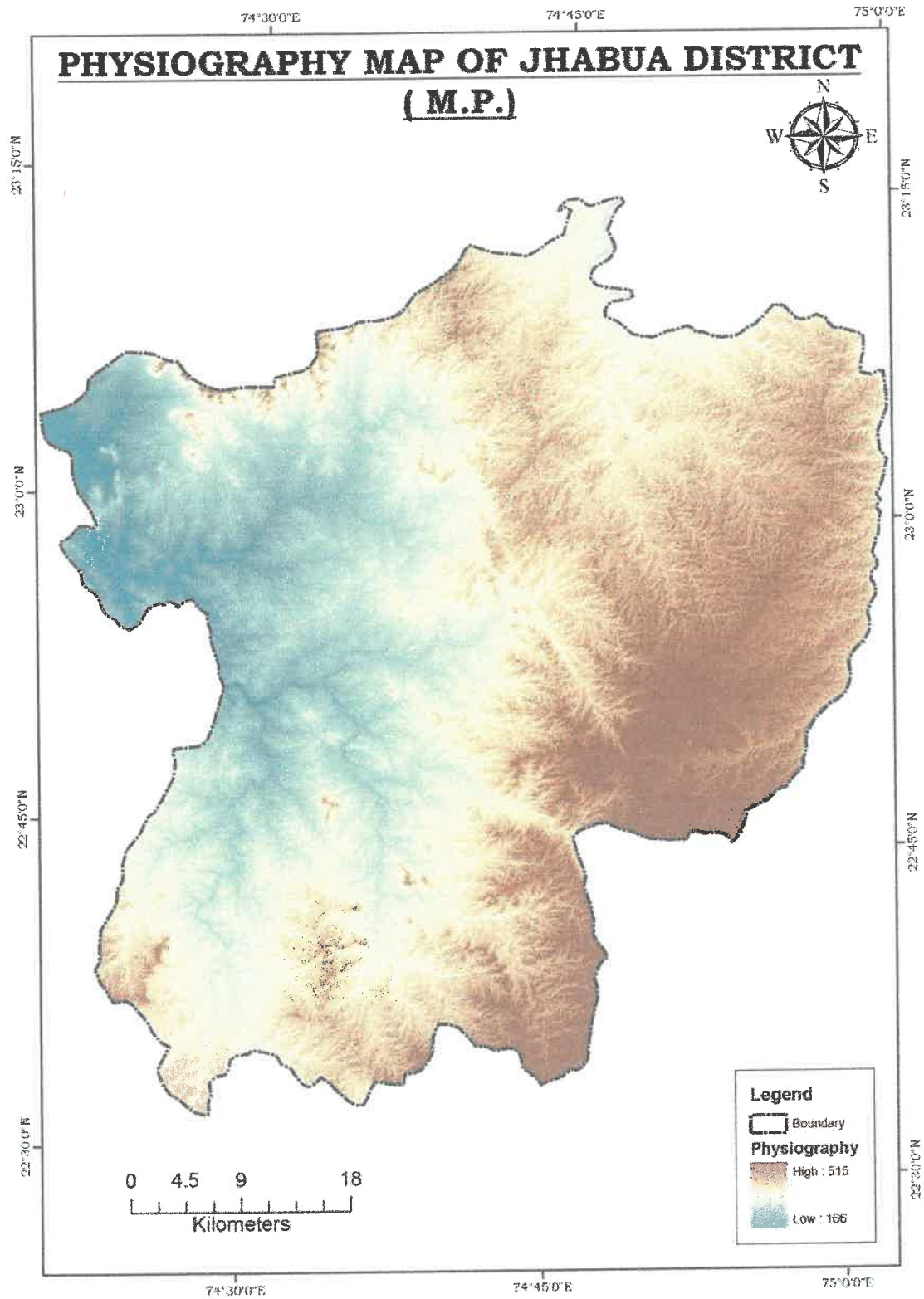
### Physiography and soil types Topography


Physiographical Unit	% of Area	Soil type
Steep hill slopes or ridges with abrupt slopes	45	Skeletal soils, shallow; yellowish brown; sandy loam's to sandy clay loam's; slightly acidic
Piedmont & undulating upland	30	Shallow to medium depth; sandy to sandy loam's; yellowish brown to reddish brown slightly acidic
Valleys	10	Medium to deep, pale to dark greyish brown, almost black in places; clay to 9 clay loam's (40-60%) alluvium of basaltic origin reaction neutral to slightly alkaline
Plateau	15	Deep to very deep, dark, black cotton clay soils on elevated plateau in northeast of district

### 9.1 soil cover

The variation in climatic condition, topography and lithology in Jhabua district has played a significant role in the formation of soil which has resulted from the physical and chemical weathering of the parent rock. Black cotton soil has been derived from the parent basaltic rock under semi-arid conditions. These soils are clay to loamy clay in texture, having clay contents of 40% to 60% mixed with red and yellow soil. The soil generally occurs in 7 slopes and uplands are sandy-to-sandy loam and their color varies from reddish yellow yellowish brown.

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## Chapter 10:- Rainfall Month-wise

In the hydrological cycle period of last three year i.e. 2019-20 to 2021-22 from June to may, the ranges of monsoon rainfall (mm) from 8266.8(2019-20), 6396.20 (2020-21), 5298.90(2021-22).

### Rainfall in Jhabua District -

Year	Rainfall in mm		
	2019-20	2020-21	2021-22
April	-	-	00
May	-	-	0.0
June	825.40	1086.40	896.40
July	1402.10	954.10	1254.70
August	3669.10	3006.00	1163.70
September	2037.60	1076.10	1659.10
October	332.60	58.70	178.20
November	00	00.00	50.20
December	00	75.40	96.60
January	00	56.80	0.0
February	00	22.20	0.0
March	00	1.4	-

  
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## Chapter 11 :- Geology and Mineral Wealth

### 11.1 Geology

The general geological successions in the Jhabua district are given-

#### Geology of Jhabua district

Age	Stratigraphic Unit	Lithology
Quaternary to Recent	Recent Alluvium	Alluvium and Laterite
----- Unconformity -----		
Upper Cretaceous to Lower Eocene	Deccan trap	Basalt with inter trappean clays
Upper Cretaceous	Lameta and Bagh Beds	Limestone and shale
Archaean	Aravali Super Group	Granites, Phyllites, Schist and Dolomitic Marble

#### Archaean

The Archaean groups of rocks are exposed in the central, north-western parts of the district. The gneissic granites are susceptible to weathering with jointed and fractured zones extending about 5 to 15 m below ground level.. The phyllites and schist are moderately permeable. The dolomitic marble and limestone occurring as bands, generally occurring occupy small hill ranges.

#### Lameta and Bagh Beds

Overlying unconformably the Archaean, are the infra-trappean represented by the Lameta and the Bagh beds. The main exposures are seen in the southeastern and central parts of the district. The outcrops occur in widely separated patches and the lithostratigraphy differs from place to place. In general the rock units lower arenaceous and upper calcareous 8 facies. Nimar sandstone, the basal units of the Bagh beds in the area are horizontally bedded and compact in nature with an average thickness of 12 to 18 meters. Though hard and compact, they are well jointed and



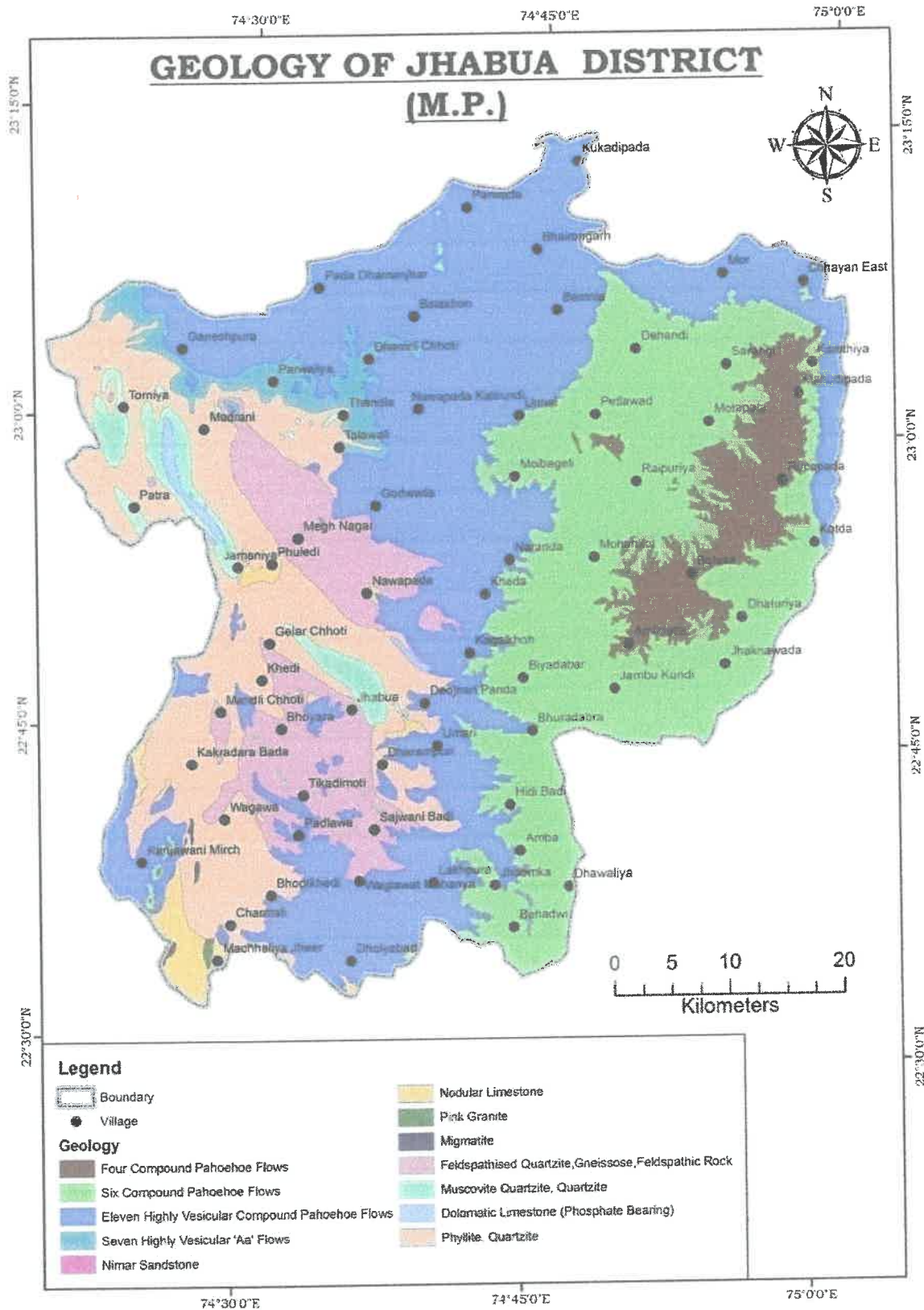
fractured and act as groundwater repository. Nimar sandstone is overlain by nodular limestone and coralline limestone. The groundwater occurs generally under phreatic conditions in the Infra-trappean sandstone and limestone. Limestone Solution activities these rocks act as promising horizons for groundwater storage.

### **Deccan Traps**

The northern and north western parts of the district covering mainly Thandla, Petlawad and Rama blocks and southern parts covered by Sondwa block are occupied by the basaltic lava flows of Cretaceous to Eocene age. More than 12 number lava flows have been demarcated in the district with average thickness of flow being 25-30 m. The bottom most parts of the flows are generally massive, hard and compact in nature. They often show columnar jointing and spheroidal weathering. The overlying vesicular basalts comprise has rounded to oval shaped vesicle, which is generally filled, with zeolites, calcite and quartz. Vesicular horizons are limited in thickness or absent there by reducing the chances of the good aquifer for the storage for groundwater storage. The weathered zones, joints, fracture and vesicular zones form the main water bearing horizons.

### **Alluvium and Laterite**

Localized patches of alluvium cover occur along the banks of major and minor rivers and streams in the district. In general it is difficult to differentiate between alluvium and product of black cotton soil underlain by yellow clay with kankar. The thickness of alluvium varies from few meters to 15 m. Laterite capping on top of Deccan trap basalt are seen in localized patches. The rocks are generally bouldery in nature, highly ferruginous and weathered to yellowish red soil.



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**Detail of River or Stream and other sand source.**

Jhabua district lies in the major basins, the Mahi in the north direction.

The Mahi River forms northern and north eastern boundary of the district. It has a length of 67 Km. Within the district limits and along with its left bank tributaries. The Anas and Pampawati drains 52% of the geographical area of the district. The Anas River with its tributaries Like Mod, Sapan and Sunar, Negaria and Pat covers 38% of the geographical area of the district.

(b) District wise availability of sand or gravel or aggregate resources.


(c) District wise detail of existing mining leases of sand and aggregates.

Drainage system with description of main rivers

S No.	Watershed	Catchment Area (sqkm)	% of area in District
1	Mahi River	795.34155	21.025
2	Pat River	889.83347	23.523
3	Negari River	437.83332	11.574
4	Mod River	497.18989	13.143
5	Anas River	690.85697	18.263
	<b>Total</b>	<b>3311.0552</b>	<b>87.528</b>

**Salient Features of Important Rivers and Streams:**

S. No.	Name of the River or Stream	Total Length in the District (inKm)	Place of origin	Altitude at Origin (m)
1	Mahi River	88.7	Bhopawar ( Dhar District)	531
2	Pat River	47.43	Nawapada Khawasa	434
3	Negari River	40.80	Paledi	517
4	Mod River	44.87	Mardundiya	410
5	Anas River	63.18	Siyali	487
6	Dhamoi River	18.48	Richhapatla	518
7	Larki River	35.13	Hamirgarh	488
8	Sapan River	23.81	Saroda	496
9	Sunar Nadi	25.21	Sukhi Imli	554


  
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## Chapter 12:- Drainage and irrigation pattern

Increase the irrigation potential area by constructing irrigation Tanks / Barrages on the river basins under the district. Construction and maintenance of canals under Mahi Major Project. Construction work of drains under Command area development in Mahi Project. Maintenance work of Dam & Canal in Major & Minor irrigation project and water supply for irrigation and revenue recovery.

Tehsil wise details of rivers -

S No.	Name	Tehsils
1	Mahi River	Petlawad, Thandla
2	Pat River	Jhabua, Thandla
3	Negari River	Jhabua, Meghnagar
4	Mod River	Jhabua, Ranapur
5	Anas River	Jhabua, Meghnagar

  
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## Chapter 13:- Surface water and ground water scenario

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### Surface Water

Due to the hilly undulating topography of the district, the availability of lakes and ponds is very less, so small dams are made on rivers and drainages to supply water for urban bodies and irrigation.

Jhabua: Water is supplied to city by the pond located in the city known by *Bada Talaband* the nearby Anas river.

Meghangar: Water is supplied to city by the nearby Anas river.

Ranapur: Water is supplied by the pond located in the city known by *Rana Talaband* the nearby Modriver.

Thandla: Water is supplied to city by the nearby Patriver.

Petlawad: Water is supplied by the nearby Mahiriver.


### Ground Water

Variation of groundwater levels in an area is an important component of hydrological cycle because it is a physical reflection of aquifer systems.

The pre-monsoon depth to water level of the district ranges between 100 and 200 mbgl.

The post-monsoon depth to water level of the district ranges between 50 and 100 mbgl.

Quality: Ground water quality of Jhabua district is being assessed annually by CGWB on the basis of analysis of ground water samples collected from 10 number of hydrograph stations in the district. On the basis of examination of data for the year 2011, the water quality is described as follows. The electrical conductivity (EC) is a measure of salinity. The EC ranges from 310 to 1175  $\mu\text{s}/\text{cm}$  at 25°C. The fluoride concentration in the district ranges between 0.18 – 1.3 mg/l. The nitrate concentration in Jhabua district ranges from 2.5mg/l to 87mg/l.

  
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## Chapter 14:-Quality & Grade of minerals available in the District

**Manganese** in alloy form is an essential input in steel making and is one of the most important metals in an industrial economy. Manganese ores of major commercial importance are (i) pyrolusite ( $MnO_2$ , Mn 63.2%); (ii) psilomelane (manganese oxide, containing water and varying amounts of oxides of Ba, K and Na as impurities; Mn commonly 45-60%); (iii) manganite ( $Mn_2O_3 \cdot H_2O$ , Mn 62.4%); and (iv) braunite ( $3Mn_2O_3$ ,  $MnSiO_3$ , Mn about 62% and  $SiO_2$  about 10%).

In Jhabua District Manganese ore deposits occur mainly as metamorphosed bedded sedimentary deposits Aravalli belts associated with Gondite Series (Archaeans) of Madhya Pradesh.

Reconnaissance stage investigation Jhabua. (G-4) was taken up in Aravalli belt in Meghnagar tehsil. Five Mn bands were traced in Nagnavat, Phuleri, Guvali, Patra and Doter areas. Out of these, three Mn bands are located in Mandali-Tunia block and one each in Rampura and Doter villages. The longest band is in Mandali & is 70 m in length with an average width of 5 m. Analysis of borehole samples indicated Mn values from 0.33 to 25.82%. The average Mn value in 45 surface samples was 14%.

**Rock Phosphate or Apatite** is the most abundant crystalline phosphate mineral found as an accessory mineral in practically all kinds of igneous rocks. Sometimes, it is concentrated in pegmatites, metallic veins and magmatic deposits. It also occurs in metamorphic rocks and as a secondary mineral in phosphatic rocks of sedimentary origin. Moon rocks collected by astronauts during the Apollo Programme also contained traces of apatite. Fluorapatite  $Ca_5(PO_4)_3F$  is the most common variety of apatite and also a secondary source of fluorine. Collophane is apparently a cryptocrystalline or amorphous calcium phosphate complex. Rock phosphates or phosphorites are sedimentary phosphatic deposits comprising fine-grained mixture of various calcium phosphates, most important being hydroxyl-apatite, carbonate-apatite, fluorapatite and their solid solutions. About 80% phosphate production in the world is derived from phosphate rocks (phosphorite) containing one or more phosphatic minerals, usually calcium phosphate of sufficient purity and quantity to permit its use directly or after concentration in manufacturing commercial products.

The Khatamba mine in Jhabua district is worked by open cast method and this mine is operated by Madhya Pradesh State Mining Corporation. Compressed air jack hammers are deployed for drilling. Till 2014 run-of-mine capacity of Jhabua mine is 1,50,000 tonnes per year. The entire ore produced from this mine is directly sold to private beneficiation Companies namely, AP India Biotech Ltd and Ms. Krishna Posphochem Ltd, whose plants are located about 22 km from the mine. The BRP plant at Hirapur mine is operated by Madhya Bharat Agro Industries Ltd. The processed ore from the plant is predominantly sold to manufacturers of phosphatic fertilizers and chemicals. Some parts of the ore are also internally consumed for fertilizer production.

## Chapter 15:-Use of Minerals

### Rock Phosphate

Rock phosphate, or phosphorite, is mined from clay deposits that contain phosphorus and is used to make organic phosphate fertilizers that many gardeners utilize. In the past, rock phosphate was used alone as a fertilizer, but due to a lack in supply, as well as low concentration, most applied fertilizer is processed.

Phosphate rock is used primarily as a plant nutrient, either by direct application to the soil as a powdered product or in the form of manufactured fertilizer, such as superphosphate, triple superphosphate, diammonium phosphate (DAP), etc. It is also used as animal feed supplements. Elemental phosphorus and phosphoric chemicals derived from phosphate rocks find application in detergents, insecticides, pharmaceutical paroducts, soft drink, toothpaste, glass, photographic films, matches, fireworks, military smoke screens, incendiary bombs, etc. Apatite is occassionally used as a gemstone. Blue & green varieties in finely divided form are also used in pigments. There is no natural or synthetic substitute for phosphorous nor is there any economical alternative to phosphate rock as the major source of phosphorous.

### Manganese

The most important use of manganese is in the manufacturing of steel. Manganese gives the steel strength and hardness.

For manganese ore used in Ferromanganese Industry, besides manganese content, other important considerations are high manganese to iron ratio and a very low content of deleterious phosphorous. Specifications of manganese ore for ferromanganese are prescribed by the Bureau of Indian Standards vide IS: 4763-2006, (Second Revision, Reaffirmed 2010).

### Quartzite

It is used to manufacture Crusher Stone, Road Metal & Building Material.

### Basalt

Mostly it is used to manufacture Crusher Stone & M-Sand.

### Murum

It is used as road & building material.

## Chapter 16:-Demand and supply of the minerals in last three years

Year	Mineral Name	Production ( in Cubic Meter)
2018-19	Gitti (Stone)	132618.10
2019-20	Gitti (Stone)	130119.10
2020-21	Gitti (Stone)	210342.30


Year	Mineral Name	Production (M.T.)
2018-19	Manganese	66511.84
2019-20	Manganese	58907.53
2020-21	Manganese	55954.44

### Proposed Minerals Blocks for Auction in the District

S.no.	Mineral	Area (hect.)	Village

## Chapter 17:- Details of eco sensitive zones

In the District there are several patches of dense, moderate and open forest area and might need consideration while proposing mining lease, as there could be negative impacts due to mining and associates activities, also threat could be posed to forest/densely planted areas by influx of population due to rapid industrialization and mining activities.

  
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## Chapter 18:-Impact on environment due to Mining activity

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Generally, the Environmental impacts can be categorized as either primary or secondary.


Primary impacts are those, which are attributed directly by the project, secondary are those which are indirectly induced and typically include the associated investment and changed pattern of social and economic activities by the proposed action.

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

And there is no process in the district in such a way that the environment is affected by mining.

Mining work is done carefully, according to the rules and suitable helmets, globes, masks etc. are provided to the workers.

And the monitoring and rules related to pollution are done under the rules of Pollution Control Board.

  
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## Chapter 19: Remedial measures to mitigate the impact of mining on the environment

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Mining of minerals, being an environmentally unfriendly activity, has attracted attention from the stand point of environmental impacts and their mitigation.

Another fact about mining is that it is a site specific activity and is only an intermediate use of the land because mining is done at the sites where the minerals exist and the land is of no use to the mining companies in the pre and post mining times. Mining affects all the components of environment and the impacts are permanent/temporary, beneficial/harmful, repairable/irreparable, and reversible/irreversible.

*Atmospheric pollution due to the mining and associated activities can be minimized by planning the activities in such a manner that the generation of the pollutants is minimum possible. In addition provisions may be made for arresting the dust by making suitable green belts.*

**Some of the measures are as outlined below:**

- a. Generation of dust in the removal of the vegetation and soils can be minimized by maintaining adequate moisture in the soil. This can also be expected to improve the efficiency of these operations as in dusty atmosphere the efficiency decreases.
- b. Use of dust extractors with the drill machines can be expected to minimize air pollution due to drilling.
- c. By optimizing the blast design the generation of dust due to blasting can be reduced.
- d. Proper maintenance of the haul roads can minimize the generation of air borne dust due to movement of dumpers on them.
- e. Water spraying at the transfer points tends to reduce air pollution.
- f. Enclosing the mineral handling and preparation units tend to reduce the contribution of SPM to the atmosphere.
- g. Proper maintenance of the equipment and machines in the mines and other places in the complexes helps not only in minimizing the contributions to the air pollution but also the noise generation.

  
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## Chapter 20:-Reclamation

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All the mines in the district are operated by OC method, for which the following planning is there for reclamation -

The mining will commence from the top levels and advance towards lower levels, as the pit shall reach the maximum economical depth.

Reclamation will be undertaken in such a manner that pit will be developing as water body.

The topography of the final landform will consist of some number of stepped benches.

**Plantation:** Plantation will be done around the perimeter of the pit or boundary only and will not involve the pit floor.

Gap filling plantation has been carried out in the safety barrier zone left around the mine lease area from the beginning of the mining operations. Additional plantation will be carried out in the inactive mining area.

Once operations have ceased, all buildings and infrastructure will be removed. These areas will be re-vegetated. The top benches will be vegetated with appropriate native species. The lower benches will be formed as a shallow depression of retention pond/ rain water harvesting structure.

The topography of the final landform within the void will consist of a number of stepped 06 m high benches.

**Fencing:** Fencing (or a similar barrier) will be erected and maintained to exclude and prohibit the movement of persons and vehicles into areas that have been rehabilitated. The fencing will be routinely checked and repaired where necessary.

  
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## Chapter 21 Risk Assessment and Disaster management plan

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Some of the aspects to be included in emergency plan are as follow:

- Organizational details including incident controller, site main controller, their duties & other key personnel.
- Emergency Control Centre
- Communication centers & persons involved call signs & list of telephone numbers.
- Availability of special emergency equipment e.g. heavy lifting gear, bulldozers, trucks, special firefighting equipment.
- Details of voluntary organizations with names of organizers, telephone numbers, resources etc.
- Humanitarian arrangements e.g. transport evacuation centers, emergency feeding, treatment of injured, first aid, ambulances etc.

  
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## Chapter 22:-Occupational health issue in the district

Occupational health and safety(OHS) is across-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. The goal of all occupational health and safety programs is to provide safe work environment. Occupational Health & Safety measures result in improving the conditions under which workers are employed and work to control and minimize the risks at work place, proponent has been framed Health, Safety and Environment Policy.

### (i) SAFETY, HEALTH AND ENVIRONMENT POLICY

Safety of both men and materials is accorded maximum priority in the mine. An occupational health and safety policy has been framed with the following objectives.

- To improve working conditions and environment.
- To propagate safety measures and create safety consciousness among workmen, Supervisors and officials.
- To train workmen as well as the supervisors in their respective fields of operations.
- To reduce the scope of accidents and to aim at accident free performance.
- To adopt measures for improvement in health standards.
- To ensure that all statutory provisions relating to safety are followed.

The occupational health hazards at mine site areas under:

- Exposure to dust
- Noise Exposure
- Physical Hazards

### (ii) IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY MEASURES

Proponent will implement the followings safety measures:

- To depute dedicated safety team.
- In section and maintenance of equipment's and accessories.
- Periodic health checkup.
- Removal of unsafe conditions and prevention of unsafe acts.
- Detailed analysis of each and every incident.
- To provide standard PPE s and ensure its uses.
- Periodic inspection by internal and external safety experts.
- Celebrations of various safety events for awareness.
- Medical facilities & first aid boxes in the mine premises.

### (iii) DISASTER MANAGEMENT AND RISK ASSESSMENT

Some of the aspects to be included in emergency plan are as follow:

- Organizational details including incident controller, site main controller, their duties & other key personnel.
- Emergency Control Centre
- Communication centers & persons involved call signs & list of telephone numbers.
- Availability of special emergency equipment e.g. heavy lifting gear, bulldozers, trucks, special firefighting equipment.
- Details of voluntary organizations with names of organizers, telephone numbers, resources etc.

  
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- Humanitarian arrangements e.g. transport evacuation centers, emergency feeding, treatment of injured, first aid, ambulances etc.



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**Chapter 23:-Plantation And Green Belt Development In Respect Of Lease  
Already Granted In The District.**

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Plantation is being done on the mines which are currently operating as per the condition of environmental clearance, about which compliance report along with photographs is also being submitted.

Plantation work has been done near the crusher machine and in the barrier zone, as well as the work of plant distribution and plantation is done in the nearby villages and areas.



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