



**DISTRICT SURVEY REPORT(DSR)
OF
MALKANGIRI DISTRICT, ODISHA
FOR
RIVER SAND**

(FOR PLANNING & EXPLOITATION OF MINOR MINERAL RESOURCES)



**As per Notification No. S.O. 3611(E) New Delhi
dated 25th July 2018 of
Ministry of Environment, Forest & Climate Change
(MoEF & CC)
COLLECTORATE MALKANGIRI**

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PREAMBLE

Odisha is one of the Major Mineral rich State in India. Malkangiri, historically known as Malikamardhangiri, is a town and municipality in Malkangiri district in the Indian state of Odisha. It is the headquarter of the Malkangiri district. Malkangiri has been the new home of the East Bengali refugees from erstwhile East Pakistan (present day Bangladesh), who have been rehabilitated since 1965 under the Dandakaranya Project. Some Sri Lankan Tamil refugees were also rehabilitated in the town, following the armed struggle of the Liberation Tigers of Tamil Eelam (LTTE) in the early 1990s, although most of them have now returned to their country. Currently, it is one of the most naxalite-affected areas of the state, and is a part of the Red Corridor.

In pursuance of MoEF & CC Notification S.O. 141(E) dated 15th Jan. 2016, District Environment Impact Assessment Authority (DEIAA) & District level Expert Appraisal Committee (DEAC) has been formed for Category –B2 Minor Minerals having area less than or equal to 5 ha. Prior to the formation of Odisha Minor Mineral Concession Rule 2004, (OMMCR -2004) the mining operation for minor mineral were carried out in unscientific manner. Identifying this fact in exercise of power, Conferred by Section 15 by Mines and Minerals (Development and Regulation) Act 1957 as amended in 2015 and all other powers enabling it in that behalf, the industry Mines & Geology Department, Govt. of Odisha framed the aforementioned rule, which has been amended with period of times in the year 2014, 2015 and 2016.

Keeping in view of experience gained in period of decade, the MoEF& CC came out with Environmental Impact Assessment Notification S.O.-1533(E) dated 14th Sept. 2006. It has been made mandatory to obtain environmental clearance for different kinds of development projects as listed in Scheduled -I of notification. Further, pursuance of the order of Hon'ble Supreme Court Petition (C) No. 19628- 19629 of 2009, dated 27th Feb. 2012 In the matter of Deepak Kumar etc., Vs State of Haryana and others etc., Prior Environmental Clearance has now become mandatory for mining of Minor Minerals irrespective of the area of Mining Lease. And, also in view of the Hon'ble National Green Tribunal, order dated the 13th Jan. 2015 the matter regarding Sand, Brick Earth, & Burrowed Earth cutting for Road Construction has to take prior E.C. for Mining Lease irrespective of the fact that whether the area involved is more or less than 5 hectares. They also suggested to make a policy on E.C for minor minerals lease in cluster. MoEF& CC in consultation with State Government has prepared Guidelines on Sustainable Sand Mining &

Minor minerals other than sand mining in 2016, detailing the provisions on Environmental Clearance for cluster. Creation of District Environmental Impact Assessment Authority (DEIAA) & proper monitoring of Minor Minerals. Mining, using Information Technology to track the mineral out material from source to destination.

DEAC will scrutinize and recommend the prior environmental clearance of mining of minor mineral to DEIAA on basis of District Survey Report. This will model and guiding document which is a compendium of available mineral resources, geographical setup, Environmental and Ecological set up of the District and replenishment of minerals and is based on data of various departments, published reports, Journal and websites. Subsequently, Hon'ble Supreme Court vide their order dt. 18.01.2022 in connection with Civil Appeal Nos. 3661-3662 of 2020, the State of Bihar and others Vrs- Pawan Kumar and others at Paragraph 14 "We therefore find it appropriate to substitute the directions issued by Tribunal vide judgment and order dated 14th October-2020 with the following directions,

- (i). The exercise of preparation of DSR for the purpose of mining of the State of Odisha in all the Districts shall be under taken afresh. The Draft DSRs shall be prepared by the Sub-Divisional Committees consisting of the Sub-Divisional Magistrate, Officers from Irrigation Department, State Pollution Control Board or Committee, Forest Department, Geological or Mining Officer. The same shall be prepared by undertaking site visits and also using by modern technology. After the Draft DSRs are prepared the District Magistrate of the concerned District shall forward the same for examination and evaluation by the SEAC. The same shall be examined by the SEAC and its report shall be forwarded to SEIAA. The SEIAA will thereafter consider the grant of approval such DSRs.*
- (ii). Needless to state that while preparing DSRs and appraisal thereof by SEAC and SEAI. It should be ensured that a strict adherence to the procedure and parameters laid down in the policy of January-2020 should be followed".*

The District Survey Report will form the basis for application for Environmental Clearance, preparation of reports and appraisal of projects. District Survey Reports are to be reviewed once in every five years as per statue.

In lieu of above guideline and orders of Hon'ble Supreme Court and in compliance to the orders of Hon'ble NGT, EZ, Kolkata, in connection with O.A No. 63/2020, the Member Secretary, SEIAA, Bhubaneswar issued a Letter on 27th December, 2022 to Collector & District Magistrate, Malkangiri with a direction "the DSR is to be signed afresh by the Collector and District Magistrate, along with members of the designated sub-committee consisting of Sub-Divisional Magistrate, and District Level Officers from Irrigation Department, State Pollution Control Board, Forest Department, Geology and /or Mining Department". Keeping in view of the orders of Hon'ble Supreme Court, Hon'ble NGT and directions of SEIAA, Bhubaneswar a fresh DSR has been prepared observing all formalities in the year,2024.

The Main objective of the preparation of District Survey Report is to ensure the following:

- 1. Identification of Mineral Resources in the District.*
- 2. Identification of areas of minor minerals having the potentiality where mining can be allowed.*
- 3. Identification of area and proximity to infrastructure and installations where mining should be prohibited.*

1.0 INTRODUCTION

Malkangiri at a Glance:

1.1 Location and Geographical Area:

Malkangiri is the southern-most district of Orissa. It was awarded the status of the district in October 1992, when the erstwhile Koraput district was divided into four new districts. The district is bordered in the North and West by Bastar district of Chhattisgarh and in the south by Khammam and East Godavari districts of Andhra Pradesh, in the east by Koraput district, Orissa. The district lies between north latitudes 17°47'58" and 18°44'18" and East longitudes 81°23'23" and 82°27'05" falling in Survey of India Degree sheet Nos. 65 F,G,J. The district covers an area of 5791 Sq.Km and is divided into 7 Community Development Blocks – Kalimela, Khairput, Korukonda, Kudumulguma, Malkangiri, Mathili and Podia. The Malkangiri town, the district headquarter is approachable from adjacent districts through State Highways. The important towns of the district are well connected by road. It is one of the most economically backward tribal districts of Orissa.

The general drainage pattern in the district is dendritic to sub-parallel. The Kolab river along with its tributaries, the Potteru and Sileru rivers are the most prominent rivers of the region. The Kolab river issues from the Sinkaram hills and follows a south westerly course after passing over Malkangiri district. The river joins the Godavari River in Khammam district of Telangana.

The hills and forests cover almost seventy six percent of the total geographical area of the district as per the classification of the forest area by legal status in Malkangiri district as on 2005, which include reserve forests, demarcated-protected forests, un-demarcated forests, unclassified forests and other forests. Only limited areas are utilized for agricultural purposes. The net area under cultivation is only twenty six percent of the total geographical area.

Agriculture is the main occupations of the vast majority of the population. However, because of forest cover and rugged terrain conditions of the district agriculture is by and large confined to Kharif Season. Rabi cultivation is practiced at places, where irrigation facilities are available. No uniform cropping pattern seems to be followed in the district. Shifting or 'Podu' cultivation is practiced on high hill slopes. Paddy is the main crop sown during the Kharif seasons. Apart from paddy, other important Kharif crops are Maize, Ragi, millet and different type of pulses. In higher altitudes above 600 m potato is cultivated during Kharif season. During Rabi oil seeds are the main crops. Pulses and wheat are also grown substantially.

Based on the soil characteristic, cropping pattern, climatological and topographical features the district has been subdivided into two agro-climatic zones, namely South Eastern Ghat and Eastern Ghat highland. The South Eastern Ghat occupies almost the entire Malkangiri district. It is characterized by warm climate with maximum temperature of 34°C and minimum temperature of 13°C. The principal crop is rice. The Eastern Ghat Highland have only a very small portion in the eastern corner of the district is characterized by Eastern Ghat Highland. The climate is warm and humid. Maximum temperature is 34°C and minimum temperature is 8°C. The principal crops are paddy, wheat and vegetables.

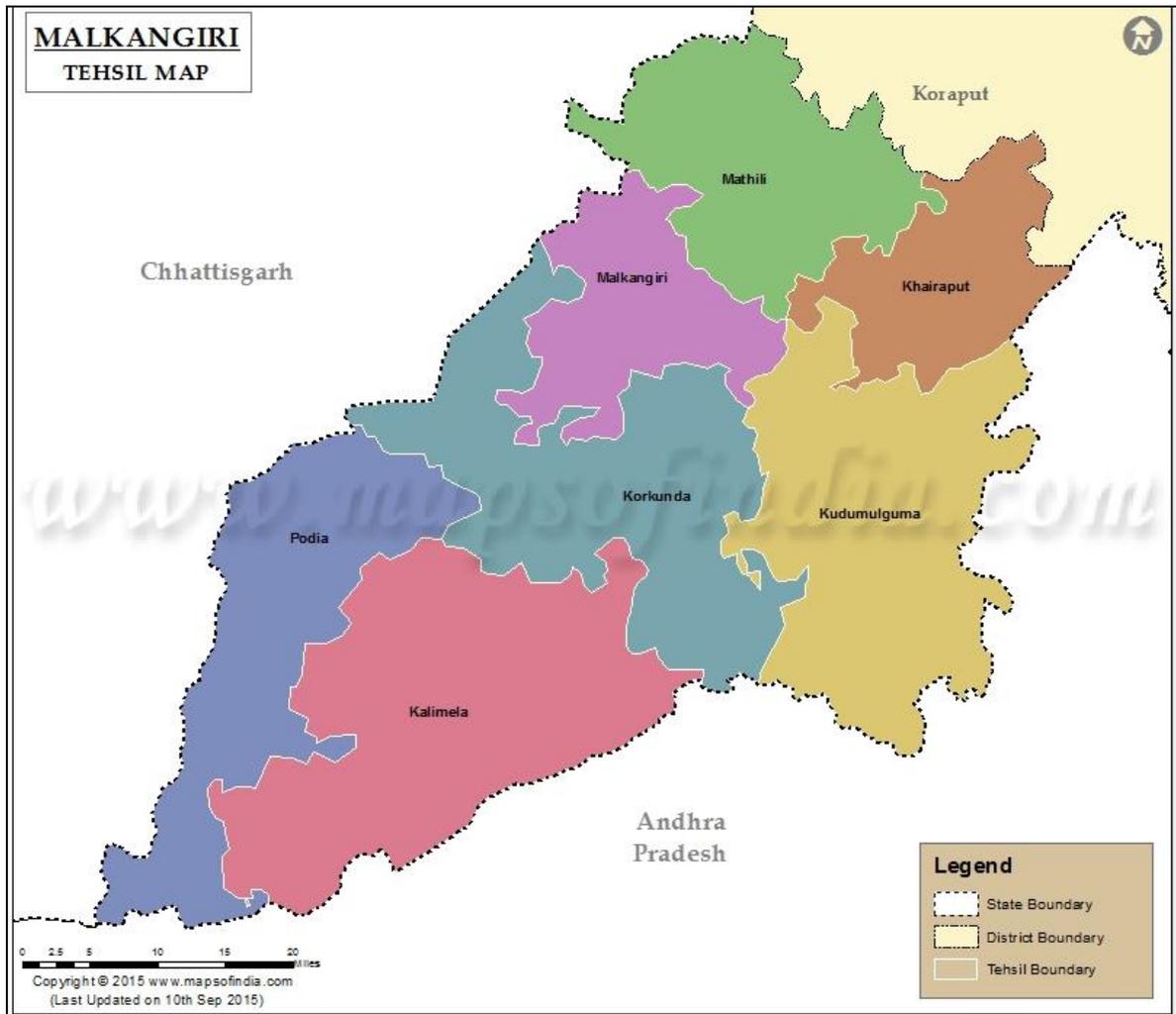
The major surface water bodies are reservoirs, rivers, streams and ponds etc. The river Potteru which is a tributary of Kolab is generally perennial in nature with a sufficient flow during summer months. The Balimela reservoir is the major irrigation project and its canal command is around 61034-Ha There are substantial numbers of tanks, ponds and water harvesting structures exist in the district, which hold considerable quantity of surface water as storage which serve the purpose for irrigation, bathing, drinking and industrial purposes. It covers an area of about 9.62 km² (3.71 sq mi), and has an average elevation of 170 m (560 ft) above the mean sea level. It lies in the area between the hills of Eastern Ghats on eastern and western sides. During monsoons, the town becomes impassably swampy and heavy floods isolate it from the rest of the state

Almost the entire population of Malkangiri is engaged in agriculture and primary sector, because it is relatively isolated from the rest of Odisha, as compared to other towns and cities, and developmental stages related to secondary and tertiary sectors are yet to be done. The primary sector accounts for 46.35% of the total workforce. Another important industry on which the population is dependent is tourism, because in and around the town, there are many places of tourist attraction. Thus, it has a large potential yet to be tapped.

In 1962, it was upgraded to a sub-division of Koraput district. The present Malkangiri got its identity as an independent district due to reorganization of districts of Odisha on 1 October 1992, with effect from 2 October 1992. Since 1967, the town along with its district has been one of the worst affected regions due to the Naxalite–Maoist insurgency, although in recent years, the effect has been considerably reduced.

**1.2 Administrative Units: -**

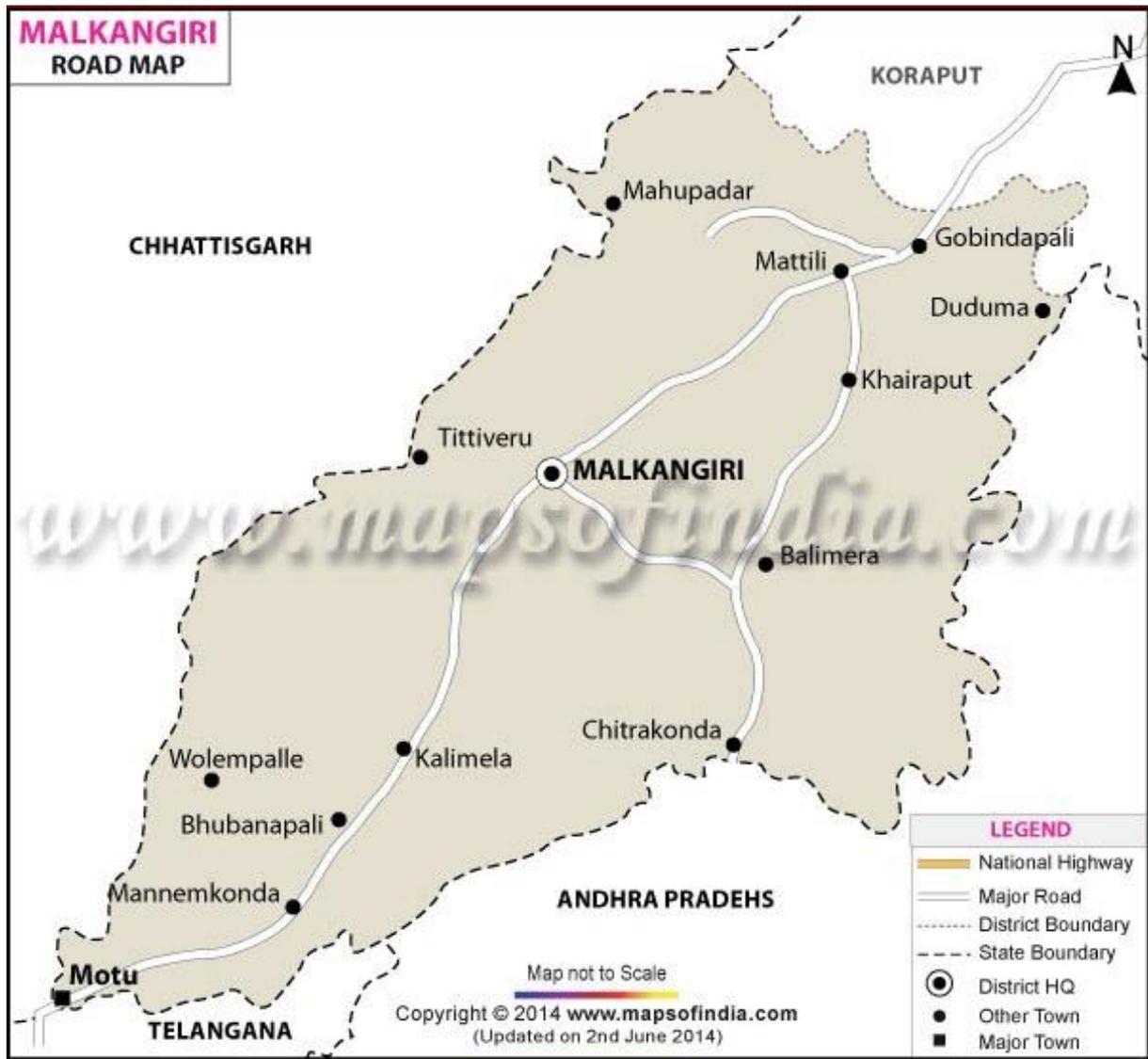
Malkangiri is the administrative headquarter of Malkangiri District. It is located at a distance of 614.2km from Bhubaneswar, state capital of Odisha. It has 1045 villages covering 7 Blocks, 7Tahasilsand1 Sub-Division .The District has 1 sub-Division. The District hasone Sub-Divisions namely 1) Malkangiri, and into 7 Blocks & 7 Tahasils, namely i) Malkangiri ii) Kalimela iii) Podia iv)Korukonda v)Chitrakonda vi)Khairput vii) Mathili. The population of the District is 613,192 according to the 2011 Census. The district accounts for 3.72% of the State's territory and about 1.45% of State's population. The density of population of the district is 106 per square km as against 270 per square km of the state. As per 2011 census, the population of Scheduled Caste is 1,38,295 (22.55%), and Scheduled Tribe is 3,56,614 (58.15%). The literacy percentage of the district covers 48.54%against 75.15 of the state.



1.3 Connectivity facilities:

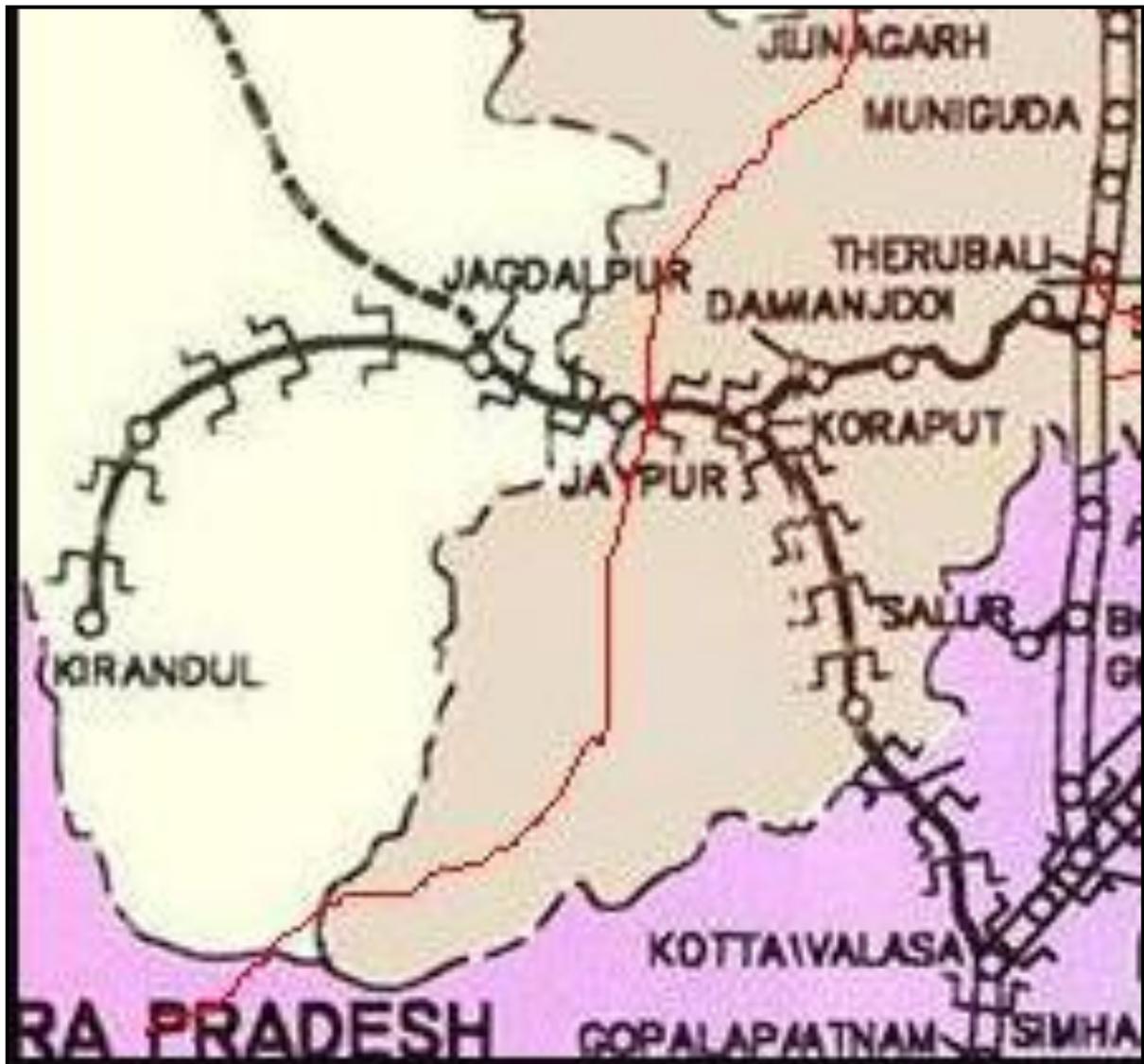
Road Network

Malkangiri District is connected to major parts of Odisha and other Districts by National Highway-326. The Malkangiri town, the district headquarter is approachable road adjacent districts through State Highways.SH-25 & SH-4 crosses within the district. The important towns of the district are well connected by road.



Rail Network

Malkangiri is not connected with rail network. Nearest major railway stations are Koraput, Jeypore and Jagdalpur.



Air Network

There is an airport located at Katelguda, on the outskirts of Malkangiri town, nearly 5 Km away from District Headquarter, Malkangiri. However, no flight operations have started as it hasn't received necessary approval from the Directorate General of Civil Aviation (DGCA), yet. Nearest airport is Jeypore Airport which is 103 kms from Malkangiri. Bhubaneswar Airport is 101 kms from Malkangiri. Rajahmundry Airport in Andhra Pradesh is 222 kms from Malkangiri.



2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT:

Other than ordinary Earth, Morrum, Stone & Sand a great variety of major mineral potential like Bauxite, Tin, Asbestos, Limestone and Specified Minor Minerals like Quartz, Talc/Soap Stone & Decorative Stone(Granite) are available in the district.

2.1 Major minerals:

SI No.	MINERAL	LOCATION	RESERVE IN MT	REMARKS
1	Bauxite	Korukonda	0.018	
2	Limestone	Kottameta-Nandiveda-Uksalvagu	240	
3	Tin	Salimi and Mundaguda	0.000347	
4	Asbestos	Bejangiwada	-	Not estimated

2.2 Minor mineral:

Specified Minor Mineral:

Sl No.	MINERAL	LOCATION	RESERVE INMT	REMARKS
1	Quartz	Gorespalli, Sardaput, Ramvaram, Kotapalli, MV-79, MV-127, MV-96, Polluru	-	Not estimated
2	Talc/Soap stone	Sardaput, Pandripani	-	Not estimated
3	Decorative/ Dimension Stone	Peta, Ponarguda, Jagannathpalli, Potteru, Majhiguda, Nilakhamar, Gagarmetla, Gangla	-	Not estimated

3.0 GENERAL PROFILE OF THE DISTRICT:

3.1 Demography:

As per data furnished by the Assistant Collector, Census, Collectorate, Malkangiri:

Population data as per Census - 2011				
Sl. No.	Unit	Total	Male	Female
1	Population	613192	303624	309568
2	ST Population	354614	171717	182897
3	SC Population	138295	70052	68243
4	Literacy (Total)	244706	147001	97705
5	Literacy (Rural)	212881	128473	84408
6	Literacy (Urban)	31825	18528	13297

Demographic Status						
Category	Male	Female	Gen	SC	ST	OBC
Category wise %	49.51	50.48		22.55	57.83	39.31

4.0 PHYSIOGRAPHY & GEOMORPHOLOGY:**4.1 Physiography:**

Malkangiri District is part of Eastern Ghat Super Group, the Eastern Ghats are a discontinuous range of mountains along India's eastern coast. The Eastern Ghats run from the northern Odisha through Andhra Pradesh to Tamil Nadu in the south passing some parts of Karnataka and in the Wayanad district of Kerala. They are eroded and cut through by four major rivers of peninsular India, viz. Godavari, Mahanadi, Krishna, and Kaveri.

The mountain ranges run parallel to the Bay of Bengal. The Deccan Plateau lies to the west of the range, between the Eastern Ghats and Western Ghats. The coastal plains, including the Coromandel Coast region, lie between the Eastern Ghats and the Bay of Bengal. The Eastern Ghats are not as high as the Western Ghats. The Eastern Ghats are older than the Western Ghats and have a complex geologic history related to the assembly and breakup of the ancient supercontinent of Rodinia and the assembly of the Gondwana super continent.

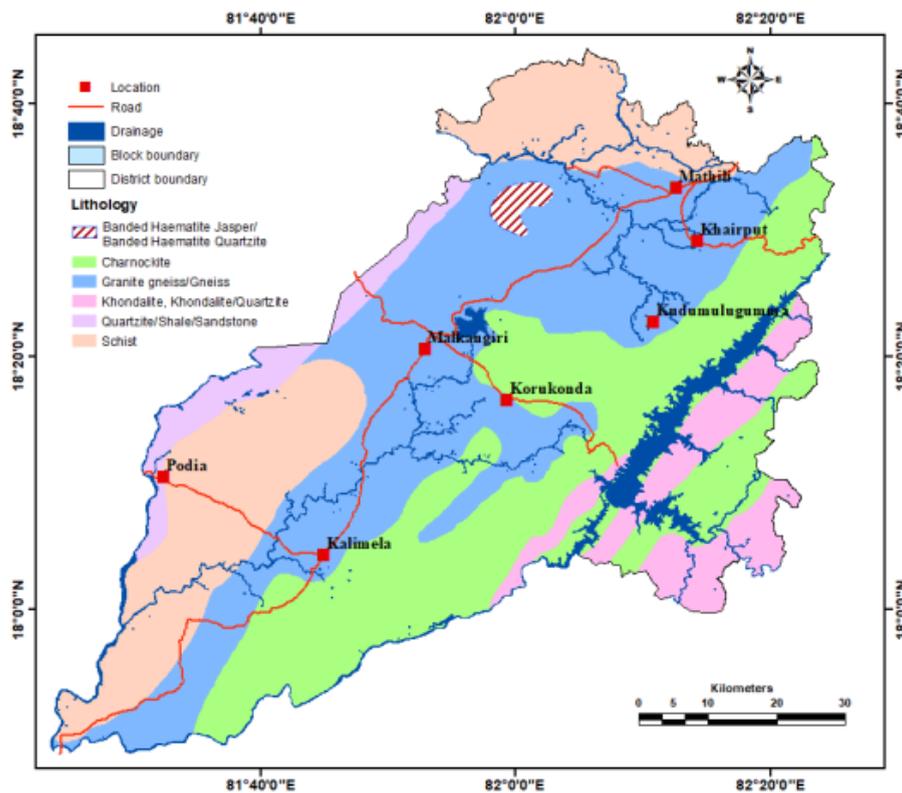
The Eastern Ghats on the east coast of India is a largely granulite terrain but also exposes granites, migmatites, anorthosites and alkaline rocks. This granulite belt has had a prolonged history of mountain building from late Archaean to late Proterozoic. During this long period the Eastern Ghats mobile belt witnessed repeated folding and possibly polycyclic metamorphism. Some recent findings suggest breaks between orogenic cycles and a Proterozoic reworking of Archean granulites. Extreme-temperature crustal metamorphism under fluid-absent conditions and crustal anatexis in huge thickness of pelitic to psammitic protoliths producing leptynites are some of the important results of recent investigations of the Eastern Ghats mobile belt. Different generations of charnockites are present in the Eastern Ghats belt, but charnockite utilisation of granitic gneisses is yet to be documented. Some apparently nascent growths, the patchy charnockites in the Chilika area are shown to be relic to folded charnockitic rocks that suffer edge granulite-facies metamorphism and attendant migmatization.

4.2 Geomorphology:

The district is characterized by varied geomorphological features. Based on Land sat data interpretations and field studies, the geomorphic units of the district are broadly identified as Structural Hills, Denudational Hills, Residual Hills, Shallow and Moderately

weathered peditplain, Pediment- Inselberg complex, Inselberg, Flood plains, Structural Valley, Linear Ridge, Bazada.

Structural Hills–It is characterized by a group of linear/ curvilinear/ folded hill ranges of large aerial extent, interspersed with narrow inter-mountain valleys showing definite structural control. It is the most important geomorphological unit in the district adjoining the entire southern border and occupying the northern corner of the district.



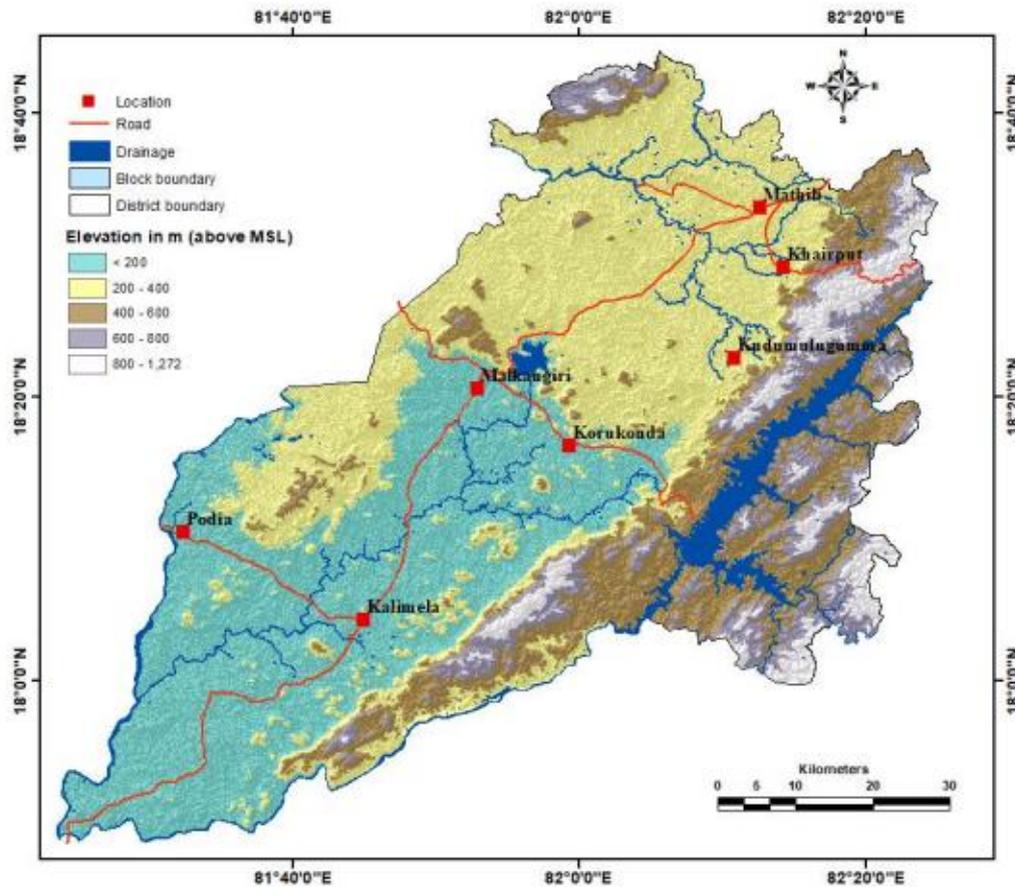
GEOLOGICAL MAP

Denudational Hills– It occurs in the North Eastern corner of the district in a limited patch. It is represented by a group of massive hill ranges interspersed with narrow inter mountain valleys having no structural control or structures obliterated by denudation.

Residual Hills– Hill ranges of moderate dimension surrounded by plains all around, occur as isolated features along the northern boundary of the district.

Shallow and Moderately Weathered Peditplain– Next to the structural hills this forms the major geomorphological unit in the district. It presents gently undulating terrain of vast aerial extent, formed as a result of coalescence of different pediments along the foot hills of the Eastern Ghats and affected by shallow to moderate weathering. The north-eastern part of the district is characterized by moderately weathered peditplain with weathering prevalent

down to a depth of 5-20m. The rest of the district is covered by shallow weathered pediplain with weathering restricted to 5m depth.



ELEVATION MAP

Pediment-Inselberg Complex– It is a gently undulating bedrock surface with a number of small inselbergs. This unit is widely distributed throughout the district.

Inselberg– Inselbergs are scattered all over the district. These are isolated hills of limited areal extent surrounded by plains all around.

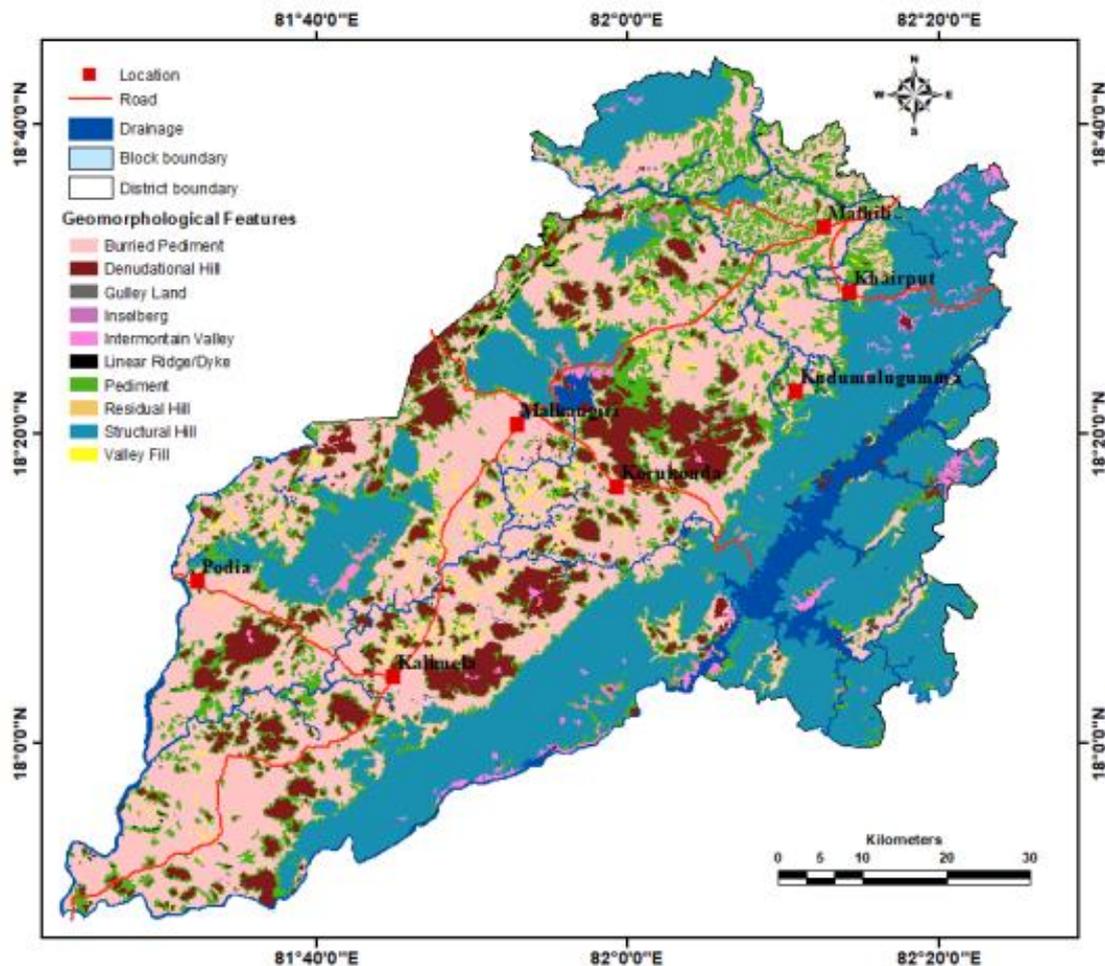
Flood Plain– A narrow stretch of alluvium occurs along river Kolab and its tributaries in the northern part of the district.

Structural Valley– A narrow linear valley within the structural hills and formed along the structurally weak planes occurs along the south-eastern boundary of the district.

Linear Ridge– A narrow line ridge of quartz reef with steep sloped covered by debris, is found in the northern part of the district.

Bajada– A gently sloping plain is formed in the foothill zone and consists mainly of alluvial and partly alluvial material comprising fine silt to big boulders. It occurs in the Southern part of the district.

The general drainage pattern in the district is dendritic to sub-parallel. The Kolab river along with its tributaries, the Potteru and Sileru rivers is the most prominent river of the region. The Kolab river issues from the Sinkaram hills and follows a south-westerly course after passing over Malkangiri district. The river joins the Godavari river in Khammam district of Telangana.



GEOMORPHOLOGY MAP

5.0 GEOLOGY OF THE DISTRICT:

The area is characterized by a complex geological set up with a variety of rock types belonging mainly to the Precambrian and Achaeans, except a thin alluvial patch along river Kolab. The Geological successions of the district is as follows –

Recent	Alluvium	
Pre-cambrian	~~~~~Unconformity~~~~~	
	Quartzites, Limestones, Conglomerates, Shales	
	~~~~~Unconformity~~~~~	
Archeans	Younger Intrusives	Dolerite Dykes, Pgmatises, Vein Quartz
	~~~~~Unconformity~~~~~	
	Andalusite Schists, Sericite Quartz Schists	
	~~~~~Unconformity~~~~~	
	Charnokites	
	Khondalites	
Granite Gneiss and Its variants		
~~~~~Base is not Known~~~~~		

The area has suffered regional metamorphism up to the granulite facies and has experienced numerous phases of magmatic intrusions, accompanied by progressive and retrogressive metamorphism, repeated folding and shearing. As a result, original structures, textures and mineral compositions have been completely obliterated by new structures and mineral assemblages.

Granite Gneiss and its variants – These are medium to fine grained rocks exposed in the undulating plains and scattered hillocks. The suite of rocks comprises Hornblende Gneiss, Biotite, Gneiss and Pink Granite. Megascopically the rocks are fine to medium grained, leucocratic with well-developed foliation planes in case of gneisses. The gneisses are usually banded. The bands consist of thin layers rich in quartz and feldspar. Hornblende and mica are common occurrence while Garnet is found occasionally. The strike of the gneisses is variable, viz. N 750E – S750W with 20° dip to N 850W – S 850E with vertical dips. In the majority of the cases, the strike is similar to that of the Eastern Ghats. Granites occur in limited patches in the central and western parts of the district.

Khondalites– The khondalitic group of rocks consists of quartz – Garnet – Sillimanite Schist & Gneiss and Garnetiferous sillimanite quartzite. The khondalites are usually found in the South Eastern and Western parts of the district in the hilly terrains. These rocks exhibit multiple sets of joints having steep dips.

Charnockites– These generally occupy the hill ranges. The rock is coarse grained, dark green to grey in colour with feldspar and quartz crystals. The ferromagnesian minerals are hypersthene and pyroxene. Garnet is also present. The charnockitic rocks form massive out crops. The joints found in charnockites trend N 300E, N-S, & E-W with sub-vertical to vertical dips.

Schists - These include Andalusite – Schists and gneisses and quartz – sericite schists. These occupy the northern part of the district. They are essentially composed of feldspar, andalusite, sericite with inclusions of quartz.

Pegmatites and Dolerites– The pegmatites are commonly associated with the granite gneisses. These are rarely associated with the rocks of charnockites. The dolerites occur locally as dykes and small intrusions in the gneisses and charnockites. Garnet is found in the dolerite in some areas.

Quartz Reef – A prominent Quartz reef is observed in the northeastern boundary of the district. This is intrusive into the country rock and occurs as a narrow linear ridge with steep slopes covered by debris.

Conglomerate, Quartzite, Limestone, Shale – These rock types occur near in North Eastern – South Western boundary of the district. The Quartzites are generally ferruginous in nature and are overlain by the limestones, fine grained and white to blue in colour.

Alluvium - A narrow patch of alluvium occurs along the river Kolab and its tributaries in the northern part of the district. It has only limited thickness.

The granites and its variants are most predominant rock type and occupy major parts of the district. Geological set up of the district primarily controls the Hydrogeological condition of the area.

5.1 Mineral potential (sand) of the district:

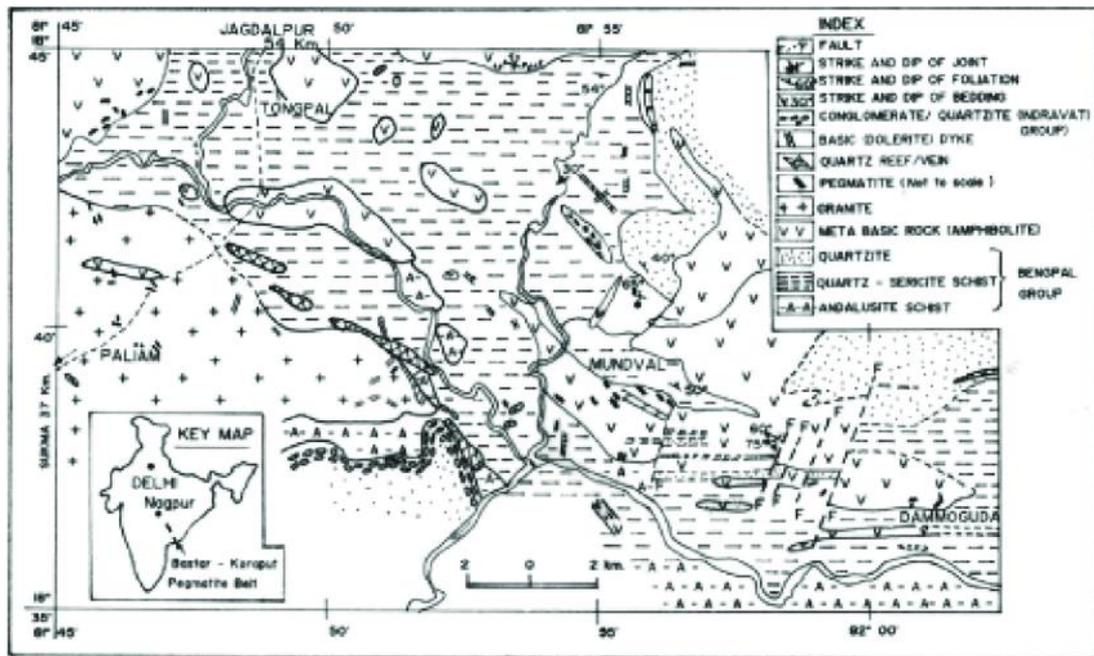
Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
Not Applicable	Not Applicable	624062	391299

5.2 Stratigraphy:

Event Stratigraphy of the Eastern Ghat Mobile Belt is as follows;

Age(Ma)	Event
550-650	Exhumation & Stabilisation (Pan-African)
800-850	Emplacement of Anorthosite Massifs, Some Alkaline Rocks (?) Younger Granitoids are charnockites
950-1100	Main Eastern Ghat Orogeny (=Grenville) Khondalite Group Garnet-Sillimanite-Graphite Gneiss (Khondalite) with minor cordierite-Sapphrine-Spinel Gneiss (Mg-Al) Calc- Silicate rocks & rare Marbles Quartzite (Garnet ± Sillimanite)
1100-1500	Emplacement of Alkaline rocks along with the rift Margin
1800-1600	Evolution of platform (Purana) basins like Cuddapah, Chhattisgarh Indravati etc.
2600-2800	Evolution of Nellore-Khemmam schist belt in Dharwar Craton Charnokite & Gneisses of the basement (WCZ).



5.3 Mineral Resources:

The total good quality Limestone reserves are near Kotameta, Nandiveda and Uskalvagu, estimated at around 240 million tonnes and Bauxite deposits are recorded near Korkunda, estimated at 0.018 million tonnes and Tin deposits are found near villages of Salimi and Mundaguda and estimated at around 0.000347 million tonnes.

In the Minor mineral categories, the specified minor minerals like quartz are found in the villages of Gorespalli, Saradaput, Ramavaram, Kotapalli and MV-79, 127, 96 and Talc/soap stone are found in the villages of Sardaput and Pandripani. However, the reserves of the specified minor minerals are not estimated by Department of Mines & Geology, BBSR.

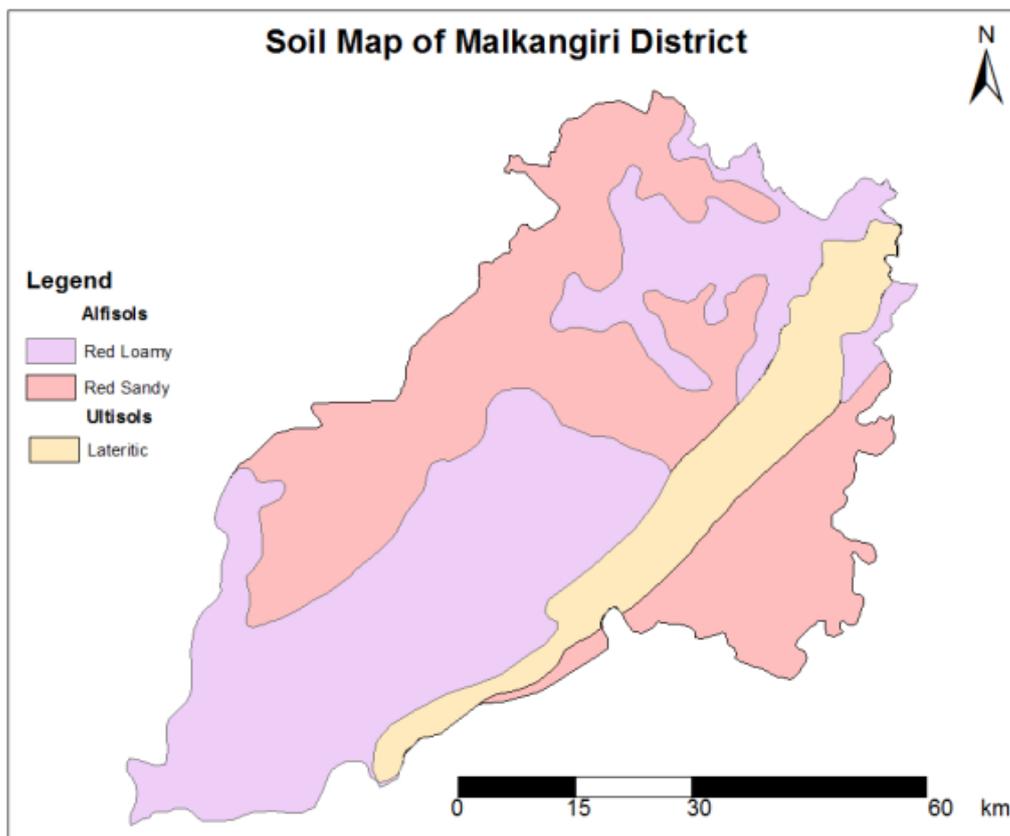
The Dimension stone are located around the villages of Peta, Ponarguda, Jagannathpalli, Potteru, Majhiguda, Nilakhamar, Gagarmetla, Gangla, but the reserves are not estimated by Department of Mines & Geology, BBSR.

5.4 Soil:

The distribution of different soil types in the district depends much on its physiographic and lithologic variations. Based on the physical and chemical characteristics, mode of origin and occurrence, soils of the district may be classified into two groups namely Alfisols (RedSoil) and Ultisols (Lateritic soil).

Alfisols- Alfisols or red soil are the most prominent soil types in the district. There are two different varieties—reds and soil and red loamy soil. They are red in colour and clayey in nature especially the loamy soil, poor in organic matter. Its fertility is low.

Ultisols- Ultisols or lateritic soil occurs in a narrow diagonal strip across the district trending NE- SW. They are red to brown in colour and clayey in nature. Due to low organic matter content the fertility of lateritic soil is low.



6.0 DRAINAGE OF IRRIGATION PATTERN

Malkangiri district is a physically hilly terrain having majorly dendritic drainage pattern to sub-parallel, there is only one main river named Sileru, Kolab River along with its tributaries, the Potteru and Saptadhara Rivers are the most prominent rivers of the region. The Kolab River originates from the Sinkaram hills and follows a south westerly course after passing over Malkangiri district. The river joins the

Godavari river in Khammam district of Telangana. The distance of the sources from the river origin is geologically very short, hence this can be concluded that the rate of deposition of sand in Sileru & Kolab River is moderate, while in rest rivers within the district, the rate of deposit is slow.

Additional river source details are given in the following table:

Sl No.	Name of river	Area (Sq.km drained)	% area drained in the District
01	Sabari/Kolab	20427.00	28.34
02	Sileru/Machhkund	6477	75.80
03	Potteru	2188	100

SALIENT FEATURES OF IMPORTANT RIVERS AND STREAMS

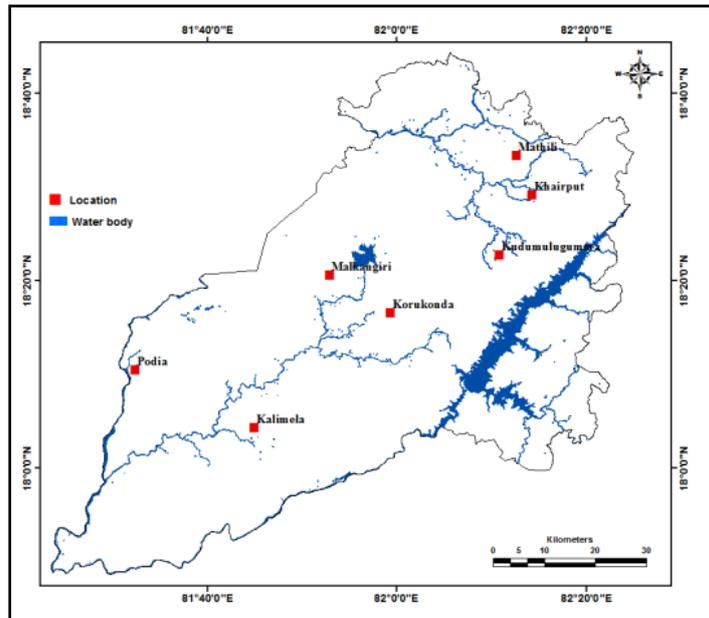
Sl. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of Origin	Altitude of Origin	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Metric Tones/Cums (60% of Total Minerals /potential)
1	Shabari	380.00	Sinkaram hill (Western Slopes of Eastern Ghats)	1370.00	Details of area are given in table in Annexure II (A), II (B), II (C)			
2	Sileru	112.00	Eastern Ghats in Northeastern Andhra Pradesh	600.00 - 900.00				
3	Potteru	111.25	Balimela Power House	418.00				
4	Pangam	NA	NA	NA				
5	Tamasa Nallah	NA	Chhattisgarh	NA				
6	Garia	NA	NA	NA				
7	Gariagad	NA	NA	NA				
8	Dharamagad	NA	NA	NA				
9	Saptadhara	NA	NA	NA				
10	Pitakata	NA	NA	NA				

The District has considerable flat land, which provide suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major rivers flowing in the District are The Kolab, Potteru, Sileru & Sabari. Major crops grown

in the District are paddy. major source of irrigations are Canals, Tanks, well and tube wells.

7.0 PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Sl No	Name of the River or Stream	Process of Deposition	Year	Volume of Sand Deposited
1	Shabari	Moderate	2023-24	NA
			2022-23	
			2021-22	
2	Sileru	Moderate	2023-24	NA
			2022-23	
			2021-22	
3	Potteru	Slow	2023-24	NA
			2022-23	
			2021-22	
4	Pangam	Moderate	2023-24	NA
			2022-23	
			2021-22	
5	Tamasa Nallah	Slow	2023-24	NA
			2022-23	
			2021-22	
6	Garia	Slow	2023-24	NA
			2022-23	
			2021-22	
7	Gariagad	Slow	2023-24	NA
			2022-23	
			2021-22	
8	Dharamagad	Slow	2023-24	NA
			2022-23	
			2021-22	
9	Saptadhara	Slow	2023-24	NA
			2022-23	
			2021-22	
10	Pitakata	Slow	2023-24	NA
			2022-23	
			2021-22	



Drainage System



River System

8.0 LAND UTILIZATION PATTERN IN THE DISTRICT

8.1 Forest and non-forest land

Forest land use as per the data collected from Divisional Forest Officer, Malkangiri is as follows;

Status	Total Area in Ha
Reserve Forest	35256.2401
Proposed Reserve Forest	72561.3603
Demarcated Protected Forest	18865.0586
Reserve Land	22615.7164
Projected Land	95.872
Village Forest	268.2
Compensatory Afforestation	156.098
Other Forest (Under Revenue Deptt.)	140061.394
Areas not recorded forests but having characteristics of forest (Govt.)	799.4
Areas not recorded forests but having characteristics of forest (Pvt.)	35.505
Total	290714.8444

Malkangiri division covers a geographical area of 5791.00 sq km which has 40.34% Forest cover area (Indian State of Forest Report, 2019). This Division lies between 17°50' to 18°45' North latitudes and 81°23' to 82°25' East longitudes. This Division has six ranges, 23 sections and 116 beats. In terms to Forest Canopy Density classes, the division has 158 sq km under very dense forest, 712.76 sq km under moderately dense forest, 1465.41 sq km under open forest and 45.90 sq km under scrub. In this Division, forest types are Moist Deciduous Forest, Southern Tropical Moist Deciduous Forests, Southern Moist Mixed Deciduous Forests, Orissa Tropical Semi Evergreen Forests, Dry Deciduous Scrub Forests and Central India South Tropical Hill Forests.

Type of Forest Cover	FC Data-2019 Area in ha
Very Dense Forest (VDF)	158
Moderately Dense Forest (MDF)	712.76
Open Forest (OF)	1465.41
Total	2336.17
% of Geographical Area	40.34
Scrub	45.90

(Source: India state of forest report 2019-Odisha)

8.2 Agricultural land

8.2.1 Agro Climatic Zone

Sl. No.	Items	
1	Climate	Hot and sub-Humid
2	Mean Annual Rainfall (mm)	1559.35 mm (for the year 2022) 1762.47 mm (for the year 2022)
3	Mean Max. Summer Temp.	38° – 42°
4	Mean Min. Winter Temp.	20° – 23°
5	Soil Type	Broadly the district has Red, Lateritic and acidic soil. Soil texture is sandy loam

8.2.2 Land use

Agriculture land use as per the data collected from Chief District Agriculture Officer, Malkangiri is as follows;

1. Geographical Area: 5,79,100 (Sq. Km.)
2. Cultivable Area: 1,62,716 Ha.
3. Cultivated Area:

High	85,760 Ha.
Medium	31,916 Ha.
Low	25,064 Ha.
Total	1,42,740 Ha.
4. Paddy Area (Kharif):

High	14,235 Ha.
Medium	31,916 Ha.
Low	25,064 Ha.
Total	71,215 Ha.
5. Cropping Intensity: 135 %
6. Irrigation Potential:

Kharif	90420 Ha.
Rabi	48315 Ha.
7. Total nos. of GPs 111 nos.

Village	1055 nos.
NAC	1 no.

Municipality 1 no.

8. Major Crops:

Kharif Paddy, Maize, Pulses, Ragi, Sesamum, Vegetables

Rabi Groundnut, Pulses, Vegetables

1. Large Farmers : 28 nos.
2. Medium Farmers : 7,537 nos.
3. Semi Medium Farmers : 13,104 nos.
4. Marginal Farmers : 62,976 nos.
5. Small Farmers : 23,684 nos.
6. Landless : 8320 nos.
7. Average size of holding : 1.22 Ha.

The agricultural activity is by and large confined to the traditional Kharif cultivation due to lack of adequate irrigation system. The principal crops of the district are Paddy, pulses and oilseeds.

8.3 Horticulture land

In Malkangiri District, Mathili, Khairput, Malkangiri and parts of Chittrakonda blocks are suitable for fruit orchards as most part of the land are upland. Plantations of cashew, mangos, jackfruits, papayas and bananas have been taken up in these areas. Other vegetables are also grown throughout the district as well. The plantations coverage in the District for the last five years as received from Dy Director of Horticulture, Malkangiri is given in the following table.

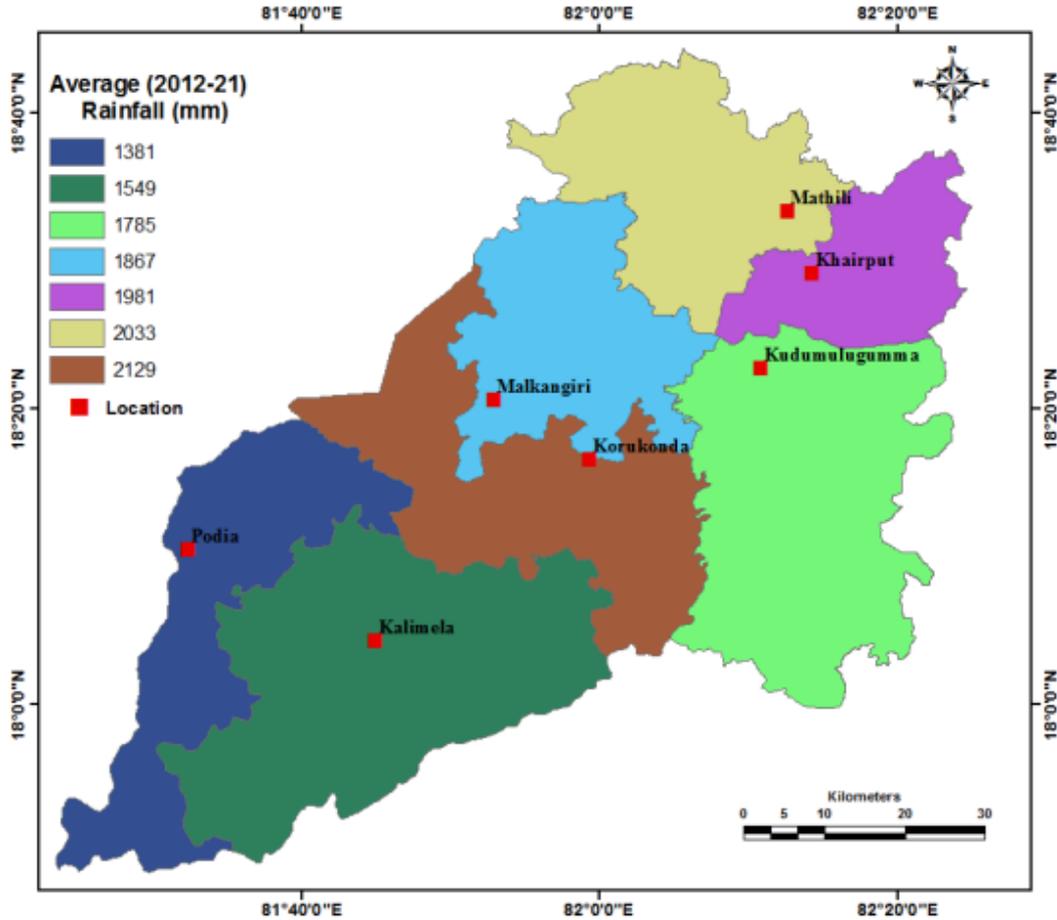
Sl. No.	Year	Fruit Plants Area (Ha)					Vegetables Area (Ha)	Flowers Area (Ha)
		Papaya	Banana	Cashew	Mango	Jackfruit		Marigold
1	2023-24	142.23	515.06	15882.12	8254.54	746.59	21368.61	112.5
2	2022-23	156	536	15593	8620	309	20327	87
3	2021-22	141.8	510	15506	8275	297	19351.76	86.4
4	2020-21	135	503	15420	8520	285	19053.76	80
5	2019-20	88	510	15552	8275	297	16729	90

9.0 RAINFALL OF THE DISTRICT AND CLIMATE CONDITION

The district has a subtropical climate. Southwest monsoon is the principal source of rainfall. Rainfall pattern is uneven and erratic. The average annual rainfall gradually increases from South Western to North Eastern parts of the district. The average annual rainfall of last five years as per the data furnished by the Emergency Section, Collectorate, Malkangiri is given below:

Average Rainfall data of last 5 years (Month Wise)					
Month	(Year wise rainfall in mm)				
	2019	2020	2021	2022	2023
January	1.14	1.91	0	17.31	0
February	0	0	2.71	0	0
March	1.86	11.49	0	0	109.87
April	5.43	89.07	97.21	32.73	50.24
May	33.71	45.71	51.63	69.49	57.1
June	151.49	238.54	216.26	110.03	215.74
July	633.84	371.54	374.09	541.2	603
August	763.34	979.64	391.96	384.43	257.4
September	339.96	211.34	371.29	343.33	368.11
October	170.61	209.54	112.63	60.66	15
November	2.86	5.21	58.8	0	37.31
December	0	0	0	0.17	48.63
Total	2104.24	2163.99	1676.58	1559.35	1762.4

The agricultural definition of drought takes into account the negative departure of seasonal rainfall from the mean seasonal rainfall. A perusal of the frequency of occurrence of drought indicates that mild to normal drought condition prevails in Malkangiri District.



9.1 Climate

The climate of the district is tropical with hot and dry summer and pleasant winter. The summer season extends from March to middle of June followed by the rainy season from June to September. The winter season extends from November till the end of February.

Temperature Graph- Malkangiri

Maximum temperature rising upto 44oC during May. In the summer months of April and May, hot winds from the west are generally experienced in the afternoon. December is the coldest month with lowest temperature during Winter being 11oC. Monsoon generally lasts from the end of May to October. Occasional showers are received in the month of April, November and December.

10.0 THE LIST OF MINING LEASES IN THE DISTRICT WISE LOCATION, AREA, AND PERIOD OF VALIDITY

Please refer Table in Annexure – II (A) & II (B)

11. DETAIL OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS (SAND):

Sl No	Tahasil Name	Mineral	Royalty Collection		
			2021-22	2022-23	2023-24
1	Chittrakonda	Sand	₹ 0.00	₹ 0.00	₹ 0.00
2	Kalimela	Sand	₹ 1,51,349.00	₹ 2,28,510.00	₹ 0.00
3	Khairput	Sand	₹ 7,86,133.00	₹ 8,34,048.00	₹ 8,88,919.00
4	Kudumulugumma	Sand	₹ 13,79,476.00	₹ 12,94,037.00	₹ 10,84,323.00
5	Malkangiri	Sand	₹ 0.00	₹ 1,28,252.00	₹ 0.00
6	Mathili	Sand	₹ 28,64,895.00	₹ 46,78,483.00	₹ 71,61,519.00
7	Motu	Sand	₹ 0.00	₹ 0.00	₹ 0.00
Total			₹ 51,81,853.00	₹ 71,63,330.00	₹ 91,34,761.00

12. DETAIL OF PRODUCTION OF RIVER SAND IN LAST THREE YEARS:

SL. NO.	Name of the Tahasil	2021-2022	2022-2023	2023-2024	Total Quantity
1	Kalimela	627.33	500.00	500.00	1627.33.00
2	Khairput	Nil	7971.00	7971.00	15942.00
3	Chittrakonda	600.00	600.00	600.00	1800.00
4	Kudumuluguma	3050.00	3050.00	2595.00	8695.00
5	Malkangiri	1700.00	2407.00	2407.00	6514.00
6	Mathili	18700.00	18700.00	18700.00	56100.00
7	Motu	905.00	600.00	3000.00	4505.00
Total					

13. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

Total mineral reserve of Sand will access after detail study or grant of potential area, which may investigate as per details below.

- (i) Stretches of sand were identified based on field observation.
- (ii) Mineable resource was calculated by considering detail prospecting.
- (iii) Area calculated as per GPS co-ordinates and information obtained from local people. Land detail need to be verified from revenue record.
- (iv) Since this is an interim report, as per the present requirement of minerals, more such Stretches of sand need to be identified and the data should be updated periodically, after certain intervals to update the data bank of DSR.

Summary of Identified River Sand Potential:

Please refer Table in Annexure – II (C) & II (C-a)

14. DEMAND AND SUPPLY OF THE MINERAL IN THE LAST THREE YEARS:

As per data furnished by the Works Deptt.

Data furnished by R&B Malkangiri Division:

Sl. No.	Mineral Type	2023-24		Remarks
		Demand (CuM)	Supply (CuM)	
1	Sand	80189.130	80189.130	

Data furnished by RWS&S Malkangiri Division:

Sl. No.	Mineral Type	2021-22		2022-23		2023-24		Remarks
		Demand (CuM)	Supply (CuM)	Demand (CuM)	Supply (CuM)	Demand (CuM)	Supply (CuM)	
1	Sand	3786.31	3786.31	3249.34	3249.34	3508.95	3508.95	

15. MAP OF EXISTING MINING LEASES IN THE DISTRICT:

N.A.

CONCLUSION:

To meet the requirement of minerals in the present scenario, it is proposed to identify such potential areas at certain interval and get the data bank of DSR to be updated regularly. The insitu mining activity in any area is on one hand bring revenue and employment (Direct and indirect) and on other hand if not done properly potential pollution and ecological imbalance increases, the ability of the ecosystem can also be reduced. Particulate matter transported by the wind as a result of excavations, blasting, transportation of materials, heavy equipment used raise these particulate levels; and Gas emissions from the combustion of fuels in stationary and mobile sources, explosions, and mineral processing. All these activities indirectly affected the biodiversity of area. Larger potential and smaller areas have been identified in Malkangiri District on the basis of geological study carried out during field observation, which can be considered for mining concession after all the parameters for statutory clearances are verified by consulting with concerned authorities.

The District Survey Report for River Sand (Minor Mineral) in respect of Malkangiri District in accordance with Appendix-X, Para-7 (iii) (a) of S.O. 3611(E) dt. 25.07.2018 of Ministry of Environment, Forest and Climate Change, New Delhi, Enforcement & Monitoring Guideline for Sand Mining-2020 and in compliance with the orders of Hon'ble Supreme Court dt. 10.11.2021 in connection with C.A Nos. 3661-3662 of 2020. Before preparation of this report, a survey has been conducted by District Environment Impact Assessment Authority (DEIAA) with the assistance of Irrigation Department, Forest Department, Public Works Department, Mining Department, Ground Water Boards, Remote Sensing Department, Mining Departments. The DSR is being submitted to SEIAA, Odisha, Bhubaneswar for necessary evaluation and approval.

Details of Sand/ M-Sand Sources

a) Rivers:

River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Shabari	380.00	NA
Potteru	111.25	NA
Pangam	NA	NA
Sileru	112.00	NA

c) Patta Lands/ Khatedairi Land (Existing Proposed)

Owner	SINo.	Area	District	Tahasil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing/ proposed
Not applicable for Malkangiri District								

B) De-Siltation Location (lakes/ Ponds/dams etc. (Existing & proposed)

1	2	3	5	6	7	8	9	10	11	12
Name of reservoir/ Dams			Maintain/Collected by State Government/ PSU	location	District	Tahasil	Village	Size (Ha)	Quantity (MT/year)	Existing/ proposed
Not applicable for Malkangiri District										

d) M-sand Plants:

Plant name	Owner	District	Tahasil	Village	Gee-location	Quantity Tonnes/Annun / Proposed
Not applicable for Malkangiri District						

Note: For inclusion of M-Sand Plant/Patta Land in DSR, the plant/landowners need to submit the request to the Mining Department with complete details. Inclusion in DSR does not give them right to operate the M-Sand Plant/Sand Mining lease.

List of Potential Mining Lease (existing & Proposed) Rivers

Tahasil	Sl. No	River details	Lease details	Area (in Ha)	Distance (in K.M) from PA/BR/WC	Distance From forest area (in K.M)	Mining lease within 500 metres (if yes cluster Area)	Total excavation in Tonnes/ Annum considering digging depth max as 3 metres	Mineral to be mined (sand/Bajri/RBM etc.)	Existing/ proposed
1	2	3	4	5	6	7	8	9	1	11
Chittrakonda Tahasil										
Chittrakonda	1	Orkel	Orkel Sand Quarry	5.00	WC-191.11km BR-2.20 km	Karlapat Wildlife Sanctuary-191.11 KM	NA		Sand	Existing

Kalimela Tahasil

Kalimela	1	Potteru	Maranpalli Sand Quarry	4.95	WC-222.32 Km BR-1.8 Km	Karlapat Wildlife Sanctuary-222.32 km	NA	NA	Sand	Existing
Kalimela	2	Potteru	Girkanpalli Sand Quarry	5.86	WC-229.56 Km BR-2.54 Km	Karlapat Wildlife Sanctuary-229.56 km	NA	NA	Sand	Existing
Kalimela	3	Potteru	Tamanpalli Sand Quarry	4.92	WC-234.32 km BR-2.89 km	Karlapat Wildlife Sanctuary-234.32 km	NA	NA	Sand	Existing
Kalimela	4	Potteru	Venkatpallam Sand Quarry	4.96	WC-219.65 km BR-4.51 km	Karlapat Wildlife Sanctuary-219.65 km	NA	NA	Sand	Existing
Kalimela	5	Potteru	Telguda Sand Quarry	4.96	WC-217.55 km BR-2.97 km	Karlapat Wildlife Sanctuary-217.55 km	NA	NA	Sand	Existing
Kalimela	6	Potteru	Tamanpalli Sand Quarry-B	5.00	WC-233.26 km BR-9.51 km	Karlapat Wildlife Sanctuary-233.26 km	NA	New	Sand	New
Kalimela	7	Potteru	Padganpalli Sand Quarry-I	3.580	WC-229.1 km BR-2.7 km	Karlapat Wildlife Sanctuary-229.1 km	Yes	New	Sand	New
Kalimela	8	Potteru	Padganpalli Sand Quarry-II	4.550	WC-228.5 km BR-3.0 km	Karlapat Wildlife Sanctuary-228.5 km	Yes	New	Sand	New
Kalimela	9	Potteru	Murbanpalli Sand Quarry	2.3	WC-233.2 km BR-1.3 km	Karlapat Wildlife Sanctuary-233.2 km	NA	New	Sand	New
Kalimela	10	Sileru	Poluru Sand Quarry	5.0	WC-249.3 km BR-4.2 km	Karlapat Wildlife Sanctuary-249.3 km	NA	New	Sand	New

Khairput Tahasil

Khairput	1	Saptadhara	Kamalapadar Sand Quarry	5.00	WC- 142.19km BR- 3.52 Km	Karlapat Wildlife Sanctuary- 142.19 km	NA	NA	Sand	Existing
Khairput	2	Garia	Govindapally Sand Quarry	4.995	WC- 145.48km BR- 0.72 km	Karlapat Wildlife Sanctuary- 145.48 km	NA	NA	Sand	Existing
Khairput	3	Pitakata	Sikhpalli Sand Bed	2.912	WC- 164.67Km BR- 1.11 Km	Karlapat Wildlife Sanctuary-164.67 km	NA	NA	Sand	Existing
Khairput	4	Pitakata	Pushpalli Sand Quarry	4.855	WC- 165.0 Km BR- 0.32 Km	Karlapat Wildlife Sanctuary- 165.0 km	NA	New	Sand	New

Mathili Tahasil

Mathili Tahasil										
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Mathili	1	Dardur	Khairapali Sand Quarry	5.00	WC-166.20 km BR-0.83 km	Kotgarh Wildlife Sanctuary-166.20 km	NA	NA	Sand	Existing
Mathili	2	Garia	Mecca Sand Quarry	5.00	WC-158.47 km BR-4.85 km	Karlapat Wildlife Sanctuary-158.47 km	NA	NA	Sand	Existing
Mathili	3	Pangam	Pangam Sand Quarry	5.00	WC-157.37 km BR-0.28 km	Karlapat Wildlife Sanctuary-157.37 km	NA	NA	Sand	Existing
Mathili	4	Pangam	Chaulamendi Sand Quarry	5.00	WC-158.24 km BR-0.33 km	Karlapat Wildlife Sanctuary-158.24 km	NA	NA	Sand	Existing
Mathili	5	Garia	Gangrajgumma Sand Quarry	5.00	WC-153.10 km BR-0.83 km	Karlapat Wildlife Sanctuary-153.10 km	NA	NA	Sand	Existing
Mathili	6	Sikhar	Maliguda Sand Quarry	5.00	WC-162.46 km BR-0.86 km	Karlapat Wildlife Sanctuary-162.46 km	NA	NA	Sand	Existing
Mathili	7	Pangam	Podaguda Sand Quarry	NA	WC-157.92 km BR-1.35 km	Karlapat Wildlife Sanctuary-157.92 km	NA	NA	Sand	Existing
Mathili	8	Pangam	Kathiguda Sand Quarry	5.00	WC-158.8 km BR-2.4 km	Karlapat Wildlife Sanctuary-158.8 km	NA	New	Sand	New
Mathili	9	Shabari	Katapali Sand Quarry	5.00	WC-161.83 km BR-12.56 km	Karlapat Wildlife Sanctuary-161.83 km	NA	New	Sand	New
Mathili	10	Shabari	Badarangabeda Sand Quarry	5.00	WC-159.7 km BR-12.24 km	Karlapat Wildlife Sanctuary-159.7 km	NA	New	Sand	New
Mathili	11	Dharamagad	Dhungiput Sand Quarry	5.00	WC-144.46 km BR-1.51 km	Karlapat Wildlife Sanctuary-144.46 km	NA	New	Sand	New
Mathili	12	Saptadhara	Timasput Sand Quarry	5.00	WC-148.71 km BR-0.41 km	Karlapat Wildlife Sanctuary-148.71 km	NA	New	Sand	New
Mathili	13	Pangam	Bijapadar Sand Quarry	5.00	WC-158.48 km BR-9.23 km	Karlapat Wildlife Sanctuary-158.48 km	NA	New	Sand	New
Mathili	14	Shabari	Mahupadar Sand Quarry-I	5.00	WC-163.9 km BR-9.0 km	Karlapat Wildlife Sanctuary-163.9 km	NA	New	Sand	New
Mathili	15	Shabari	Mahupadar Sand Quarry-II	5.00	WC-164.2 km BR-7.78 km	Karlapat Wildlife Sanctuary-164.2 km	NA	New	Sand	New
Mathili	16	Garigad	Chaulamendi Sand Quarry-B	5.00	WC-158.76 km BR-1.12 km	Karlapat Wildlife Sanctuary-158.76 km	NA	New	Sand	New
Mathili	17	Pitakata	Mutebeda Sand Quarry	3.5	WC-163.2 km BR-0.92 km	Karlapat Wildlife Sanctuary-163.2 km	NA	New	Sand	New
Kudumuluguma Tahasil										
Kugumulugumma	1	Gotiguda	Gotiguda Sand Quarry	5.00	WC-164.25 km BR-0.81 km	Karlapat Wildlife Sanctuary-164.25 km	NA	NA	Sand	Existing

Kugumulgumma	2	Dumali	Chitapari Sand Quarry	1.367	WC-160.0 km	Karlapat Wildlife Sanctuary- 160.0km	NA	NA	Sand	Existing
Kugumulgumma	3	NA	Maheswarpur & Kondelguda Sand bed Sand Quarry	5.000	WC-179.77km BR-0.09 km	Karlapat Wildlife Sanctuary-179.77km	NA	NA	Sand	Existing
Malkangiri Tahasil										
Malkangiri	1	Tamasa Nallah	Chidupali Sand Bed-B	4.93	WC-200.06 km BR-0.91 km	Karlapat Wildlife Sanctuary-200.06km	Yes	NA	Sand	Existing
Malkangiri	2	Poteru	Pulimetla Sand Quarry	4.475	WC-209.68km BR-0.63km	Karlapat Wildlife Sanctuary-209.68 km	NA	NA	Sand	Existing
Malkangiri	3	Poteru	Kodelmetla Sand Quarry	4.86	WC-204.78 km BR-0.98km	Karlapat Wildlife Sanctuary-204.78 km	NA	NA	Sand	Existing
Motu Tahasil										
Motu	1	Shabari	Uskalbag Sand Bed	5.00	WC-211.24km BR-4.22 km	Kotagarh Wildlife Sanctuary-211.24km	NA	NA	Sand	Existing
Motu	2	Shabari	Alma Sand Quarry	5.00	WC-260.76 km BR-9.51 km	Kotagarh Wildlife Sanctuary-260.76 km	NA	New	Sand	New

Patta Lands/ Khatedairi Land (Existing Proposed)

Owner	SI No.	Area	District	Tahasil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing/ proposed
Not applicable for Malkangiri District								

De-Siltation Location (lakes/ Ponds/dams etc. (Existing &proposed)

1	2	3	5	6	7	8	9	10	11
Nameofreservoir/Dams	Maintain/Collected by State Government/PSU	location	District	Tahasil	Village	Size(Ha)	Quantity (MT/year)	Existing/ proposed	
Not applicable for Malkangiri District									

M-Sand Plants: (existing and proposed)

Plant name	Owner	District	Tahasil	Village	Gee-location	Quantity Tonnes/Annun	Existing /Proposed
Not applicable for Malkangiri District							

Note: For inclusion of M-Sand Plant/Patta Land in DSR the plant/landowners need to submit the request to the Mining Department with complete details. Inclusion in DSR does not give them the right to operate the M-Sand Plant/Sand Mining lease.

List Operational River Sand Sources in Malkangiri District

SI No	Name of the river or stream	Name of the Quarry Lease	Village, Khata No, Plot No & Kسام	Latitude	Longitude	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Metric Tones/Cums (60% of Total Minerals/potential)	Geological mineral potential in Metric Tones/Cums	Name of the Lessee with address despatch	Period of Lease		Status of working or non working/Temp permit working for
												From	To	
1	Tahasil	4	5	6	7	8	9	10	11	12	13	14	15	16
CHITRAKONDA														
Chittrakonda	Orkel	Orkel Sand Quarry	Khata No.-51, Plot No. - 426/P Kسام-Nadi, Mouza-Orkel	18°12'59.9 0868"N to 18°13'13.6 6173" N	82°02'46.1 5746"E to 82°03'03.7 6343"E			5.000 Ha	MR-5010	GR-7374	Sri D Venket Rao AT- Kumutiguda Malkangiri, Odisha	13.05.2021	12.05.2026	Operational
KALIMELA														
Kalimela	Potteru	Girkanpalli Sand Quarry	Khata No.-398, Plot No. - 3156 & 3240, Kسام-Nadi, Mouza-Girkanpalli	18°03'12.634 14"N to 18°03'30.153 44" N	81°39'17.449 68"E to 81°39'29.45 781"E			4.850 Ha	MR-9979	GR-23440	Sri Krishna Rangu, A/Po-Kalimela, Malkangiri, Odisha, Mob: 9437820186	29.03.2022	28.03.2027	Operational
Kalimela	Potteru	Tamanpalli Sand Quarry	Khata No.-224, Plot No. - 25/1, Kسام-Nadi, Mouza-Tamanpalli	18°03'32.59" N to 18°03'17.15" N	81°35'26.345 85"E to 81°35'42.919 81"E			4.92 Ha	MR-3106.4	GR-4658.4	Gitanjali Panigrahi, At-Santosh Marg, Po-Bhawanipatna, Dist.-Kalahandi, Odisha . Mob.- 9437000101	29.12.2022	28.12.2027	Operational
KHAIRPUT														
Khairput	Saptadhara	Kamalapadar Sand Bed	Khata No.-23, Plot No. - 70, Kسام-Nadi, Mouza-Kamalapadar	18° 35' 23.76165"N to 18° 35' 57.98786" N	82° 16' 12.03638"E to 82° 16' 34.32312"E			5.000Ha	MR-4800	GR-8000	Samarjit Jena, AV/ PO- Govindapalli, PS-Mathili, Dist- Malkangiri	26.11.2021	25.11.2026	Operational

Khairput	2	Garia	Govindapalli Sand Quarry	Khata No.-452, Plot No. - 596,1300,1309, Kisam-Nadi, Mouza-Govindapalli, Area in Ha-4.995	18° 34' 00.46867"N to 18° 34' 12.22093" N	82° 16' 22.43749"E to 82° 16' 58.82375"E				4.995Ha	MR-16828	GR-54770	Prafulla Chandra Rath, At-Govindapalli, Dist.-Malkangiri	06.08.2022	05.08.2027	Operational
Khairput	3	Pitakata	Sikhpalli Sand Quarry	Khata No.-150, Plot No. - 1582/1, 1734/1 Kisam-Nadi, Mouza-Sikhpalli, Area in Ha-2.354	18° 27' 34.46612"N to 18° 27' 16.91427" N	82° 08' 16.68061"E to 82° 08' 09.66500"E				2.354Ha	MR- 8474	GR-14124	Sahadev Behera, At/PO-Govindapalli, PS-Mathili, Dist-Malkangiri	03.11.2021	02.11.2026	Operational

MATHILI

Mathili	1	Dardur	Khairapalli Sand Bed	Khata No.-131, Plot No. -1351/1, 1169/1 & 418/1, Kisam-Nadi, Mouza-Khairapalli	18°26'43.489 56"N to 18°26'55.027 35" N	82°06'58.620 10"E to 82°07'14.445 58"E				5.000Ha	MR-34585	GR-50000	J. Srinivas Rao, At/PO-Mathili, Dist-Malkangiri, Odisha	27.12.2021	26.12.2026	Operational
Mathili	2	Pangam	Mecca Sand Bed	Khata No.-167, Plot No. -2457, 2458 & 2702, Kisam-Nadi, Mouza-Mecca	18°32'30.519 17"N to 18°32'51.695 28" N	82°05'37.547 20"E to 82°05'55.337 83"E				5.000Ha	MR-37088	GR-50000	Bikram Keshri Patra, At/PO-Nayakguda Malkangiri	05.04.2021	04.04.2026	Operational
Mathili	3	Pangam	Pangam Sand Bed	Khata No.-163, Plot No. -152, Kisam-Nadi, Mouza-Pangam	18°31'41.728 48"N to 18°31'58.408 67" N	82°07'48.665 89"E to 82°08'06.333 16"E				5.000Ha	MR-39120	GR-50000	Jayanta Behera, At/PO-Mathili, Dist-Malkangiri, Odisha	17.03.2021	16.03.2026	Operational
Mathili	4	Pangam	Chaulamendi Sand Quarry	Khata No.-361, Plot No. -444, Kisam-Nadi, Mouza-Chaulamendi	18°30'11.727 10"N to 18°30'31.578 94" N	82°09'33.789 83"E to 82°09'54.562 53"E				5.000Ha	MR-14510	GR-19231	Rajesh Kumar Buruda, At-Pandiripani Po-Serapali, Dist-Malkangiri Odisha	16.02.2022	15.02.2027	Operational
Mathili	5	Garia	Gangarajuma Sand Quarry	Khata No.-100, Plot No. -188, 190, 192,376 & 372/1, Kisam-Nadi, Mouza-Gangarajuma	18°31'01.147 30"N to 18°31'14.842 71" N	82°13'24.635 23"E to 82°13'41.006 69"E				5.000Ha	MR-37057.35	GR-50000	V Ramesh, At-Durgagudisahi, Po/Dist-Malkangiri, Odisha	27.12.2021	26.12.2026	Operational
Mathili	6	Sikhar	Malguda Sand Bed	Khata No.-44, Plot No. -254 & 356, Kisam-Nadi, Mouza-Malguda	18°28'40.140 06"N to 18°28'58.183 45" N	82°07'35.3"E to 82°07'55.4"E				5.000Ha	MR-32890	GR-50000	Bikram Keshri Patra, At/PO-Nayakguda Malkangiri	05.04.2021	04.04.2026	Operational

Mathili	7	Pangam	Podaguda Sand Bed	Khata No.-47, Plot No. -195, Kisam-Nadi, Mouza-Podaguda	18°31'05.345 30"N to 18°31'27.571 23"N	82°08'54.650 65"E to 82°09'00.344 42"E.		5.000Ha	MR-39100	GR-50000	Lalit Somany, MV-03, AI/Po/Dist-Malkangiri, Odisha	08.03.2021	07.03.2026	Operational
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KUDUMULUGUMMA

Kudummulugumma	1	Dumali	Chitapari Sand Quarry	Khata No.-57, Plot No. -394,370, Kism-Nadi, Mouza-Chitapari, Area In Ha- 1.367	18°24'53.550 55"N to 18°24'43.316 53" N	82°10'10.874 73"E to 82°10'14.776 26"E		1.367Ha	MR-7074	GR-13670	Uma Shankar Sahu, AI/Po-Konukonda, Dist-Malkangiri, Odisha	10.12.2021	09.12.2026	Operational
Kudummulugumma	2	Gotiguda	Gotiguda Sand Quarry	Khata No.-158, Plot No. -1162, 1172,1119, Kism-Nadi, Mouza-Gotiguda	18°25'25.479 56"N to 18°25'52.952 14" N	82°10'07.293 57"E to 82°10'16.555 19"E		5.000Ha	MR-64312	GR-100000	Durga Prasad Barik, AI/Po-Kudummulugumma, Dist-Malkangiri	12.11.2021	11.11.2026	Operational

MALKANGIRI

Malkangiri	1	Tamasana Nala	Chidupali Sand Bed-B	Khata No.-625, Plot No. -4421/4839, Kism-Nadi, Mouza-Chidupali	18°14'16.962 14"N to 18°15'06.285 52" N	81°52'07.967 47"E to 81°52'26.49 586"E		4.930Ha	MR-2900.5	GR-13892	Subash Chandra Mistry, At-MPV-03, Po-Malkangiri, Dist-Malkangiri	01.08.2022	31.07.2027	Operational
Malkangiri	2	Potteru	Pulimetta Sand Quarry	Khata No.-306, Plot No. -2171, Kism-Nadi, Mouza-Pulimetta	18°10'43.510 40"N to 18°10'58.578 10" N	81°47'48.073 24"E to 81°47'.56.87 058"E		4.475Ha	MR-5004	GR-6421	Kiran Kumar Gouda, AI/Po-Malkangiri, Dist-Malkangiri	25.05.2022	24.05.2027	Operational
Malkangiri	3	Potteru	Kodelimetta Sand Quarry	Khata No.-446(AAJ), Plot No. -3377, Kism-Nadi, Mouza-Kodelimetta	18°12'23.483 04"N to 18°12'47.028 63" N	81°50'00.917 60"E to 81°50'.59.35 857"E		4.860Ha	MR-13700	GR-23038	Rajesh Kumar Buruda, At-Pandripani Serapalli Malkangiri Mob No-8280885455	29.10.21	28.01.2026	Operational

MOTU

Motu	1	Shabari	Uskalbag Sand Bed	Khata No.-148, Plot No. -1, Kism-Nadi, Mouza-Motu	18°18'38.164 28"N to 18°18'49.785 33" N	81°37'23.907 13"E to 81°37'.34.75 359"E		5.000Ha	MR-6419	GR-8249	Premchand Gupta, At-Civil Lane, Ial Bagh, Po-Jagdaipur, Dist-Bastar, Chhattisgarh	18.07.2023	17.07.2028	Operational
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N.B: The Geological resource and Movable reserve is as per approved mining plan by Authorized officers.

List of Non-operational River Sand Sources in Malkangiri District

Tahasil	Sl No	Name of the river or stream	Name of the Quarry Lease	Village, Khata No, Plot No & Kisam	Latitude	Longitude	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Tones/Cums (60% of Total Minerals/potential)	Geological mineral potential in Metric tones/Cums	Name of the Lessee with address despatch	Period of Lease		Status of working or non working/Temp p permit working for
													From	To	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
KALIMELA															
Kalimela	1	Potteru	Maranpalli Sand Bed	Khata No.-339, Plot No.-2320 & 2321, Kisam-Nadi, Mouza-Marandapally	18°6'24.496" N to 18°6'47.835" N	81°41'48.665" E to 81°41'59.195" E			4.95 Ha	MR-3210.25	GR-7896	NA	NA	NA	Non-Operational
Kalimela	2	Potteru	Venkaipallam Sand Quarry	Khata No.-195, Plot No.-01 & 02, Kisam-Nadi, Mouza-Venkatpalam	18°07'25.974" N to 18°07'25.107" N	81°42'53.385" E to 81°42'54.496" E			3.560 Ha	MR-2437.5	GR-7548	NA	NA	NA	Non-Operational
Kalimela	3	Potteru	Teliguda Sand Quarry	Khata No.-50, Plot No.-1 & 2, Kisam-Nadi, Mouza-Teliguda	18°08'36.56" N to 18°09'02.52" N	81°43'08.16E to 81°43'22.58" E			5.000 Ha	MR-3694	GR-20000	NA	NA	NA	Non-Operational
KUDUMULUGUMMA															
Kudumulgumma	1	NA	Maheswarpur & Kondelguda Sand Quarry	Village-Maheswarpur Khata No.-103, Plot No.-358, Village-Kondelguda, Khata No.-70, Plot No.-615,410, 411, Kisam-Nadi, Area in Ha-4.056	18°17'12.600" N to 18°17'54.613" N	82°06'18.646" E to 82°06'51.031" E			4.956ha	NA	NA	NA	NA	NA	Non-Operational

N.B: The Geological resource and Mineable reserve is as per approved mining plan by Authorized officers.

ADDITIONAL INFORMATION AS SOUGHT FOR WIDE LETTER NO. 4605 /SEIAA DT. 25.05.2022 ON DISTRICT SURVEY REPORT OF NON-OPERATIONAL SAND SOURCES

Tahasil	Sl No	Name of the river or stream	Name of the source	Khata, Plot, area, Mouza	Latitude	Longitude	Width of the river	Distance of the source area from river embankment	Distance from nearest road/railway bridge	Distance from nearest sand mining source	Distance from village road	Distance from school, temple etc.	Distance from nearest Eco-Sensitive Zone/Wild life sanctuary	Whether there is any cluster situation	Year- wise deposition of sand in the stretch of river where the source is located	Year- wise depletion of sand in the stretch of river where the source is located	Rate of replenishment of sand in the stretch of river where the source is located	Quantum of sand that can be sustainably extracted year to year
	1				6	7	8	9	10	11	12	13	14	15	16	17	18	19
KALIMELA																		
Kalimeela	1	Potteru	Maranpalli Sand Quarry	Khata No.- 339, Plot No.- 2320 & 2321, Kisam-Nadi, Mouza-Maranpally, Area-4.95	18°6'24.496" N to 18°6'47.835" N	81°41'48.665" E to 81°41'59.195" E								No				222.00 Cum
Kalimeela	2	Potteru	Venkatpallam Sand Quarry	Khata No.- 195, Plot No.- 01 & 02, Kisam-Nadi, Mouza-Venkatpallam, Area- 3.56 Ha	18°07'25.974" N to 18°07'25.107" N	81°42'53.385" E to 81°42'54.496" E								No				222.00 Cum
Kalimeela	3	Potteru	Teliguda Sand Quarry	Khata No.- 50, Plot No.- 1 & 2, Kisam-Nadi, Mouza-Teliguda, Area-5.0ha	18°08'36.56" N to 18°09'02.52" N	81°43'08.16E to 81°43'22.58"E								No				222.00 Cum
KUDUMULUGUMMA																		
Kudumulu gumma	1	Hatilamba	Maheswarpur & Kondeiguda Sand Quarry	Village- Maheswarpur, Khata No.- 103, Plot No.- 358, Village- Kondeiguda, Khata No.- 70, Plot No.- 615,410, 411, Kisam-Nadi, Total Area in Ha- 4.956	18°17'12.600 02"N to 18°17'54.613 37" N	82°06'18.6465 2"E to 82°06'51.0310 5"E								No				NA

SUMMARY OF SAND SOURCES OF MALKANGIRI DISTRICT

SUB-DIVISION	NAME OF THE TAHASIL	NO. OF OPERATIONAL SOURCES	NO. OF NON-OPERATIONAL SOURCES	NO. OF NEW SOURCES	TAHASIL WISE TOTAL SAND SOURCES
MALKANGIRI	CHITRAKONDA	1	-	-	1
	KALIMELA	2	3	5	10
	KHAIRPUT	3	-	1	4
	KUDUMULUGUMMA	2	1	-	3
	MALKANGIRI	3	-	-	3
	MATHILI	7	-	10	17
	MOTU	1	-	1	2
	TOTAL		19	04	17

Cluster & Contiguous Cluster details
Cluster:

River Name	Cluster No.	Lease No.	Location (River Bed/ Patta Land	Village	Area(inHa.)	Total excavation (Cum)
Poteru	1	NA	River Bed	Padganpalli	3.58	NA
Poteru	1	NA	River Bed	Padganpalli	4.55	NA

Contiguous Cluster Details

River Name	Contiguous Cluster No.	Cluster No.	Number of leases in the cluster	Location (River Bed/ Patta Land	Distance between clusters	Village	Area of cluster (in Ha.)	Total excavation (Ton)
No contiguous Cluster Situation available in respect of Malkangiri District								

Annexure-IV

Transportation Routes for individual leases and leases in Cluster.

Name of The Tahasil	Name of the Sand source	Lease No.	Transportation Route number	Whether runs on Govt. or Private Land	Details of village/ Forest area/ Agricultural land through which the approach road runs if any	Number of tippers/ day of lease	Number of tippers /day of all the lease on route	Length of Route in K.M	Type of Road (Blacktopped/ Unpaved)	Recommendation for road (Black Topped/ Unpaved)	The road will be constructed by Government/Lease Owner	Route map and location
1	2	3	4	5	6	7	8	9	10	11	12	13
Chitrakonda Tahasil												
Chitrakonda	Orkel Sand Quarry	NA	Village Road	Govt. Land	Orkel	4	7	3	Unpaved	Unpaved	Lease Owner	
Kalimela Tahasil												
Kalimela	Maranpalli Sand Quarry	NA	Village Road	Govt. Land	Maranpalli	3	5	3	Unpaved	Unpaved	Lease Owner	
Kalimela	Girkanpalli Sand Quarry	NA	Village Road	Govt. Land	Girkanpalli	2	4	4	Unpaved	Unpaved	Lease Owner	
Kalimela	Tamanpalli Sand Quarry	NA	Village Road	Govt. Land	Tamanpalli	4	5	2	Unpaved	Unpaved	Lease Owner	
Kalimela	Venkatpallam Sand Quarry	NA	Village Road	Govt. Land	Venkatpallam	4	6	3	Unpaved	Unpaved	Lease Owner	
Kalimela	Teliguda Sand Quarry	NA	Village Road	Govt. Land	Teliguda	3	5	3	Unpaved	Unpaved	Lease Owner	
Kalimela	Padganpalli Sand Quarry-I	NA	Village Road	Govt. Land	Padganpalli	5	7	4	Unpaved	Unpaved	New	
Kalimela	Padganpalli Sand Quarry-II	NA	Village Road	Govt. Land	Padganpalli	3	4	3	Unpaved	Unpaved	New	
Kalimela	Tamanpalli Sand Quarry-B	NA	Village Road	Govt. Land	Tamanpalli	4	5	2	Unpaved	Unpaved	New	
Kalimela	Murbalpalli Sand Quarry	NA	Village Road	Govt. Land	Murbalpalli	3	5	4	Unpaved	Unpaved	New	
Kalimela	Poturu Sand Quarry	NA	Village Road	Govt. Land	Poturu	2	5	4	Unpaved	Unpaved	New	
Khairput Tahasil												
Khairput	Kamalapadar Sand Quarry	NA	Village Road	Govt. Land	Tamanpalli	4	12	3	Unpaved	Unpaved	Lease Owner	
Khairput	Govindapalli Sand Quarry	NA	Village Road	Govt. Land	Govindapally	3	8	2	Unpaved	Unpaved	Lease Owner	
Khairput	Sikhpalli Sand Bed	NA	Village Road	Govt. Land	Sikhpalli	4	10	3	Unpaved	Unpaved	Lease Owner	
Khairput	Pushapalli Sand Bed	NA	Village Road	Govt. Land	Pusapalli	2	6	5	Unpaved	Unpaved	New	
Mathili Tahasil												
Mathili	Khairapalli Sand Quarry	NA	Village Road	Govt. Land	Khairpally	4	10	3	Unpaved	Unpaved	Lease Owner	
Mathili	Mecca Sand Quarry	NA	Village Road	Govt. Land	Mecca	3	12	4	Unpaved	Unpaved	Lease Owner	

Mathili	Pangam Sand Quarry	NA	Village Road	Govt. Land	Pangam	2	5	6	Unpaved	Unpaved	Lease Owner
Mathili	Chaulamendi Sand Quarry	NA	Village Road	Govt. Land	Chaulamendi	2	6	6	Unpaved	Unpaved	Lease Owner
Mathili	Gangrajgumma Sand Quarry	NA	Village Road	Govt. Land	Gangrajgumma	4	9	7	Unpaved	Unpaved	Lease Owner
Mathili	Malguda Sand Quarry	NA	Village Road	Govt. Land	Malguda	3	6	8	Unpaved	Unpaved	Lease Owner
Mathili	Podaguda Sand Quarry	NA	Village Road	Govt. Land	Podaguda	2	5	10	Unpaved	Unpaved	Lease Owner
Mathili	Katiguda Sand Quarry	NA	Village Road	Govt. Land	Katiguda	1	3	8	Unpaved	Unpaved	New
Mathili	Katapali Sand Quarry	NA	Village Road	Govt. Land	Katapali	2	6	9	Unpaved	Unpaved	New
Mathili	Badarengabeda Sand Quarry	NA	Village Road	Govt. Land	Badarengabeda	2	5	11	Unpaved	Unpaved	New
Mathili	Dhungiaput Sand Quarry	NA	Village Road	Govt. Land	Dhungiaput	1	5	10	Unpaved	Unpaved	New
Mathili	Timusput Sand Bed	NA	Village Road	Govt. Land	Timusput	2	5	8	Unpaved	Unpaved	New
Mathili	Bijapadar Sand Quarry	NA	Village Road	Govt. Land	Bijapadar	3	7	9	Unpaved	Unpaved	New
Mathili	Mahupadar Sand Bed-I	NA	Village Road	Govt. Land	Mahupadar	3	6	9	Unpaved	Unpaved	New
Mathili	Mahupadar Sand Bed-II	NA	Village Road	Govt. Land	Mahupadar	3	6	9	Unpaved	Unpaved	New
Mathili	Chaulamendi Sand Quarry-B	NA	Village Road	Govt. Land	Chaulamendi	2	6	6	Unpaved	Unpaved	New
Mathili	Mutebeda Sand Quarry	NA	Village Road	Govt. Land	Mutebeda	3	4	6	Unpaved	Unpaved	New

Kudumulugumma Tahasil

Kudumulugumma	Gotiguda Sand Quarry	NA	Village Road	Govt. Land	Gotiguda	4	12	3	Unpaved	Unpaved	Lease Owner
Kudumulugumma	Chitapari Sand Quarry	NA	Village Road	Govt. Land	Chitapari	1	3	0.1	Unpaved	Unpaved	Lease Owner
Kudumulugumma	Maheswarpur & Kondelguda Sand Bed	NA	Village Road	Govt. Land	Maheswarpur & Kondelguda	5	11	4	Unpaved	Unpaved	Lease Owner

Malkangiri Tahasil

Malkangiri	Chidupali Sand Bed-B	NA	Village Road	Govt. Land	Chidupali	5	14	4	Unpaved	Unpaved	Lease Owner
Malkangiri	Pulimetla Sand Quarry	NA	Village Road	Govt. Land	Pulimetla	3	6	5	Unpaved	Unpaved	Lease Owner
Malkangiri	Kodelmetla Sand Quarry	NA	Village Road	Govt. Land	Kodelmetla	6	8	6	Unpaved	Unpaved	Lease Owner

Motu Tahasil

Motu	Uskalbag Sand Bed	NA	Village Road	Govt. Land	Uskalbag	2	2	3	Unpaved	Unpaved	Lease Owner
Motu	Alma Sand	NA	Village Road	Govt. Land	Alma	2	3	4	Unpaved	Unpaved	New

Cluster No.	Transportation Route number	Number of tippers/ day of Cluster	Number Of tippers /day of all the Cluster on route	Length of Route in K.M	Type of Road (Blacktopped/ unpaved)	Recommendation for road (Black Topped/ Unpaved)	The road will be constructed by Government/Lease Owner	Route map and location
Cluster-1	Quarry Road	8	11	7	Unpaved	Unpaved	New	

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PREAMBLE

Odisha is one of the Major Mineral rich State in India. Malkangiri, historically known as Malikamardhangiri, is a town and municipality in Malkangiri district in the Indian state of Odisha. It is the headquarter of the Malkangiri district. Malkangiri has been the new home of the East Bengali refugees from erstwhile East Pakistan (present day Bangladesh), who have been rehabilitated since 1965 under the Dandakaranya Project. Some Sri Lankan Tamil refugees were also rehabilitated in the town, following the armed struggle of the Liberation Tigers of Tamil Eelam (LTTE) in the early 1990s, although most of them have now returned to their country. Currently, it is one of the most naxalite-affected areas of the state, and is a part of the Red Corridor.

In pursuance of MoEF & CC Notification S.O. 141(E) dated 15th Jan. 2016, District Environment Impact Assessment Authority (DEIAA) & District level Expert Appraisal Committee (DEAC) has been formed for Category –B2 Minor Minerals having area less than or equal to 5 ha. Prior to the formation of Odisha Minor Mineral Concession Rule 2004, (OMMCR -2004) the mining operation for minor mineral were carried out in unscientific manner. Identifying this fact in exercise of power, Conferred by Section 15 by Mines and Minerals (Development and Regulation) Act 1957 as amended in 2015 and all other powers enabling it in that behalf, the industry Mines & Geology Department, Govt. of Odisha framed the aforementioned rule, which has been amended with period of times in the year 2014, 2015 and 2016.

Keeping in view of experience gained in period of decade, the MoEF& CC came out with Environmental Impact Assessment Notification S.O.-1533(E) dated 14th Sept. 2006. It has been made mandatory to obtain environmental clearance for different kinds of development projects as listed in Scheduled -I of notification. Further, pursuance of the order of Hon'ble Supreme Court Petition (C) No. 19628- 19629 of 2009, dated 27th Feb. 2012 In the matter of Deepak Kumar etc., Vs State of Haryana and others etc., Prior Environmental Clearance has now become mandatory for mining of Minor Minerals irrespective of the area of Mining Lease. And, also in view of the Hon'ble National Green Tribunal, order dated the 13th Jan. 2015 the matter regarding Sand, Brick Earth, & Burrowed Earth cutting for Road Construction has to take prior E.C. for Mining Lease irrespective of the fact that whether the area involved is more or less than 5 hectares. They also suggested to make a policy on E.C for minor minerals lease in cluster. MoEF& CC in consultation with State Government has prepared Guidelines on Sustainable Sand Mining &

Minor minerals other than sand mining in 2016, detailing the provisions on Environmental Clearance for cluster. Creation of District Environmental Impact Assessment Authority (DEIAA) & proper monitoring of Minor Minerals. Mining, using Information Technology to track the mineral out material from source to destination.

DEAC will scrutinize and recommend the prior environmental clearance of mining of minor mineral to DEIAA on basis of District Survey Report. This will model and guiding document which is a compendium of available mineral resources, geographical setup, Environmental and Ecological set up of the District and replenishment of minerals and is based on data of various departments, published reports, Journal and websites. Subsequently, Hon'ble Supreme Court vide their order dt. 18.01.2022 in connection with Civil Appeal Nos. 3661-3662 of 2020, the State of Bihar and others Vrs- Pawan Kumar and others at Paragraph 14 "We therefore find it appropriate to substitute the directions issued by Tribunal vide judgment and order dated 14th October-2020 with the following directions,

- (i). The exercise of preparation of DSR for the purpose of mining of the State of Odisha in all the Districts shall be under taken afresh. The Draft DSRs shall be prepared by the Sub-Divisional Committees consisting of the Sub-Divisional Magistrate, Officers from Irrigation Department, State Pollution Control Board or Committee, Forest Department, Geological or Mining Officer. The same shall be prepared by undertaking site visits and also using by modern technology. After the Draft DSRs are prepared the District Magistrate of the concerned District shall forward the same for examination and evaluation by the SEAC. The same shall be examined by the SEAC and its report shall be forwarded to SEIAA. The SEIAA will thereafter consider the grant of approval such DSRs.*
- (ii). Needless to state that while preparing DSRs and appraisal thereof by SEAC and SEAI. It should be ensured that a strict adherence to the procedure and parameters laid down in the policy of January-2020 should be followed".*

The District Survey Report will form the basis for application for Environmental Clearance, preparation of reports and appraisal of projects. District Survey Reports are to be reviewed once in every five years as per statue.

In lieu of above guideline and orders of Hon'ble Supreme Court and in compliance to the orders of Hon'ble NGT, EZ, Kolkata, in connection with O.A No. 63/2020, the Member Secretary, SEIAA, Bhubaneswar issued a Letter on 27th December, 2022 to Collector & District Magistrate, Malkangiri with a direction "the DSR is to be signed afresh by the Collector and District Magistrate, along with members of the designated sub-committee consisting of Sub-Divisional Magistrate, and District Level Officers from Irrigation Department, State Pollution Control Board, Forest Department, Geology and /or Mining Department". Keeping in view of the orders of Hon'ble Supreme Court, Hon'ble NGT and directions of SEIAA, Bhubaneswar a fresh DSR has been prepared observing all formalities in the year,2024.

The Main objective of the preparation of District Survey Report is to ensure the following:

- 1. Identification of Mineral Resources in the District.*
- 2. Identification of areas of minor minerals having the potentiality where mining can be allowed.*
- 3. Identification of area and proximity to infrastructure and installations where mining should be prohibited.*

1.0 INTRODUCTION

Malkangiri at a Glance:

1.1 Location and Geographical Area:

Malkangiri is the southern-most district of Orissa. It was awarded the status of the district in October 1992, when the erstwhile Koraput district was divided into four new districts. The district is bordered in the North and West by Bastar district of Chhattisgarh and in the south by Khammam and East Godavari districts of Andhra Pradesh, in the east by Koraput district, Orissa. The district lies between north latitudes 17°47'58" and 18°44'18" and East longitudes 81°23'23" and 82°27'05" falling in Survey of India Degree sheet Nos. 65 F,G,J. The district covers an area of 5791 Sq.Km and is divided into 7 Community Development Blocks – Kalimela, Khairput, Korukonda, Kudumulguma, Malkangiri, Mathili and Podia. The Malkangiri town, the district headquarter is approachable from adjacent districts through State Highways. The important towns of the district are well connected by road. It is one of the most economically backward tribal districts of Orissa.

The general drainage pattern in the district is dendritic to sub-parallel. The Kolab river along with its tributaries, the Potteru and Sileru rivers are the most prominent rivers of the region. The Kolab river issues from the Sinkaram hills and follows a south westerly course after passing over Malkangiri district. The river joins the Godavari River in Khammam district of Telangana.

The hills and forests cover almost seventy six percent of the total geographical area of the district as per the classification of the forest area by legal status in Malkangiri district as on 2005, which include reserve forests, demarcated-protected forests, un-demarcated forests, unclassified forests and other forests. Only limited areas are utilized for agricultural purposes. The net area under cultivation is only twenty six percent of the total geographical area.

Agriculture is the main occupations of the vast majority of the population. However, because of forest cover and rugged terrain conditions of the district agriculture is by and large confined to Kharif Season. Rabi cultivation is practiced at places, where irrigation facilities are available. No uniform cropping pattern seems to be followed in the district. Shifting or 'Podu' cultivation is practiced on high hill slopes. Paddy is the main crop sown during the Kharif seasons. Apart from paddy, other important Kharif crops are Maize, Ragi, millet and different type of pulses. In higher altitudes above 600 m potato is cultivated during Kharif season. During Rabi oil seeds are the main crops. Pulses and wheat are also grown substantially.

Based on the soil characteristic, cropping pattern, climatological and topographical features the district has been subdivided into two agro-climatic zones, namely South Eastern Ghat and Eastern Ghat highland. The South Eastern Ghat occupies almost the entire Malkangiri district. It is characterized by warm climate with maximum temperature of 34°C and minimum temperature of 13°C. The principal crop is rice. The Eastern Ghat Highland have only a very small portion in the eastern corner of the district is characterized by Eastern Ghat Highland. The climate is warm and humid. Maximum temperature is 34°C and minimum temperature is 8°C. The principal crops are paddy, wheat and vegetables.

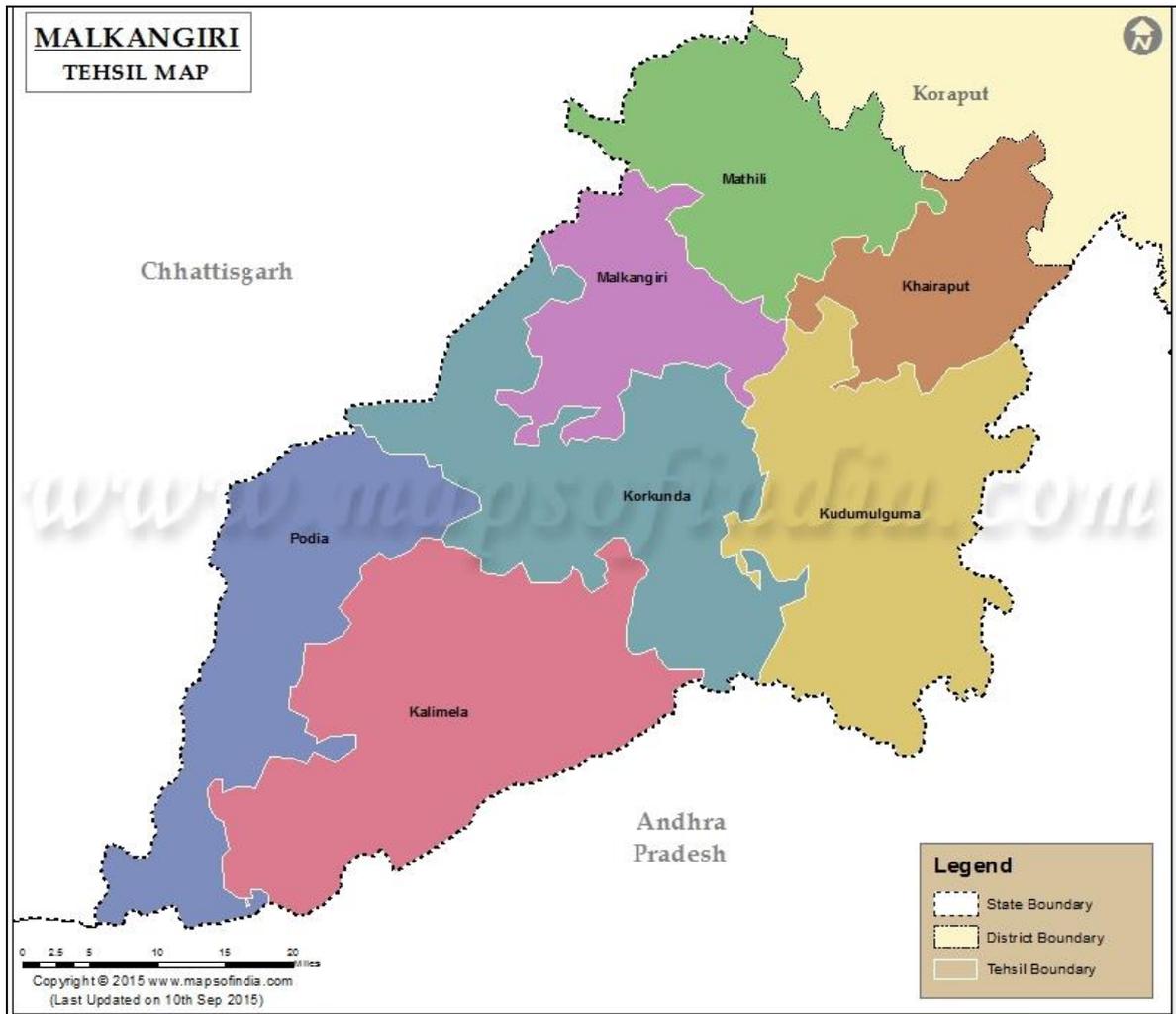
The major surface water bodies are reservoirs, rivers, streams and ponds etc. The river Potteru which is a tributary of Kolab is generally perennial in nature with a sufficient flow during summer months. The Balimela reservoir is the major irrigation project and its canal command is around 61034-Ha There are substantial numbers of tanks, ponds and water harvesting structures exist in the district, which hold considerable quantity of surface water as storage which serve the purpose for irrigation, bathing, drinking and industrial purposes. It covers an area of about 9.62 km² (3.71 sq mi), and has an average elevation of 170 m (560 ft) above the mean sea level. It lies in the area between the hills of Eastern Ghats on eastern and western sides. During monsoons, the town becomes impassably swampy and heavy floods isolate it from the rest of the state

Almost the entire population of Malkangiri is engaged in agriculture and primary sector, because it is relatively isolated from the rest of Odisha, as compared to other towns and cities, and developmental stages related to secondary and tertiary sectors are yet to be done. The primary sector accounts for 46.35% of the total workforce. Another important industry on which the population is dependent is tourism, because in and around the town, there are many places of tourist attraction. Thus, it has a large potential yet to be tapped.

In 1962, it was upgraded to a sub-division of Koraput district. The present Malkangiri got its identity as an independent district due to reorganization of districts of Odisha on 1 October 1992, with effect from 2 October 1992. Since 1967, the town along with its district has been one of the worst affected regions due to the Naxalite–Maoist insurgency, although in recent years, the effect has been considerably reduced.

**1.2 Administrative Units: -**

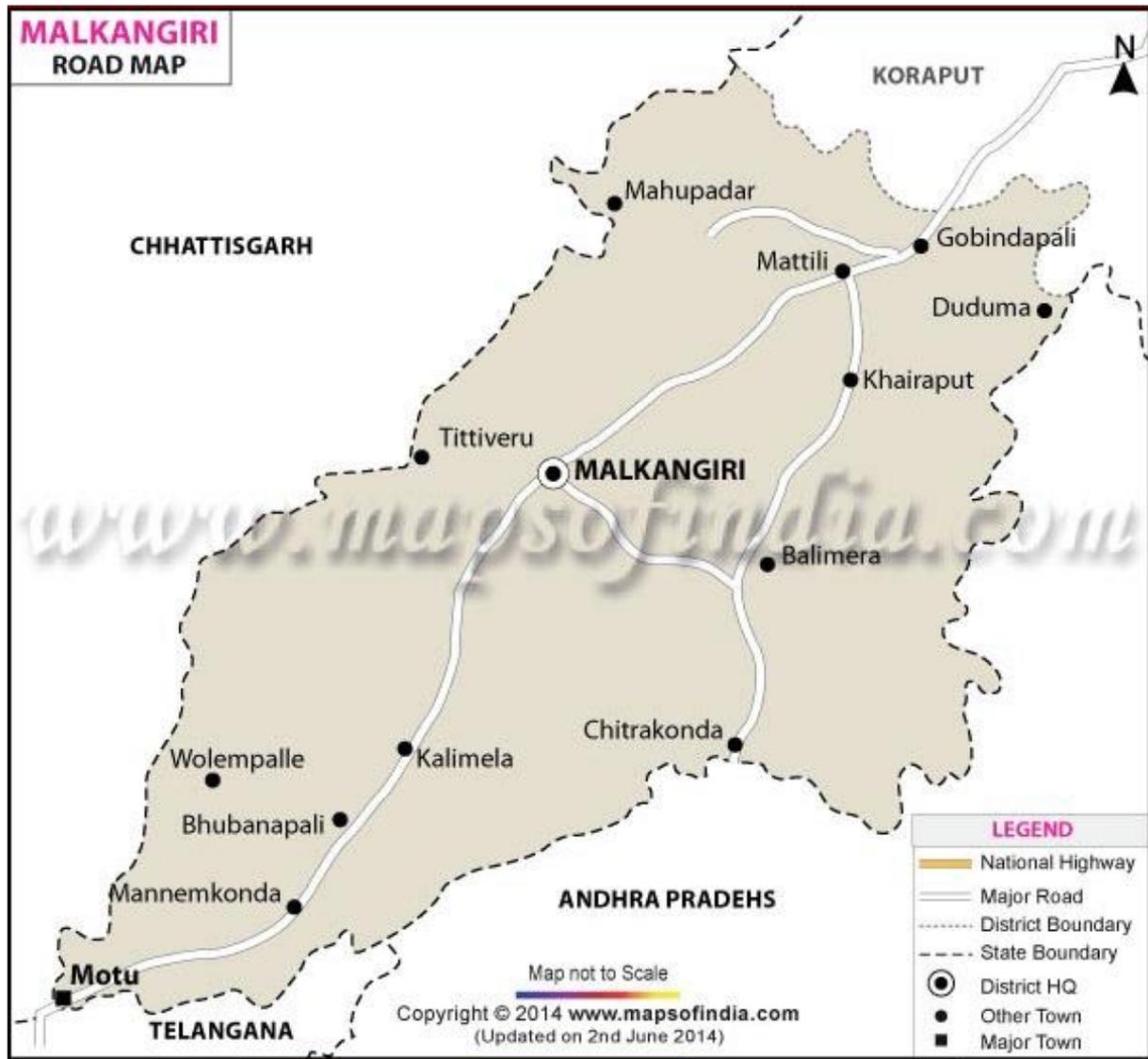
Malkangiri is the administrative headquarter of Malkangiri District. It is located at a distance of 614.2km from Bhubaneswar, state capital of Odisha. It has 1045 villages covering 7 Blocks, 7Tahasilsand1 Sub-Division .The District has 1 sub-Division. The District hasone Sub-Divisions namely 1) Malkangiri, and into 7 Blocks & 7 Tahasils, namely i) Malkangiri ii) Kalimela iii) Podia iv)Korukonda v)Chitrakonda vi)Khairput vii) Mathili. The population of the District is 613,192 according to the 2011 Census. The district accounts for 3.72% of the State's territory and about 1.45% of State's population. The density of population of the district is 106 per square km as against 270 per square km of the state. As per 2011 census, the population of Scheduled Caste is 1,38,295 (22.55%), and Scheduled Tribe is 3,56,614 (58.15%). The literacy percentage of the district covers 48.54%against 75.15 of the state.



1.3 Connectivity facilities:

Road Network

Malkangiri District is connected to major parts of Odisha and other Districts by National Highway-326. The Malkangiri town, the district headquarter is approachable road adjacent districts through State Highways.SH-25 & SH-4 crosses within the district. The important towns of the district are well connected by road.



Rail Network

Malkangiri is not connected with rail network. Nearest major railway stations are Koraput, Jeypore and Jagdalpur.



Air Network

There is an airport located at Katelguda, on the outskirts of Malkangiri town, nearly 5 Km away from District Headquarter, Malkangiri. However, no flight operations have started as it hasn't received necessary approval from the Directorate General of Civil Aviation (DGCA), yet. Nearest airport is Jeypore Airport which is 103 kms from Malkangiri. Bhubaneswar Airport is 101 kms from Malkangiri. Rajahmundry Airport in Andhra Pradesh is 222 kms from Malkangiri.



2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT:

Other than ordinary Earth, Morrum, Stone & Sand a great variety of major mineral potential like Bauxite, Tin, Asbestos, Limestone and Specified Minor Minerals like Quartz, Talc/Soap Stone & Decorative Stone(Granite) are available in the district.

2.1 Major minerals:

SI No.	MINERAL	LOCATION	RESERVE IN MT	REMARKS
1	Bauxite	Korukonda	0.018	
2	Limestone	Kottameta-Nandiveda-Uksalvagu	240	
3	Tin	Salimi and Mundaguda	0.000347	
4	Asbestos	Bejangiwada	-	Not estimated

2.2 Minor mineral:

Specified Minor Mineral:

Sl No.	MINERAL	LOCATION	RESERVE INMT	REMARKS
1	Quartz	Gorespalli, Sardaput, Ramvaram, Kotapalli, MV-79, MV-127, MV-96, Polluru	-	Not estimated
2	Talc/Soap stone	Sardaput, Pandripani	-	Not estimated
3	Decorative/ Dimension Stone	Peta, Ponarguda, Jagannathpalli, Potteru, Majhiguda, Nilakhamar, Gagarmetla, Gangla	-	Not estimated

3.0 GENERAL PROFILE OF THE DISTRICT:

3.1 Demography:

As per data furnished by the Assistant Collector, Census, Collectorate, Malkangiri:

Population data as per Census - 2011				
Sl. No.	Unit	Total	Male	Female
1	Population	613192	303624	309568
2	ST Population	354614	171717	182897
3	SC Population	138295	70052	68243
4	Literacy (Total)	244706	147001	97705
5	Literacy (Rural)	212881	128473	84408
6	Literacy (Urban)	31825	18528	13297

Demographic Status						
Category	Male	Female	Gen	SC	ST	OBC
Category wise %	49.51	50.48		22.55	57.83	39.31

4.0 PHYSIOGRAPHY & GEOMORPHOLOGY:**4.1 Physiography:**

Malkangiri District is part of Eastern Ghat Super Group, the Eastern Ghats are a discontinuous range of mountains along India's eastern coast. The Eastern Ghats run from the northern Odisha through Andhra Pradesh to Tamil Nadu in the south passing some parts of Karnataka and in the Wayanad district of Kerala. They are eroded and cut through by four major rivers of peninsular India, viz. Godavari, Mahanadi, Krishna, and Kaveri.

The mountain ranges run parallel to the Bay of Bengal. The Deccan Plateau lies to the west of the range, between the Eastern Ghats and Western Ghats. The coastal plains, including the Coromandel Coast region, lie between the Eastern Ghats and the Bay of Bengal. The Eastern Ghats are not as high as the Western Ghats. The Eastern Ghats are older than the Western Ghats and have a complex geologic history related to the assembly and breakup of the ancient supercontinent of Rodinia and the assembly of the Gondwana super continent.

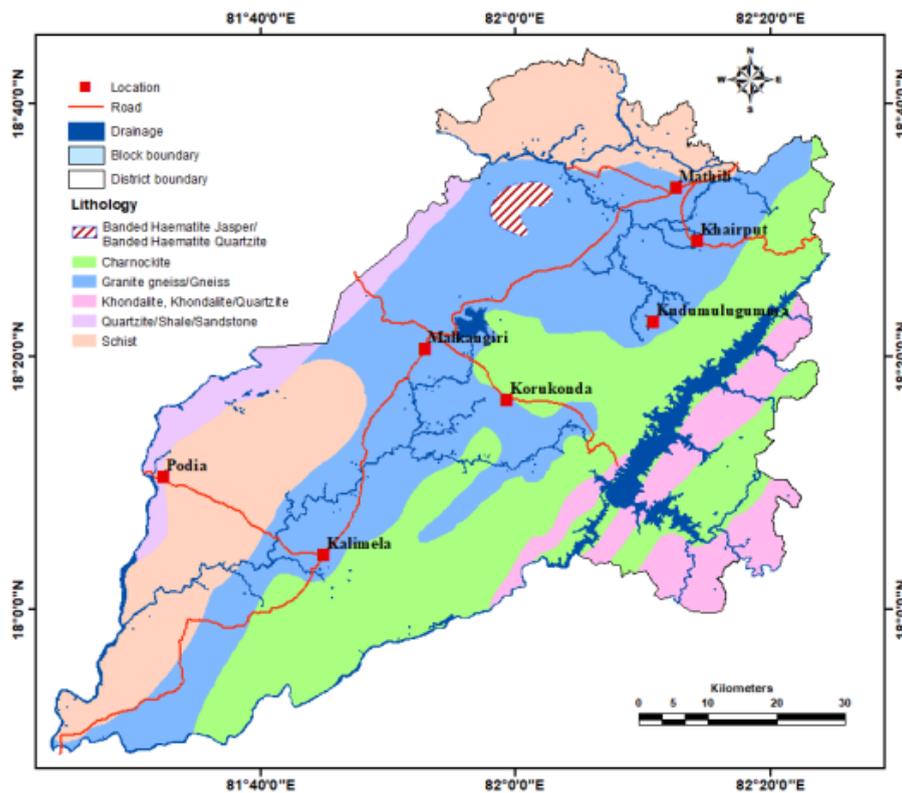
The Eastern Ghats on the east coast of India is a largely granulite terrain but also exposes granites, migmatites, anorthosites and alkaline rocks. This granulite belt has had a prolonged history of mountain building from late Archaean to late Proterozoic. During this long period the Eastern Ghats mobile belt witnessed repeated folding and possibly polycyclic metamorphism. Some recent findings suggest breaks between orogenic cycles and a Proterozoic reworking of Archean granulites. Extreme-temperature crustal metamorphism under fluid-absent conditions and crustal anatexis in huge thickness of pelitic to psammitic protoliths producing leptynites are some of the important results of recent investigations of the Eastern Ghats mobile belt. Different generations of charnockites are present in the Eastern Ghats belt, but charnockite utilisation of granitic gneisses is yet to be documented. Some apparently nascent growths, the patchy charnockites in the Chilika area are shown to be relic to folded charnockitic rocks that suffer edge granulite-facies metamorphism and attendant migmatization.

4.2 Geomorphology:

The district is characterized by varied geomorphological features. Based on Land sat data interpretations and field studies, the geomorphic units of the district are broadly identified as Structural Hills, Denudational Hills, Residual Hills, Shallow and Moderately

weathered peditain, Pediment- Inselberg complex, Inselberg, Flood plains, Structural Valley, Linear Ridge, Bazada.

Structural Hills–It is characterized by a group of linear/ curvilinear/ folded hill ranges of large aerial extent, interspersed with narrow inter-mountain valleys showing definite structural control. It is the most important geomorphological unit in the district adjoining the entire southern border and occupying the northern corner of the district.



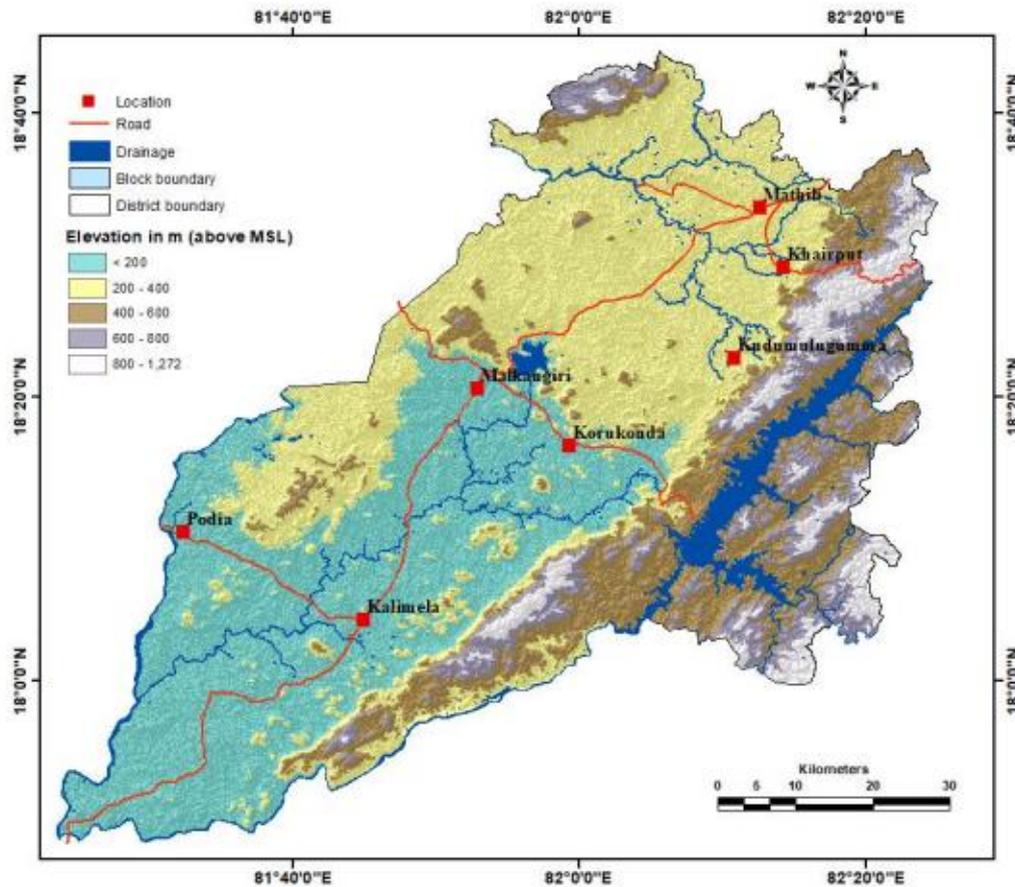
GEOLOGICAL MAP

Denudational Hills– It occurs in the North Eastern corner of the district in a limited patch. It is represented by a group of massive hill ranges interspersed with narrow inter mountain valleys having no structural control or structures obliterated by denudation.

Residual Hills– Hill ranges of moderate dimension surrounded by plains all around, occur as isolated features along the northern boundary of the district.

Shallow and Moderately Weathered Peditain– Next to the structural hills this forms the major geomorphological unit in the district. It presents gently undulating terrain of vast aerial extent, formed as a result of coalescence of different pediments along the foot hills of the Eastern Ghats and affected by shallow to moderate weathering. The north-eastern part of the district is characterized by moderately weathered peditain with weathering prevalent

down to a depth of 5-20m. The rest of the district is covered by shallow weathered pediplain with weathering restricted to 5m depth.



ELEVATION MAP

Pediment-Inselberg Complex– It is a gently undulating bedrock surface with a number of small inselbergs. This unit is widely distributed throughout the district.

Inselberg– Inselbergs are scattered all over the district. These are isolated hills of limited areal extent surrounded by plains all around.

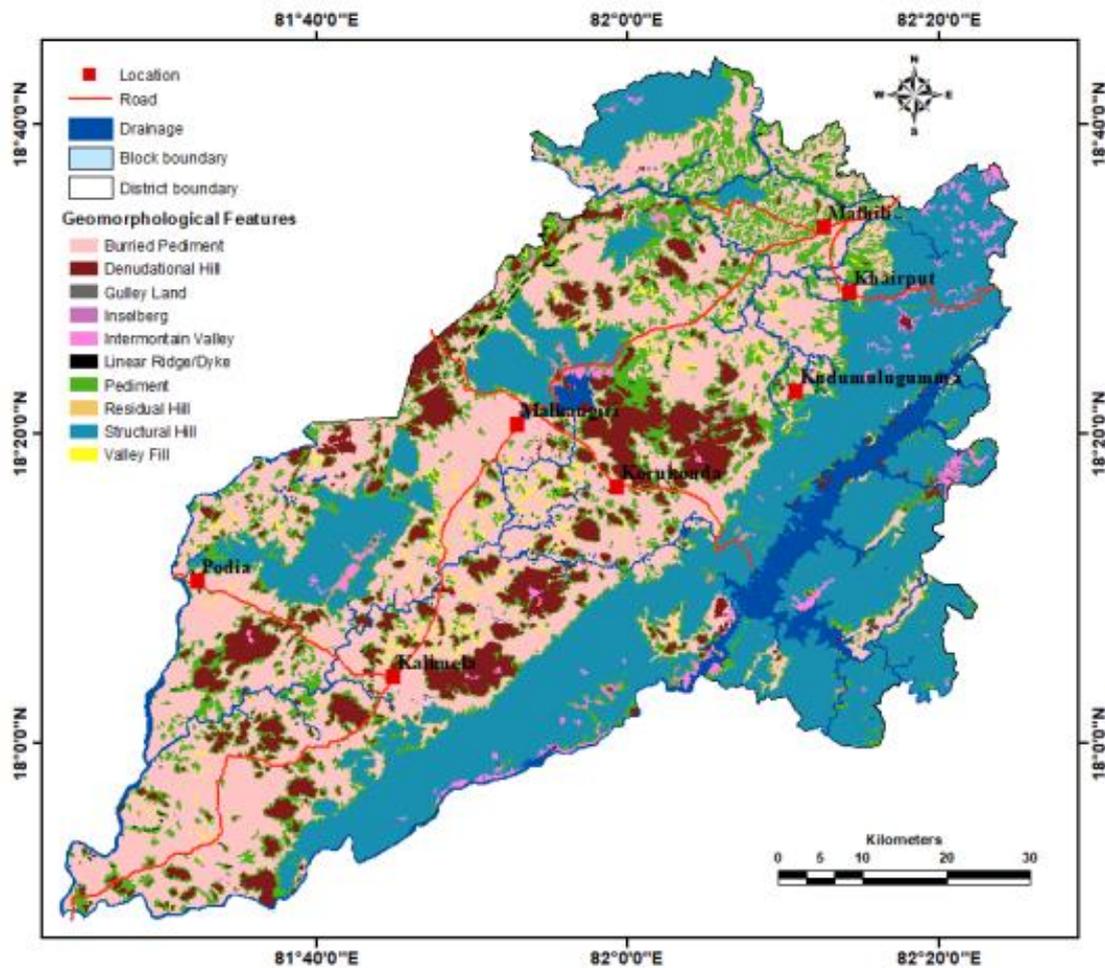
Flood Plain– A narrow stretch of alluvium occurs along river Kolab and its tributaries in the northern part of the district.

Structural Valley– A narrow linear valley within the structural hills and formed along the structurally weak planes occurs along the south-eastern boundary of the district.

Linear Ridge– A narrow line ridge of quartz reef with steep sloped covered by debris, is found in the northern part of the district.

Bajada– A gently sloping plain is formed in the foothill zone and consists mainly of alluvial and partly alluvial material comprising fine silt to big boulders. It occurs in the Southern part of the district.

The general drainage pattern in the district is dendritic to sub-parallel. The Kolab river along with its tributaries, the Potteru and Sileru rivers is the most prominent river of the region. The Kolab river issues from the Sinkaram hills and follows a south-westerly course after passing over Malkangiri district. The river joins the Godavari river in Khammam district of Telangana.



GEOMORPHOLOGY MAP

5.0 GEOLOGY OF THE DISTRICT:

The area is characterized by a complex geological set up with a variety of rock types belonging mainly to the Precambrian and Achaeans, except a thin alluvial patch along river Kolab. The Geological successions of the district is as follows –

Recent	Alluvium	
Pre-cambrian	~~~~~Unconformity~~~~~	
	Quartzites, Limestones, Conglomerates, Shales	
	~~~~~Unconformity~~~~~	
Archeans	Younger Intrusives	Dolerite Dykes, Pgmatises, Vein Quartz
	~~~~~Unconformity~~~~~	
	Andalusite Schists, Sericite Quartz Schists	
	~~~~~Unconformity~~~~~	
	Charnokites Khondalites Granite Gneiss and Its variants	
	~~~~~Base is not Known~~~~~	

The area has suffered regional metamorphism up to the granulite facies and has experienced numerous phases of magmatic intrusions, accompanied by progressive and retrogressive metamorphism, repeated folding and shearing. As a result, original structures, textures and mineral compositions have been completely obliterated by new structures and mineral assemblages.

Granite Gneiss and its variants – These are medium to fine grained rocks exposed in the undulating plains and scattered hillocks. The suite of rocks comprises Hornblende Gneiss, Biotite, Gneiss and Pink Granite. Megascopically the rocks are fine to medium grained, leucocratic with well-developed foliation planes in case of gneisses. The gneisses are usually banded. The bands consist of thin layers rich in quartz and feldspar. Hornblende and mica are common occurrence while Garnet is found occasionally. The strike of the gneisses is variable, viz. N 750E – S750W with 20° dip to N 850W – S 850E with vertical dips. In the majority of the cases, the strike is similar to that of the Eastern Ghats. Granites occur in limited patches in the central and western parts of the district.

Khondalites– The khondalitic group of rocks consists of quartz – Garnet – Sillimanite Schist & Gneiss and Garnetiferous sillimanite quartzite. The khondalites are usually found in the South Eastern and Western parts of the district in the hilly terrains. These rocks exhibit multiple sets of joints having steep dips.

Charnockites– These generally occupy the hill ranges. The rock is coarse grained, dark green to grey in colour with feldspar and quartz crystals. The ferromagnesian minerals are hypersthene and pyroxene. Garnet is also present. The charnockitic rocks form massive out crops. The joints found in charnockites trend N 300E, N-S, & E-W with sub-vertical to vertical dips.

Schists - These include Andalusite – Schists and gneisses and quartz – sericite schists. These occupy the northern part of the district. They are essentially composed of feldspar, andalusite, sericite with inclusions of quartz.

Pegmatites and Dolerites– The pegmatites are commonly associated with the granite gneisses. These are rarely associated with the rocks of charnockites. The dolerites occur locally as dykes and small intrusions in the gneisses and charnockites. Garnet is found in the dolerite in some areas.

Quartz Reef – A prominent Quartz reef is observed in the northeastern boundary of the district. This is intrusive into the country rock and occurs as a narrow linear ridge with steep slopes covered by debris.

Conglomerate, Quartzite, Limestone, Shale – These rock types occur near in North Eastern – South Western boundary of the district. The Quartzites are generally ferruginous in nature and are overlain by the limestones, fine grained and white to blue in colour.

Alluvium - A narrow patch of alluvium occurs along the river Kolab and its tributaries in the northern part of the district. It has only limited thickness.

The granites and its variants are most predominant rock type and occupy major parts of the district. Geological set up of the district primarily controls the Hydrogeological condition of the area.

5.1 Mineral potential (sand) of the district:

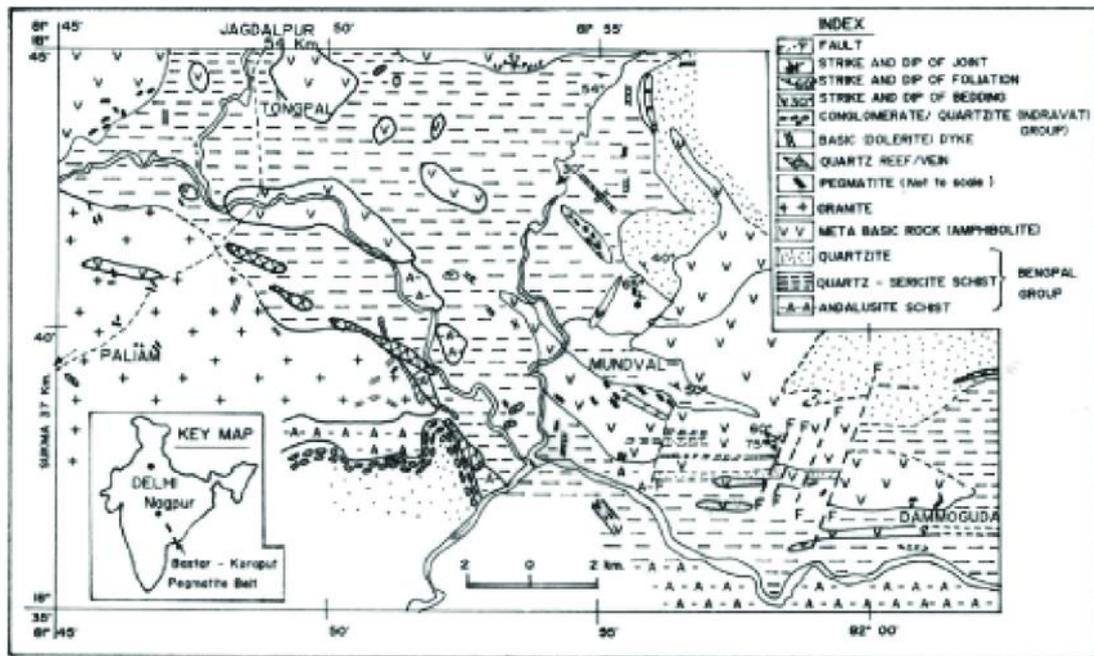
Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
Not Applicable	Not Applicable	624062	391299

5.2 Stratigraphy:

Event Stratigraphy of the Eastern Ghat Mobile Belt is as follows;

Age(Ma)	Event
550-650	Exhumation & Stabilisation (Pan-African)
800-850	Emplacement of Anorthosite Massifs, Some Alkaline Rocks (?) Younger Granitoids are charnockites
950-1100	Main Eastern Ghat Orogeny (=Grenville) Khondalite Group Garnet-Sillimanite-Graphite Gneiss (Khondalite) with minor cordierite-Sapphrine-Spinel Gneiss (Mg-Al) Calc- Silicate rocks & rare Marbles Quartzite (Garnet ± Sillimanite)
1100-1500	Emplacement of Alkaline rocks along with the rift Margin
1800-1600	Evolution of platform (Purana) basins like Cuddapah, Chhattisgarh Indravati etc.
2600-2800	Evolution of Nellore-Khemmam schist belt in Dharwar Craton Charnokite & Gneisses of the basement (WCZ).



5.3 Mineral Resources:

The total good quality Limestone reserves are near Kotameta, Nandiveda and Uskalvagu, estimated at around 240 million tonnes and Bauxite deposits are recorded near Korkunda, estimated at 0.018 million tonnes and Tin deposits are found near villages of Salimi and Mundaguda and estimated at around 0.000347 million tonnes.

In the Minor mineral categories, the specified minor minerals like quartz are found in the villages of Gorespalli, Saradaput, Ramavaram, Kotapalli and MV-79, 127, 96 and Talc/soap stone are found in the villages of Sardaput and Pandripani. However, the reserves of the specified minor minerals are not estimated by Department of Mines & Geology, BBSR.

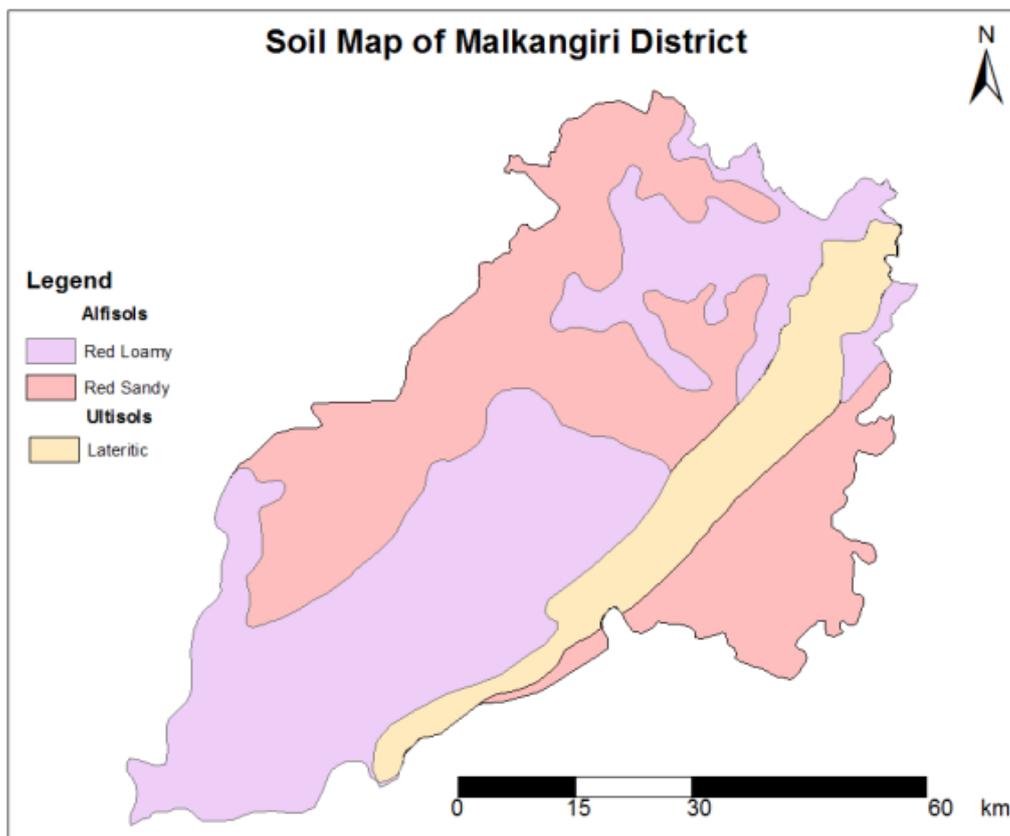
The Dimension stone are located around the villages of Peta, Ponarguda, Jagannathpalli, Potteru, Majhiguda, Nilakhamar, Gagarmetla, Gangla, but the reserves are not estimated by Department of Mines & Geology, BBSR.

5.4 Soil:

The distribution of different soil types in the district depends much on its physiographic and lithologic variations. Based on the physical and chemical characteristics, mode of origin and occurrence, soils of the district may be classified into two groups namely Alfisols (RedSoil) and Ultisols (Lateritic soil).

Alfisols- Alfisols or red soil are the most prominent soil types in the district. There are two different varieties—reds and soil and red loamy soil. They are red in colour and clayey in nature especially the loamy soil, poor in organic matter. Its fertility is low.

Ultisols- Ultisols or lateritic soil occurs in a narrow diagonal strip across the district trending NE- SW. They are red to brown in colour and clayey in nature. Due to low organic matter content the fertility of lateritic soil is low.



6.0 DRAINAGE OF IRRIGATION PATTERN

Malkangiri district is a physically hilly terrain having majorly dendritic drainage pattern to sub-parallel, there is only one main river named Sileru, Kolab River along with its tributaries, the Potteru and Saptadhara Rivers are the most prominent rivers of the region. The Kolab River originates from the Sinkaram hills and follows a south westerly course after passing over Malkangiri district. The river joins the

Godavari river in Khammam district of Telangana. The distance of the sources from the river origin is geologically very short, hence this can be concluded that the rate of deposition of sand in Sileru & Kolab River is moderate, while in rest rivers within the district, the rate of deposit is slow.

Additional river source details are given in the following table:

Sl No.	Name of river	Area (Sq.km drained)	% area drained in the District
01	Sabari/Kolab	20427.00	28.34
02	Sileru/Machhkund	6477	75.80
03	Potteru	2188	100

SALIENT FEATURES OF IMPORTANT RIVERS AND STREAMS

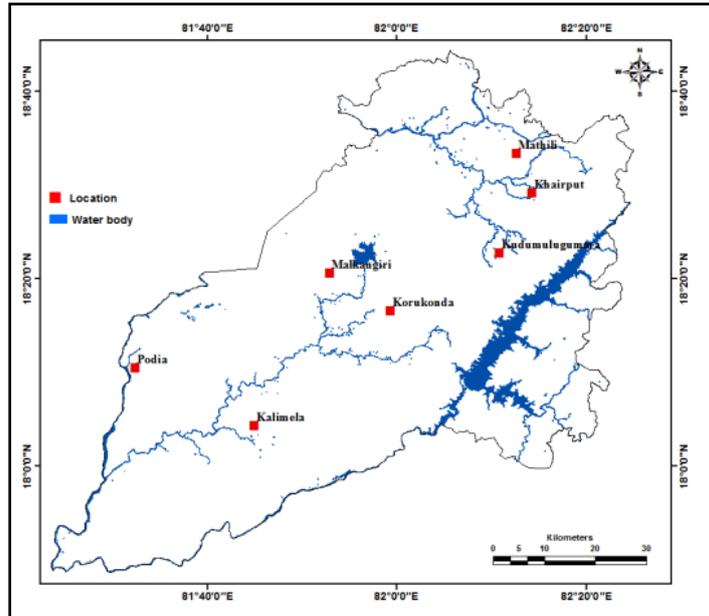
Sl. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of Origin	Altitude of Origin	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Metric Tones/Cums (60% of Total Minerals /potential)
1	Shabari	380.00	Sinkaram hill (Western Slopes of Eastern Ghats)	1370.00	Details of area are given in table in Annexure II (A), II (B), II (C)			
2	Sileru	112.00	Eastern Ghats in Northeastern Andhra Pradesh	600.00 - 900.00				
3	Potteru	111.25	Balimela Power House	418.00				
4	Pangam	NA	NA	NA				
5	Tamasa Nallah	NA	Chhattisgarh	NA				
6	Garia	NA	NA	NA				
7	Gariagad	NA	NA	NA				
8	Dharamagad	NA	NA	NA				
9	Saptadhara	NA	NA	NA				
10	Pitakata	NA	NA	NA				

The District has considerable flat land, which provide suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major rivers flowing in the District are The Kolab, Potteru, Sileru & Sabari. Major crops grown

in the District are paddy. major source of irrigations are Canals, Tanks, well and tube wells.

7.0 PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Sl No	Name of the River or Stream	Process of Deposition	Year	Volume of Sand Deposited
1	Shabari	Moderate	2023-24	NA
			2022-23	
			2021-22	
2	Sileru	Moderate	2023-24	NA
			2022-23	
			2021-22	
3	Potteru	Slow	2023-24	NA
			2022-23	
			2021-22	
4	Pangam	Moderate	2023-24	NA
			2022-23	
			2021-22	
5	Tamasa Nallah	Slow	2023-24	NA
			2022-23	
			2021-22	
6	Garia	Slow	2023-24	NA
			2022-23	
			2021-22	
7	Gariagad	Slow	2023-24	NA
			2022-23	
			2021-22	
8	Dharamagad	Slow	2023-24	NA
			2022-23	
			2021-22	
9	Saptadhara	Slow	2023-24	NA
			2022-23	
			2021-22	
10	Pitakata	Slow	2023-24	NA
			2022-23	
			2021-22	



Drainage System



River System

8.0 LAND UTILIZATION PATTERN IN THE DISTRICT

8.1 Forest and non-forest land

Forest land use as per the data collected from Divisional Forest Officer, Malkangiri is as follows;

Status	Total Area in Ha
Reserve Forest	35256.2401
Proposed Reserve Forest	72561.3603
Demarcated Protected Forest	18865.0586
Reserve Land	22615.7164
Projected Land	95.872
Village Forest	268.2
Compensatory Afforestation	156.098
Other Forest (Under Revenue Deptt.)	140061.394
Areas not recorded forests but having characteristics of forest (Govt.)	799.4
Areas not recorded forests but having characteristics of forest (Pvt.)	35.505
Total	290714.8444

Malkangiri division covers a geographical area of 5791.00 sq km which has 40.34% Forest cover area (Indian State of Forest Report, 2019). This Division lies between 17°50' to 18°45' North latitudes and 81°23' to 82°25' East longitudes. This Division has six ranges, 23 sections and 116 beats. In terms to Forest Canopy Density classes, the division has 158 sq km under very dense forest, 712.76 sq km under moderately dense forest, 1465.41 sq km under open forest and 45.90 sq km under scrub. In this Division, forest types are Moist Deciduous Forest, Southern Tropical Moist Deciduous Forests, Southern Moist Mixed Deciduous Forests, Orissa Tropical Semi Evergreen Forests, Dry Deciduous Scrub Forests and Central India South Tropical Hill Forests.

Type of Forest Cover	FC Data-2019 Area in ha
Very Dense Forest (VDF)	158
Moderately Dense Forest (MDF)	712.76
Open Forest (OF)	1465.41
Total	2336.17
% of Geographical Area	40.34
Scrub	45.90

(Source: India state of forest report 2019-Odisha)

8.2 Agricultural land

8.2.1 Agro Climatic Zone

Sl. No.	Items	
1	Climate	Hot and sub-Humid
2	Mean Annual Rainfall (mm)	1559.35 mm (for the year 2022) 1762.47 mm (for the year 2022)
3	Mean Max. Summer Temp.	38° – 42°
4	Mean Min. Winter Temp.	20° – 23°
5	Soil Type	Broadly the district has Red, Lateritic and acidic soil. Soil texture is sandy loam

8.2.2 Land use

Agriculture land use as per the data collected from Chief District Agriculture Officer, Malkangiri is as follows;

1. Geographical Area: 5,79,100 (Sq. Km.)
2. Cultivable Area: 1,62,716 Ha.
3. Cultivated Area:

High	85,760 Ha.
Medium	31,916 Ha.
Low	25,064 Ha.
Total	1,42,740 Ha.
4. Paddy Area (Kharif):

High	14,235 Ha.
Medium	31,916 Ha.
Low	25,064 Ha.
Total	71,215 Ha.
5. Cropping Intensity: 135 %
6. Irrigation Potential:

Kharif	90420 Ha.
Rabi	48315 Ha.
7. Total nos. of GPs 111 nos.

Village	1055 nos.
NAC	1 no.

Municipality 1 no.

8. Major Crops:

Kharif Paddy, Maize, Pulses, Ragi, Sesamum, Vegetables

Rabi Groundnut, Pulses, Vegetables

1. Large Farmers : 28 nos.
2. Medium Farmers : 7,537 nos.
3. Semi Medium Farmers : 13,104 nos.
4. Marginal Farmers : 62,976 nos.
5. Small Farmers : 23,684 nos.
6. Landless : 8320 nos.
7. Average size of holding : 1.22 Ha.

The agricultural activity is by and large confined to the traditional Kharif cultivation due to lack of adequate irrigation system. The principal crops of the district are Paddy, pulses and oilseeds.

8.3 Horticulture land

In Malkangiri District, Mathili, Khairput, Malkangiri and parts of Chittrakonda blocks are suitable for fruit orchards as most part of the land are upland. Plantations of cashew, mangos, jackfruits, papayas and bananas have been taken up in these areas. Other vegetables are also grown throughout the district as well. The plantations coverage in the District for the last five years as received from Dy Director of Horticulture, Malkangiri is given in the following table.

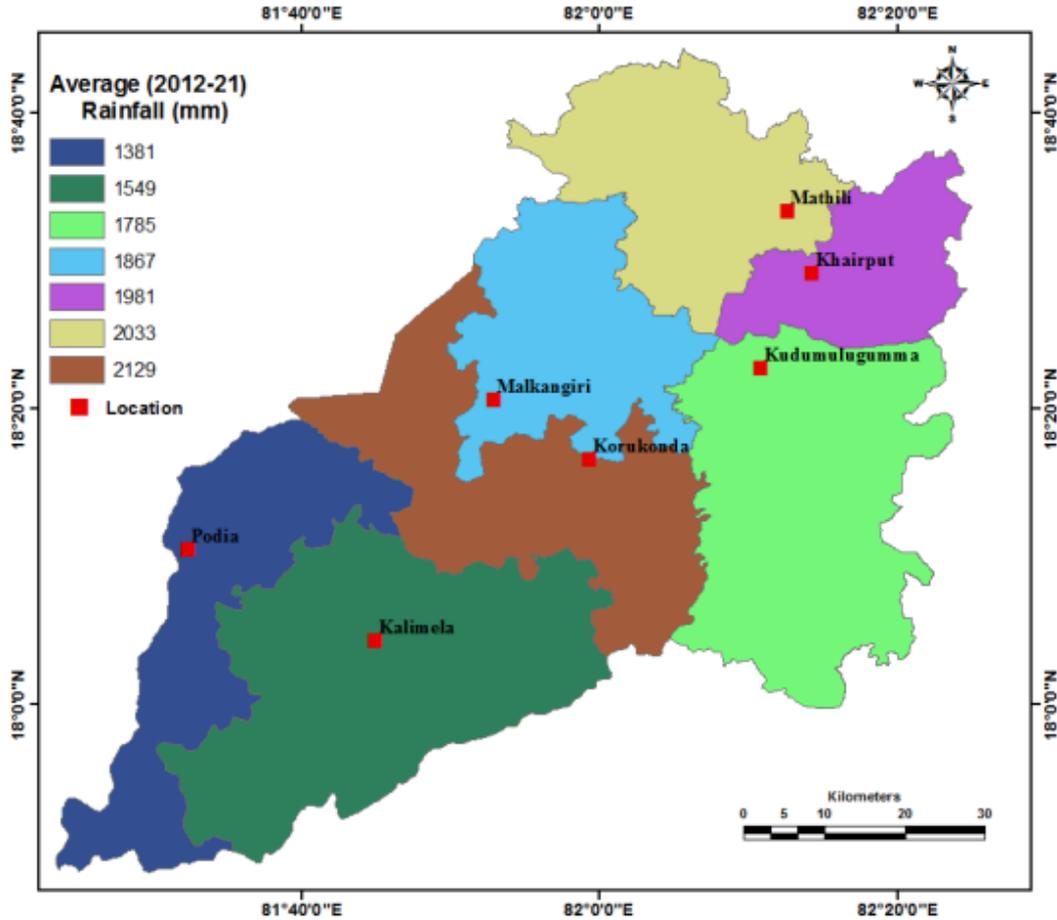
Sl. No.	Year	Fruit Plants Area (Ha)					Vegetables Area (Ha)	Flowers Area (Ha)
		Papaya	Banana	Cashew	Mango	Jackfruit		Marigold
1	2023-24	142.23	515.06	15882.12	8254.54	746.59	21368.61	112.5
2	2022-23	156	536	15593	8620	309	20327	87
3	2021-22	141.8	510	15506	8275	297	19351.76	86.4
4	2020-21	135	503	15420	8520	285	19053.76	80
5	2019-20	88	510	15552	8275	297	16729	90

9.0 RAINFALL OF THE DISTRICT AND CLIMATE CONDITION

The district has a subtropical climate. Southwest monsoon is the principal source of rainfall. Rainfall pattern is uneven and erratic. The average annual rainfall gradually increases from South Western to North Eastern parts of the district. The average annual rainfall of last five years as per the data furnished by the Emergency Section, Collectorate, Malkangiri is given below:

Average Rainfall data of last 5 years (Month Wise)					
Month	(Year wise rainfall in mm)				
	2019	2020	2021	2022	2023
January	1.14	1.91	0	17.31	0
February	0	0	2.71	0	0
March	1.86	11.49	0	0	109.87
April	5.43	89.07	97.21	32.73	50.24
May	33.71	45.71	51.63	69.49	57.1
June	151.49	238.54	216.26	110.03	215.74
July	633.84	371.54	374.09	541.2	603
August	763.34	979.64	391.96	384.43	257.4
September	339.96	211.34	371.29	343.33	368.11
October	170.61	209.54	112.63	60.66	15
November	2.86	5.21	58.8	0	37.31
December	0	0	0	0.17	48.63
Total	2104.24	2163.99	1676.58	1559.35	1762.4

The agricultural definition of drought takes into account the negative departure of seasonal rainfall from the mean seasonal rainfall. A perusal of the frequency of occurrence of drought indicates that mild to normal drought condition prevails in Malkangiri District.



9.1 Climate

The climate of the district is tropical with hot and dry summer and pleasant winter. The summer season extends from March to middle of June followed by the rainy season from June to September. The winter season extends from November till the end of February.

Temperature Graph- Malkangiri

Maximum temperature rising upto 44oC during May. In the summer months of April and May, hot winds from the west are generally experienced in the afternoon. December is the coldest month with lowest temperature during Winter being 11oC. Monsoon generally lasts from the end of May to October. Occasional showers are received in the month of April, November and December.

10.0 THE LIST OF MINING LEASES IN THE DISTRICT WISE LOCATION, AREA, AND PERIOD OF VALIDITY

Please refer Table in Annexure – II (A) & II (B)

11. DETAIL OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS (SAND):

SI No	Tahasil Name	Mineral	Royalty Collection		
			2021-22	2022-23	2023-24
1	Chittrakonda	Sand	₹ 0.00	₹ 0.00	₹ 0.00
2	Kalimela	Sand	₹ 1,51,349.00	₹ 2,28,510.00	₹ 0.00
3	Khairput	Sand	₹ 7,86,133.00	₹ 8,34,048.00	₹ 8,88,919.00
4	Kudumulugumma	Sand	₹ 13,79,476.00	₹ 12,94,037.00	₹ 10,84,323.00
5	Malkangiri	Sand	₹ 0.00	₹ 1,28,252.00	₹ 0.00
6	Mathili	Sand	₹ 28,64,895.00	₹ 46,78,483.00	₹ 71,61,519.00
7	Motu	Sand	₹ 0.00	₹ 0.00	₹ 0.00
Total			₹ 51,81,853.00	₹ 71,63,330.00	₹ 91,34,761.00

12. DETAIL OF PRODUCTION OF RIVER SAND IN LAST THREE YEARS:

SL. NO.	Name of the Tahasil	2021-2022	2022-2023	2023-2024	Total Quantity
1	Kalimela	627.33	500.00	500.00	1627.33.00
2	Khairput	Nil	7971.00	7971.00	15942.00
3	Chittrakonda	600.00	600.00	600.00	1800.00
4	Kudumuluguma	3050.00	3050.00	2595.00	8695.00
5	Malkangiri	1700.00	2407.00	2407.00	6514.00
6	Mathili	18700.00	18700.00	18700.00	56100.00
7	Motu	905.00	600.00	3000.00	4505.00
Total					

13. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

Total mineral reserve of Sand will access after detail study or grant of potential area, which may investigate as per details below.

- (i) Stretches of sand were identified based on field observation.
- (ii) Mineable resource was calculated by considering detail prospecting.
- (iii) Area calculated as per GPS co-ordinates and information obtained from local people. Land detail need to be verified from revenue record.
- (iv) Since this is an interim report, as per the present requirement of minerals, more such Stretches of sand need to be identified and the data should be updated periodically, after certain intervals to update the data bank of DSR.

Summary of Identified River Sand Potential:

Please refer Table in Annexure – II (C) & II (C-a)

14. DEMAND AND SUPPLY OF THE MINERAL IN THE LAST THREE YEARS:

As per data furnished by the Works Deptt.

Data furnished by R&B Malkangiri Division:

Sl. No.	Mineral Type	2023-24		Remarks
		Demand (CuM)	Supply (CuM)	
1	Sand	80189.130	80189.130	

Data furnished by RWS&S Malkangiri Division:

Sl. No.	Mineral Type	2021-22		2022-23		2023-24		Remarks
		Demand (CuM)	Supply (CuM)	Demand (CuM)	Supply (CuM)	Demand (CuM)	Supply (CuM)	
1	Sand	3786.31	3786.31	3249.34	3249.34	3508.95	3508.95	

15. MAP OF EXISTING MINING LEASES IN THE DISTRICT:

N.A.

CONCLUSION:

To meet the requirement of minerals in the present scenario, it is proposed to identify such potential areas at certain interval and get the data bank of DSR to be updated regularly. The insitu mining activity in any area is on one hand bring revenue and employment (Direct and indirect) and on other hand if not done properly potential pollution and ecological imbalance increases, the ability of the ecosystem can also be reduced. Particulate matter transported by the wind as a result of excavations, blasting, transportation of materials, heavy equipment used raise these particulate levels; and Gas emissions from the combustion of fuels in stationary and mobile sources, explosions, and mineral processing. All these activities indirectly affected the biodiversity of area. Larger potential and smaller areas have been identified in Malkangiri District on the basis of geological study carried out during field observation, which can be considered for mining concession after all the parameters for statutory clearances are verified by consulting with concerned authorities.

The District Survey Report for River Sand (Minor Mineral) in respect of Malkangiri District in accordance with Appendix-X, Para-7 (iii) (a) of S.O. 3611(E) dt. 25.07.2018 of Ministry of Environment, Forest and Climate Change, New Delhi, Enforcement & Monitoring Guideline for Sand Mining-2020 and in compliance with the orders of Hon'ble Supreme Court dt. 10.11.2021 in connection with C.A Nos. 3661-3662 of 2020. Before preparation of this report, a survey has been conducted by District Environment Impact Assessment Authority (DEIAA) with the assistance of Irrigation Department, Forest Department, Public Works Department, Mining Department, Ground Water Boards, Remote Sensing Department, Mining Departments. The DSR is being submitted to SEIAA, Odisha, Bhubaneswar for necessary evaluation and approval.

Details of Sand/ M-Sand Sources

a) Rivers:

River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Shabari	380.00	NA
Potteru	111.25	NA
Pangam	NA	NA
Sileru	112.00	NA

c) Patta Lands/ Khatedairi Land (Existing Proposed)

Owner	SINo.	Area	District	Tahasil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing/ proposed
Not applicable for Malkangiri District								

B) De-Siltation Location (lakes/ Ponds/dams etc. (Existing & proposed)

1	2	3	5	6	7	8	9	10	11	12
Name of reservoir/ Dams			Maintain/Collected by State Government/ PSU	location	District	Tahasil	Village	Size (Ha)	Quantity (MT/year)	Existing/ proposed
Not applicable for Malkangiri District										

d) M-sand Plants:

Plant name	Owner	District	Tahasil	Village	Gee-location	Quantity Tonnes/Annun / Proposed
Not applicable for Malkangiri District						

Note: For inclusion of M-Sand Plant/Patta Land in DSR, the plant/landowners need to submit the request to the Mining Department with complete details. Inclusion in DSR does not give them right to operate the M-Sand Plant/Sand Mining lease.

List of Potential Mining Lease (Existing & Proposed) Rivers

Tahasil	Sl.No	River detail	Lease detail	Area (in Ha.)	Distance (in K.M) from PA/BR/WC	Distance from forest area (inK.M)	Mining lease within 500 metres (if yes cluster Area)	Total excavation in Tonnes/ Annum considering digging depth max as 3 metres	Mineral to be mined (sand/Bajri/RBM etc.)	Existing/ proposed
1	2	3	4	5	6	7	8	9	10	11

Chittrakonda Tahasil

Chittrakonda	1	Orkel	Orkel Sand Quarry	5.00	WC-191.11km BR-2.20 km	Karlapat Wildlife Sanctuary-191.11 KM	No	600	Sand	Existing
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Kalimela Tahasil

Kalimela	1	Potteru	Maranpalli Sand Quarry	4.95	WC-222.32 Km BR-1.8 Km	Karlapat Wildlife Sanctuary-222.32 km	No	NA	Sand	Existing
Kalimela	2	Potteru	Girkanpalli Sand Quarry	5.86	WC-229.56 Km BR-2.54 Km	Karlapat Wildlife Sanctuary-229.56 km	No	500	Sand	Existing
Kalimela	3	Potteru	Tamanpalli Sand Quarry	4.92	WC-234.32 km BR-2.89 km	Karlapat Wildlife Sanctuary-234.32 km	No	1000	Sand	Existing
Kalimela	4	Potteru	Venkatpallam sand Quarry	4.96	WC-219.65 km BR-4.51 km	Karlapat Wildlife Sanctuary-219.65 km	No	NA	Sand	Existing
Kalimela	5	Potteru	Telguda Sand Quarry	4.96	WC-217.55 km BR-2.97 km	Karlapat Wildlife Sanctuary-217.55 km	No	NA	Sand	Existing
Kalimela	6	Potteru	Tamanpalli Sand Quarry-B	5.00	WC-233.26 km BR-9.51 km	Karlapat Wildlife Sanctuary-233.26 km	No	NA	Sand	New
Kalimela	7	Potteru	Padganpalli Sand Quarry-I	3.580	WC-229.1 km BR-2.7 km	Karlapat Wildlife Sanctuary-229.1 km	Yes	NA	Sand	New
Kalimela	8	Potteru	Padganpalli Sand Quarry-II	4.550	WC-228.5 km BR-3.0 km	Karlapat Wildlife Sanctuary-228.5 km	Yes	NA	Sand	New
Kalimela	9	Potteru	Murbampalli Sand Quarry	2.3	WC-233.2 km BR-1.3 km	Karlapat Wildlife Sanctuary-233.2 km	No	NA	Sand	New
Kalimela	10	Sileru	Poluru Sand Quarry	5.0	WC-249.3 km BR-4.2 km	Karlapat Wildlife Sanctuary-249.3 km	No	NA	Sand	New

Khairput Tahasil

Khairput	1	Saptadhara	Kamalapadar Sand Quarry	5.00	WC- 142.19km BR- 3.52 Km	Karlapat Wildlife Sanctuary-142.19 km	No	1570	Sand	Existing
Khairput	2	Garia	Govindapalli Sand Quarry	NA	WC- 145.48 km BR- 0.72 km	Karlapat Wildlife Sanctuary-145.48 km	No	5001	Sand	Existing
Khairput	3	Pitakata	Sikhpalli Sand Bed	2.912	WC- 164.67 Km BR- 1.11 Km	Karlapat Wildlife Sanctuary-164.67 km	No	1400	Sand	Existing
Khairput	4	Pitakata	Pushpalli Sand Quarry	4.855	WC- 165.0 Km BR- 0.32 Km	Karlapat Wildlife Sanctuary-165.0 km	No	NA	Sand	New

Mathili Tahasil

Mathili	1	Dardur	Khairapali Sand Quarry	5.00	WC-166.20 km BR-0.83 km	Kotgarh Wildlife Sanctuary-166.20 km	No	2500	Sand	Existing
Mathili	2	Pangam	Mecca Sand Quarry	5.00	WC-158.47 km BR-4.85 km	Karlapat Wildlife Sanctuary-158.47 km	No	2800	Sand	Existing
Mathili	3	Pangam	Pangam Sand Quarry	5.00	WC-157.37 km BR-0.28 km	Karlapat Wildlife Sanctuary-157.37 km	No	3000	Sand	Existing
Mathili	4	Gariagad	Chaulamendi Sand Quarry	5.00	WC-158.24 km BR-0.33 km	Karlapat Wildlife Sanctuary-158.24 km	No	1250	Sand	Existing
Mathili	5	Gariagad	Gangrajgumma Sand Quarry	5.00	WC-153.10 km BR-0.83 km	Karlapat Wildlife Sanctuary-153.10 km	No	2500	Sand	Existing
Mathili	6	Sikhar	Malguda Sand Quarry	5.00	WC-162.46 km BR-0.86 km	Karlapat Wildlife Sanctuary-162.46 km	No	2700	Sand	Existing
Mathili	7	Pangam	Podaguda Sand Quarry	NA	WC-157.92 km BR-1.35 km	Karlapat Wildlife Sanctuary-157.92 km	No	2700	Sand	Existing
Mathili	8	Pangam	Kathiguda Sand Quarry	5.00	WC-158.8 km BR-2.4 km	Karlapat Wildlife Sanctuary-158.8 km	No	NA	Sand	New
Mathili	9	Shabari	Katapali Sand Quarry	5.00	WC-161.83 km BR-12.56 km	Karlapat Wildlife Sanctuary-161.83 km	No	NA	Sand	New
Mathili	10	Shabari	Badarengabeda Sand Quarry	5.00	WC-159.7 km BR-12.24 km	Karlapat Wildlife Sanctuary-159.7 km	No	NA	Sand	New
Mathili	11	Dharamagad	Dhungiput Sand Quarry	5.00	WC-144.46 km BR-1.51 km	Karlapat Wildlife Sanctuary-144.46 km	No	NA	Sand	New
Mathili	12	Saptadhara	Timasput Sand Quarry	5.00	WC-148.71 km BR-0.41 km	Karlapat Wildlife Sanctuary-148.71 km	No	NA	Sand	New
Mathili	13	Pangam	Bijapadar Sand Quarry	5.00	WC-158.48 km BR-9.23 km	Karlapat Wildlife Sanctuary-158.48 km	No	NA	Sand	New
Mathili	14	Shabari	Mahupadar Sand Quarry-I	5.00	WC-163.9 km BR-9.0 km	Karlapat Wildlife Sanctuary-163.9 km	No	NA	Sand	New
Mathili	15	Shabari	Mahupadar Sand Quarry-II	5.00	WC-164.2 km BR-7.78 km	Karlapat Wildlife Sanctuary-164.2 km	No	NA	Sand	New
Mathili	16	Gariagad	Chaulamendi Sand Quarry-B	5.00	WC-158.76 km BR-1.12 km	Karlapat Wildlife Sanctuary-158.76 km	No	NA	Sand	New
Mathili	17	Pitakata	Mutebeda Sand Quarry	3.5	WC-163.2 km BR-0.92 km	Karlapat Wildlife Sanctuary-163.2 km	No	NA	Sand	New

Kudumulgumma Tahasil

Kugumulgumma	1	Gotiguda	Gotiguda Sand Quarry	2.02	WC-164.25km BR-0.81 km	Karlapat Wildlife Sanctuary-164.25km	No	1400	Sand	Existing
Kugumulgumma	2	Dumali	Chitapari Sand Quarry	1.367	WC-160km	Karlapat Wildlife Sanctuary-160km	No	1000	Sand	Existing
Kugumulgumma	3	NA	Maheswarpur & Kondeguda Sand bed Sand Quarry	5.796	WC-179.77km BR-0.09 km	Karlapat Wildlife Sanctuary-179.77km	No	NA	Sand	Existing

Malkangiri Tahasil

Malkangiri	1	Tamasa Nallah	Chidupali Sand Bed-B	4.93	WC-200.06 km BR-0.91km	Karlapat Wildlife Sanctuary-200.06km	No	716	Sand	Existing
Malkangiri	2	Potteru	Pulimetla Sand Quarry	4.475	WC-209.68km BR-0.63km	Karlapat Wildlife Sanctuary-209.68 km	No	1000	Sand	Existing
Malkangiri	3	Potteru	Kodelmetla Sand Quarry	4.86	WC-204.78 km BR-0.98km	Karlapat Wildlife Sanctuary-204.78 km	No	700	Sand	Existing

Motu Tahasil

Motu	1	Shabari	Uskalbag Sand Bed	5.00	WC-211.24km BR-4.22 km	Kotagarh Wildlife Sanctuary-211.24km	No	600	Sand	Existing
Motu	2	NA	Alma Sand Quarry	5.00	WC-260.76 km BR-9.51 km	Kotagarh Wildlife Sanctuary-260.76 km	No	NA	Sand	New

List Operational River Sand Sources in Malkangiri District

SI No	Name of the river or stream	Name of the Quarry Lease	Village, Khata No, Plot No & Kسام	Latitude	Longitude	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Metric Tones/Cums (60% of Total Minerals/potential)	Geological mineral potential in Metric Tones/Cums	Name of the Lessee with address despatch	Period of Lease		Status of working or non working/Temp permit working for	
												From	To		
1	Tahasil	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CHITRAKONDA															
Chittrakonda	1	Orkel	Orkel Sand Quarry	Khata No.-51, Plot No. - 426/P Kسام-Nadi, Mouza-Orkel	18°12'59.9 0868"N to 18°13'13.6 6173" N	82°02'46.1 5746"E to 82°03'03.7 6343"E		5.000 Ha	MR-5010	GR-7374	Sri D Venket Rao, A.T- Kumutiguda Malkangiri, Odisha	13.05.2021	12.05.2026	Operational	
Kalimela	1	Potteru	Girkanpalli Sand Quarry	Khata No.-398, Plot No. - 3156 & 3240, Kسام-Nadi, Mouza-Girkanpalli	18°03'12.634 14"N to 18°03'30.153 44" N	81°39'17.449 68"E to 81°39'29.45 781"E		4.850 Ha	MR-9979	GR-23440	Sri Krishna Rangu, A/Po-Kalimela, Malkangiri, Odisha, Mob: 9437820186	29.03.2022	28.03.2027	Operational	
Kalimela	2	Potteru	Tamanpalli Sand Quarry	Khata No.-224, Plot No. - 25/1, Kسام-Nadi, Mouza-Tamanpalli	18°03'32.59" N to 18°03'17.15" N	81°35'26.345 85"E to 81°35'42.919 81"E		4.92 Ha	MR-3106.4	GR-4658.4	Gitanjali Panigrahi, At-Santosh Marg, Po-Bhawanipatna, Dist.-Kalahandi, Odisha . Mob.- 9437000101	29.12.2022	28.12.2027	Operational	
KHAIRPUT															
Khairput	1	Saptadhara	Kamalapadar Sand Bed	Khata No.-23, Plot No. - 70, Kسام-Nadi, Mouza-Kamalapadar	18° 35' 23.76165"N to 18° 35' 57.98786" N	82° 16' 12.03638"E to 82° 16' 34.32312"E		5.000Ha	MR-4800	GR-8000	Samarjit Jena, A/ PO- Govindapalli, PS-Mathili, Dist- Malkangiri	26.11.2021	25.11.2026	Operational	

Khairput	2	Garia	Govindapalli Sand Quarry	Khata No.-452, Plot No. - 596,1300,1309, Kisam-Nadi, Mouza-Govindapalli, Area in Ha-4.995	18° 34' 00.46867"N to 18° 34' 12.22093" N	82° 16' 22.43749"E to 82° 16' 58.82375"E				4.995Ha	MR-16828	GR-54770	Prafulla Chandra Rath, At-Govindapalli, Dist.-Malkangiri	06.08.2022	05.08.2027	Operational
Khairput	3	Pitakata	Sikhpalli Sand Quarry	Khata No.-150, Plot No. - 1582/1, 1734/1 Kisam-Nadi, Mouza-Sikhpalli, Area in Ha-2.354	18° 27' 34.46612"N to 18° 27' 16.91427" N	82° 08' 16.68061"E to 82° 08' 09.66500"E				2.354Ha	MR- 8474	GR-14124	Sahadev Behera, At/PO-Govindapalli, PS-Mathili, Dist-Malkangiri	03.11.2021	02.11.2026	Operational

MATHILI

Mathili	1	Dardur	Khairapalli Sand Bed	Khata No.-131, Plot No. -1351/1, 1169/1 & 418/1, Kisam-Nadi, Mouza-Khairapalli	18°26'43.489 56"N to 18°26'55.027 35" N	82°06'58.620 10"E to 82°07'14.445 58"E				5.000Ha	MR-34585	GR-50000	J. Srinivas Rao, At/PO-Mathili, Dist-Malkangiri, Odisha	27.12.2021	26.12.2026	Operational
Mathili	2	Pangam	Mecca Sand Bed	Khata No.-167, Plot No. -2457, 2458 & 2702, Kisam-Nadi, Mouza-Mecca	18°32'30.519 17"N to 18°32'51.695 28" N	82°05'37.547 20"E to 82°05'55.337 83"E				5.000Ha	MR-37088	GR-50000	Bikram Keshri Patra, At/PO-Nayakguda Malkangiri	05.04.2021	04.04.2026	Operational
Mathili	3	Pangam	Pangam Sand Bed	Khata No.-163, Plot No. -152, Kisam-Nadi, Mouza-Pangam	18°31'41.728 48"N to 18°31'58.408 67" N	82°07'48.665 89"E to 82°08'06.333 16"E				5.000Ha	MR-39120	GR-50000	Jayanta Behera, At/PO-Mathili, Dist-Malkangiri, Odisha	17.03.2021	16.03.2026	Operational
Mathili	4	Pangam	Chaulamendi Sand Quarry	Khata No.-361, Plot No. -444, Kisam-Nadi, Mouza-Chaulamendi	18°30'11.727 10"N to 18°30'31.578 94" N	82°09'33.789 83"E to 82°09'54.562 53"E				5.000Ha	MR-14510	GR-19231	Rajesh Kumar Buruda, At-Pandiripani Po-Serapali, Dist-Malkangiri Odisha	16.02.2022	15.02.2027	Operational
Mathili	5	Garia	Gangarajuma Sand Quarry	Khata No.-100, Plot No. -188, 190, 192,376 & 372/1, Kisam-Nadi, Mouza-Gangarajuma	18°31'01.147 30"N to 18°31'14.842 71" N	82°13'24.635 23"E to 82°13'41.006 69"E				5.000Ha	MR-37057.35	GR-50000	V Ramesh, At-Durgagudisahi, Po/Dist-Malkangiri, Odisha	27.12.2021	26.12.2026	Operational
Mathili	6	Sikhar	Malguda Sand Bed	Khata No.-44, Plot No. -254 & 356, Kisam-Nadi, Mouza-Malguda	18°28'40.140 06"N to 18°28'58.183 45" N	82°07'35.3"E to 82°07'55.4"E				5.000Ha	MR-32890	GR-50000	Bikram Keshri Patra, At/PO-Nayakguda Malkangiri	05.04.2021	04.04.2026	Operational

Mathili	7	Pangam	Podaguda Sand Bed	Khata No.-47, Plot No. -195, Kisam-Nadi, Mouza-Podaguda	18°31'05.345 30"N to 18°31'27.571 23"N	82°08'54.650 65"E to 82°09'00.344 42"E.		5.000Ha	MR-39100	GR-50000	Lalit Somany, MV-03, AI/Po/Dist-Malkangiri, Odisha	08.03.2021	07.03.2026	Operational
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KUDUMULUGUMMA

Kudummulugumma	1	Dumali	Chitapari Sand Quarry	Khata No.-57, Plot No. -394,370, Kism-Nadi, Mouza-Chitapari, Area In Ha- 1.367	18°24'53.550 55"N to 18°24'43.316 53" N	82°10'10.874 73"E to 82°10'14.776 26"E		1.367Ha	MR-7074	GR-13670	Uma Shankar Sahu, AI/Po-Konukonda, Dist-Malkangiri, Odisha	10.12.2021	09.12.2026	Operational
Kudummulugumma	2	Gotiguda	Gotiguda Sand Quarry	Khata No.-158, Plot No. -1162, 1172,1119, Kism-Nadi, Mouza-Gotiguda	18°25'25.479 56"N to 18°25'52.952 14" N	82°10'07.293 57"E to 82°10'16.555 19"E		5.000Ha	MR-64312	GR-100000	Durga Prasad Barik, AI/Po-Kudummulugumma, Dist-Malkangiri	12.11.2021	11.11.2026	Operational

MALKANGIRI

Malkangiri	1	Tamasana Nala	Chidupali Sand Bed-B	Khata No.-625, Plot No. -4421/4839, Kism-Nadi, Mouza-Chidupali	18°14'16.962 14"N to 18°15'06.285 52" N	81°52'07.967 47"E to 81°52'26.49 586"E		4.930Ha	MR-2900.5	GR-13892	Subash Chandra Mistry, At-MPV-03, Po-Malkangiri, Dist-Malkangiri	01.08.2022	31.07.2027	Operational
Malkangiri	2	Potteru	Pulimetta Sand Quarry	Khata No.-306, Plot No. -2171, Kism-Nadi, Mouza-Pulimetta	18°10'43.510 40"N to 18°10'58.578 10" N	81°47'48.073 24"E to 81°47'.56.87 058"E		4.475Ha	MR-5004	GR-6421	Kiran Kumar Gouda, AI/Po-Malkangiri, Dist-Malkangiri	25.05.2022	24.05.2027	Operational
Malkangiri	3	Potteru	Kodelimetta Sand Quarry	Khata No.-446(AAJ), Plot No. -3377, Kism-Nadi, Mouza-Kodelimetta	18°12'23.483 04"N to 18°12'47.028 63" N	81°50'00.917 60"E to 81°50'.59.35 857"E		4.860Ha	MR-13700	GR-23038	Rajesh Kumar Buruda, At-Pandripani Serapalli Malkangiri Mob No-8280885455	29.10.2021	28.01.2026	Operational

MOTU

Motu	1	Shabari	Uskalbag Sand Bed	Khata No.-148, Plot No. -1, Kism-Nadi, Mouza-Motu	18°18'38.164 28"N to 18°18'49.785 33" N	81°37'23.907 13"E to 81°37'.34.75 359"E		5.000Ha	MR-6419	GR-8249	Premchand Gupta, At-Civil Lane, Ial Bagh, Po-Jagdalpur, Dist-Bastar, Chhattisgarh	24.07.2023	23.07.2028	Operational
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N.B: The Geological resource and Movable reserve is as per approved mining plan by Authorized officers.

List of Non-operational River Sand Sources in Malkangiri District

Sl No	Name of the river or stream	Name of the Quarry Lease	Village, Khata No, Plot No & Kisam	Latitude	Longitude	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Metric Tones/Cums (60% of Total Minerals/potential)	Geological mineral potential in Metric Tones/Cums	Name of the Lessee with address despatch	Period of Lease		Status of working or non working permit for working for
												From	To	
1	Tahasil			6	7	8	9	10	11	12	13	14	15	16
KALIMELA														
Kalimela	1	Potteru Maranpalli Sand Bed	Khata No.- 339, Plot No.- 2320 & 2321, Kisam-Nadi, Mouza- Maranpally	18°6'24.496" N to 18°6'47.835" N	81°41'48.665" E to 81°41'59.195" E			4.95 Ha	MR-3210.25	GR-7896	NA	NA	NA	Non-Operational
Kalimela	2	Potteru Venkaipallam Sand Quarry	Khata No.- 195, Plot No.- 01, 02, 73 & 74, Kisam-Nadi, Mouza- Venkatpalam.	18°07'25.974" N to 18°07'25.107" N	81°42'53.385" E to 81°42'54.496" E			4.96 Ha	MR-2437.5	GR-7548	NA	NA	NA	Non-Operational
Kalimela	3	Potteru Teliguda Sand Quarry	Khata No.-50, Plot No.- 1 & 2, Kisam-Nadi, Mouza- Teliguda	18°08'36.56" N to 18°09'02.52" N	81°43'08.16E to 81°43'22.58" E			5.000 Ha	MR-3694	GR-20000	NA	NA	NA	Non-Operational
KUDUMULUGUMMA														
Kudumulgumma	1	NA Maheswarpur & Kondelguda Sand Quarry	Village- Maheswarpur Khata No.- 103, Plot No.- 358, Village- Kondelguda, Khata No.-70, Plot No.- 615,410, 411, Kisam-Nadi, Area in Ha- 4.956	18°17'12.600" N to 18°17'54.613" N	82°06'18.646" E to 82°06'51.031" E			4.956ha	NA	NA	NA	NA	NA	Non-Operational

N.B: The Geological resource and Mineable reserve is as per approved mining plan by Authorized officers.

ADDITIONAL INFORMATION AS SOUGHT FOR WIDE LETTER NO. 4605 /SEIAA DT. 25.05.2022 ON DISTRICT SURVEY REPORT OF NON-OPERATIONAL SAND SOURCES

Tahasil	Sl No	Name of the river or stream	Name of the source	Khata, Plot, area, Mouza	Latitude	Longitude	Width of the river	Distance of the source area from river embankment	Distance from nearest road/railway bridge	Distance from nearest sand mining source	Distance from village road	Distance from school, temple etc.	Distance from nearest Eco-Sensitive Zone/Wild life sanctuary	Whether there is any cluster situation	Year- wise deposition of sand in the stretch of river where the source is located	Year- wise depletion of sand in the stretch of river where the source is located	Rate of replenishment of sand in the stretch of river where the source is located	Quantum of sand that can be sustainably extracted year to year
	1				6	7	8	9	10	11	12	13	14	15	16	17	18	19
KALIMELA																		
Kalimeela	1	Potteru	Maranpalli Sand Quarry	Khata No.- 339, Plot No.- 2320 & 2321, Kisam-Nadi, Mouza-Maranpally, Area-4.95	18°6'24.496" N to 18°6'47.835" N	81°41'48.665" E to 81°41'59.195" E								No				222.00 Cum
Kalimeela	2	Potteru	Venkatpallam Sand Quarry	Khata No.- 195, Plot No.- 01, 02, 73 & 74, Kisam-Nadi, Mouza-Venkatpallam, Area- 4.96 Ha	18°07'25.974" N to 18°07'25.107" N	81°42'53.385" E to 81°42'54.496" E								No				222.00 Cum
Kalimeela	3	Potteru	Teluguda Sand Quarry	Khata No.- 50, Plot No.- 1 & 2, Kisam-Nadi, Mouza-Teluguda, Area-5.0ha	18°08'36.56" N to 18°09'02.52" N	81°43'08.16E to 81°43'22.58"E								No				222.00 Cum
KUDUMULUGUMMA																		
Kudumulu gumma	1	Hatilamba	Maheswarpur & Kondeiguda Sand Quarry	Village- Maheswarpur, Khata No.- 103, Plot No.-358, Village- Kondeiguda, Khata No.- 70, Plot No.- 615,410, 411, Kisam-Nadi, Total Area in Ha- 4.956	18°17'12.600 02"N to 18°17'54.613 37" N	82°06'18.6465 2"E to 82°06'51.0310 5"E								No				NA

SUMMARY OF SAND SOURCES OF MALKANGIRI DISTRICT

SUB-DIVISION	NAME OF THE TAHASIL	NO. OF OPERATIONAL SOURCES	NO. OF NON-OPERATIONAL SOURCES	NO. OF NEW SOURCES	TAHASIL WISE TOTAL SAND SOURCES
MALKANGIRI	CHITRAKONDA	1	-	-	1
	KALIMELA	2	3	5	10
	KHAIRPUT	3	-	1	4
	KUDUMULUGUMMA	2	1	-	3
	MALKANGIRI	3	-	-	3
	MATHILI	7	-	10	17
	MOTU	1	-	1	2
	TOTAL		19	04	17

List of New River Sand sources of Malkangiri District

SI No	Name of the river or stream	Name of the Quarry Lease	Village, Khata No, Plot No & KISAM	Latitude	Longitude	Length of Area recommended for Mineral concession (in KM)	Average width of Area recommended for Mineral concession (in Meter)	Total Area recommended for Mineral concession (in Sq. Meter/Ha.)	Mineable Mineral potential in Metric Tones/Cums (60% of Total Minerals/potential)	Geological mineral potential in Metric tones/Cums	Name of the Lessee with address and despatch	Period of Lease		Status of working or non working/Temp permit working for		
												From	To			
Tahasil																
1																
Mathili	1	Pangam	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mathili	2	Shabari	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mathili	3	Shabari	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mathili	4	Dharmagad	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mathili	5	Saptadhara	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mathili	6	Pangam	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mathili	7	Shabari	3	4	5	6	7	8	9	10	11	12	13	14	15	16

ADDITIONAL INFORMATION AS SOUGHT FOR VIDE LETTER NO. 4605 /SEIAA DT. 25.05.2022 ON DISTRICT SURVEY REPORT OF SAND SAIRAT OF NEW SOURCES

Tahasil	SI No	Name of the river or stream	Name of the source	Khata, Plot, area, Mouza	Latitude	Longitude	Width of the river	Distance of the source area from river embankment	Distance from nearest road/railway bridge	Distance from nearest sand mining source	Distance from village road	Distance from school, temple etc.	Distance from nearest Eco-Sensitive Zone/ Wild life sanctuary	Whether there is any cluster situation	Year- wise deposition of sand in the stretch of river where source is located	Year- wise depletion of sand in the stretch of river where the source is located	Rate of replenishment of sand in the stretch of river where the source is located	Quantum of sand that can be sustainably extracted year to year
					6	7	8	9	10	11	12	13	14	15	16	17	18	19
Mathili	1	Pangam	Kathiguda Sand Quarry	Khata No.-6, Plot No. - 400/615/1 Kislam-Nadi, Mouza-Kathiguda Ha-5.00	18°31'57.66 270°N to 18°32'27.92 231° N	82°06'41.85 464°E to 82°06'58.56 203°E	0.06 km	0.27 km	2.4 km	3.26 km	0.5 km	0.91 km	158.8 km	NO				
Mathili	2	Shabari	Katapalli Sand Quarry	Khata No.-40, Plot No. - 2/1, Kislam-Nadi, Mouza-Katapalli, Ha-5.00	18°35'37.51 593°N to 18°35'46.59 595° N	81°59'33.19 306°E to 81°59'48.46 206°E	0.12 km	0.86 km	12.56 km	2.92 km	0.25 km	0.87 km	161.83 km	NO				
Mathili	3	Shabari	Badaragabeda Sand Quarry	Khata No.-67, Plot No. - 575/653/1, Kislam-Nadi, Mouza-Badarangabeda, Ha-5.00	18°35'37.86 931°N to 18°35'49.66 263° N	82°01'20.23 189°E to 82°01'33.95 472°E	0.12 km	1.11 km	12.24 km	2.92 km	0.67 km	4.0 km	159.7 km	NO				
Mathili	4	Dharmagad	Dhunglapat Sand Quarry	Khata No.-253, Plot No. - 577/1, 567/1, Kislam-Nadi, Mouza-Dhunglapat, Ha-5.00	18°35'37.66 640°N to 18°35'46.36 310° N	82°15'19.62 354°E to 82°15'46.17 918°E	0.08 km	0.12 km	1.51 km	9.77 km	0.65 km	0.97 km	144.46 km	NO				
Mathili	5	Saptadhar	Timasput Sand Quarry	Khata No.-141, Plot No. - 858, 1153/1 Kislam-Nadi, Mouza-Timasput, Ha-5.000	18°36'35.70 8718°N to 18°36'47.63 294° N	82°09'50.58 251°E to 82°10'17.42 8514°E	0.18 km	0.41 km	0.51 km	0.31 km	0.88 km	0.94 km	148.71 km	NO				
Mathili	6	Pangam	Bijapadar Sand Quarry	Khata No.-128, Plot No. - 47, Kislam-Nadi, Mouza-Bijapadar, Ha-4800	18°34'26.75 038°N to 18°34'54.77 810° N	82°03'45.62 126°E to 82°03'58.77 702°E	0.04 km	0.7km	9.23 km	4.77 km	0.79 km	0.34 km	158.48	NO				
Mathili	7	Shabari	Mahupadar Sand Quarry-I	Khata No.-211, Plot No. - 1878/1, Kislam-Nadi, Mouza-Mahupadar, Ha-5.00	18°35'50.33 488°N to 18°36'00.98 677° N	81°57'34.92 599°E to 81°57'46.57 583°E	0.16 km	0.47 km	9.0 km	1.14 km	0.6 km	3.62 km	163.9 km	NO				
Mathili	8	Shabari	Mahupadar Sand Quarry-II	Khata No.-211, Plot No. - 1877/1, Kislam-Nadi, Mouza-Mahupadar, Ha-5.00	18°35'57.67 141°N to 18°36'04.21 588° N	81°56'51.50 912°E to 81°57'01.71 986°E	0.18 km	0.08 km	7.78 km	1.14 km	1.06 km	2.41 km	164.7 km	NO				

Mathili	9	Ganiagad	Chaulamendi Sand Quarry	Khata No.-361, Plot No. - 32/1, Kisan-Nadi, Mouza-Chaulamendi, Ha-5.00	18°30'27.70 754"N to 18°30'32.01 627" N	82°08'56.96 074"E to 82°09'16.83 914"E	0.07 km	0.08 km	1.12 km	4.76 km	0.75 km	0.96 km	158.76 km	NO			
Mathili	10	Pilakata	Mutebeda Sand Quarry	Khata No.-31(AAA), Plot No.-15/1, 16/1,20/1, Kisan-Nadi, Mouza-Mutebeda, Ha-3.5	18°28'30.335 10"N to 18°28'25.426 74" N	82°07'44.020 78"E	0.09 km	0.08 km	0.92 km	2.2 km	0.2 km	1.0 km	163.2 km	NO			
Motu	11	Shabari	Alma Sand Quarry	Khata No.-74, Plot No.-465, Kisan-Nadi, Mouza-Alma, Ha-5.00	17°53'15.873 08"N to 17°53'25.664 08" N	81°24'59.409 31"E to 81°25'07.932 54"E	0.17 km	0.07 km	7.95 km	27.32 km	1.12 km	1.23 km	260.76 km	NO			
Kalimela	12	Potteru	Tamanapalli Sand Quarry	Khata No.-224, Plot No.- 74/1, Kisan-Nadi, Mouza-Tamanapalli, Ha-5.00	18°03' 28.55669"N to 18°03'39.676 86" N	81°36' 15.66704"E to 81°36'34.101 20"E	0.09 km	0.05 km	9.51 km	27.32 km	0.71 km	0.98 km	233.26 km	NO			
Kalimela	13	Potteru	Padangpalli Sand Quarry-I	Khata No.-209, Plot No. - 1877, Kisan-Nadi, Mouza-Padangpalli, Ha-3.580	18°03'31.119 81"N to 18°03'27.136 59" N	81°40'28.264 36"E to 81°40'15.226 82"E	0.2 km	0.1 km	2.7 km	0.00 km	0.3 km	1.6 km	229.1 km	YES			
Kalimela	14	Potteru	Padangpalli Sand Quarry-II	Khata No.-209, Plot No. - 2115, Kisan-Nadi, Mouza-Padangpalli, Ha-4.550	18°03'43.423 88"N to 18°03'27.272 57" N	81°40'43.100 78"E to 81°40'30.033 25"E	0.2 km	0.1 km	3.0 km	0.00 km	0.3 km	1.7 km	228.5 km	YES			
Kalimela	15	Potteru	Murbanpalli Sand Quarry	Khata No.-380, Plot No. - 3545, Kisan-Nadi, Mouza-Murbanpalli, Ha-2.300	18°03'26.626 87"N to 18°03'10.728 27" N	81°37'18.512 66"E to 81°36'54.013 73"E	0.1 km	0.1 km	1.3 km	5.9 km	0.6 km	1.0 km	233.2 km	NO			
Kalimela	16	Sileru	Poluru Sand Quarry	Khata No.-55(AAA), Plot No.-1232, Kisan-Nadi, Mouza-Poluru, Ha-5.000	17°51'01.3681 6"N to 17°50'50.497 83" N	81°38'49.772 74"E to 81°38'40.881 17"E	0.13 km	0.3 km	4.2 km	23.0 km	0.2 km	1.1 km	249.3 km	NO			
Khairput	17	Pilakata	Pushpalli Sand Quarry	Khata No.-259, Plot No. - 24,181, Kisan-Nadi, Mouza-Pushpalli Ha-4.855	18°27'15.985 13"N to 18°26'54.835 96" N	82°08'25.515 87"E to 82°08'05.753 40"E	0.09 km	0.01 KM	0.32 km	6 km	0.58 km	0.9 km	165.0 km	NO			

Cluster & Contiguous Cluster details
Cluster:

River Name	Cluster No.	Lease No.	Location (River Bed/ Patta Land	Village	Area(inHa.)	Total excavation (Cum)
Poteru	1	NA	River Bed	Padganpalli	3.58	NA
Poteru	1	NA	River Bed	Padganpalli	4.55	NA

Contiguous Cluster Details

River Name	Contiguous Cluster No.	Cluster No.	Number of leases in the cluster	Location (River Bed/ Patta Land	Distance between clusters	Village	Area of cluster (in Ha.)	Total excavation (Ton)
No contiguous Cluster Situation available in respect of Malkangiri District								

Annexure-IV

Transportation Routes for individual leases and leases in Cluster.

Name of The Tahasil	Name of the Sand source	Lease No.	Transportation Route number	Whether runs on Govt. or Private Land	Details of village/ Forest area/ Agricultural land through which the approach road runs if any	Number of tippers/ day of lease	Number of tippers /day of all the lease on route	Length of Route in K.M	Type of Road (Blacktopped/ Unpaved)	Recommendation for road (Black Topped/ Unpaved)	The road will be constructed by Government/Lease Owner	Route map and location
1	2	3	4	5	6	7	8	9	10	11	12	13
Chitrakonda Tahasil												
Chitrakonda	Orkel Sand Quarry	11252100068	Village Road	Govt. Land	Orkel	4	7	3	Unpaved	Unpaved	Lease Owner	
Kalimela Tahasil												
Kalimela	Maranpalli Sand Quarry	NA	Village Road	Govt. Land	Maranpalli	3	5	3	Unpaved	Unpaved	Lease Owner	
Kalimela	Girkanpalli Sand Quarry	11242200077	Village Road	Govt. Land	Girkanpalli	2	4	4	Unpaved	Unpaved	Lease Owner	
Kalimela	Tamanpalli Sand Quarry	11242200273	Village Road	Govt. Land	Tamanpalli	4	5	2	Unpaved	Unpaved	Lease Owner	
Kalimela	Venkatapallam Sand Quarry	NA	Village Road	Govt. Land	Venkatapallam	4	6	3	Unpaved	Unpaved	Lease Owner	
Kalimela	Teliguda Sand Quarry	NA	Village Road	Govt. Land	Teliguda	3	5	3	Unpaved	Unpaved	Lease Owner	
Kalimela	Padganpalli Sand Quarry-I	NA	Village Road	Govt. Land	Padganpalli	5	7	4	Unpaved	Unpaved	New	
Kalimela	Padganpalli Sand Quarry-II	NA	Village Road	Govt. Land	Padganpalli	3	4	3	Unpaved	Unpaved	New	
Kalimela	Tamanpalli Sand Quarry-B	NA	Village Road	Govt. Land	Tamanpalli	4	5	2	Unpaved	Unpaved	New	
Kalimela	Murbalpalli Sand Quarry	NA	Village Road	Govt. Land	Murbalpalli	3	5	4	Unpaved	Unpaved	New	
Kalimela	Poturu Sand Quarry	NA	Village Road	Govt. Land	Poturu	2	5	4	Unpaved	Unpaved	New	
Khairput Tahasil												
Khairput	Kamalapadar Sand Quarry	11252100151	Village Road	Govt. Land	Tamanpalli	4	12	3	Unpaved	Unpaved	Lease Owner	
Khairput	Govindapalli Sand Quarry	11252200105	Village Road	Govt. Land	Govindapalli	3	8	2	Unpaved	Unpaved	Lease Owner	
Khairput	Sikhpalli Sand Bed	11252100122	Village Road	Govt. Land	Sikhpalli	4	10	3	Unpaved	Unpaved	Lease Owner	
Khairput	Pushapalli Sand Bed	NA	Village Road	Govt. Land	Pusapalli	2	6	5	Unpaved	Unpaved	New	
Mathili Tahasil												
Mathili	Khairapalli Sand Quarry	11232101285	Village Road	Govt. Land	Khairapalli	4	10	3	Unpaved	Unpaved	Lease Owner	
Mathili	Mecca Sand Quarry	11232100388	Village Road	Govt. Land	Mecca	3	12	4	Unpaved	Unpaved	Lease Owner	

Mathili	Pangam Sand Quarry	11232100313	Village Road	Govt. Land	Pangam	2	5	6	Unpaved	Unpaved	Lease Owner
Mathili	Chaulamendi Sand Quarry	11232200174	Village Road	Govt. Land	Chaulamendi	2	6	6	Unpaved	Unpaved	Lease Owner
Mathili	Gangrajgumma Sand Quarry	11232101286	Village Road	Govt. Land	Gangrajgumma	4	9	7	Unpaved	Unpaved	Lease Owner
Mathili	Malguda Sand Quarry	11232100387	Village Road	Govt. Land	Malguda	3	6	8	Unpaved	Unpaved	Lease Owner
Mathili	Podaguda Sand Quarry	11232100235	Village Road	Govt. Land	Podaguda	2	5	10	Unpaved	Unpaved	Lease Owner
Mathili	Katiguda Sand Quarry	NA	Village Road	Govt. Land	Katiguda	1	3	8	Unpaved	Unpaved	New
Mathili	Katapali Sand Quarry	NA	Village Road	Govt. Land	Katapali	2	6	9	Unpaved	Unpaved	New
Mathili	Badarengabeda Sand Quarry	NA	Village Road	Govt. Land	Badarengabeda	2	5	11	Unpaved	Unpaved	New
Mathili	Dhungiaput Sand Quarry	NA	Village Road	Govt. Land	Dhungiaput	1	5	10	Unpaved	Unpaved	New
Mathili	Timusput Sand Bed	NA	Village Road	Govt. Land	Timusput	2	5	8	Unpaved	Unpaved	New
Mathili	Bijapadar Sand Quarry	NA	Village Road	Govt. Land	Bijapadar	3	7	9	Unpaved	Unpaved	New
Mathili	Mahupadar Sand Bed-I	NA	Village Road	Govt. Land	Mahupadar	3	6	9	Unpaved	Unpaved	New
Mathili	Mahupadar Sand Bed-II	NA	Village Road	Govt. Land	Mahupadar	3	6	9	Unpaved	Unpaved	New
Mathili	Chaulamendi Sand Quarry-B	NA	Village Road	Govt. Land	Chaulamendi	2	6	6	Unpaved	Unpaved	New
Mathili	Mutebeda Sand Quarry	NA	Village Road	Govt. Land	Mutebeda	3	4	6	Unpaved	Unpaved	New

Kudumulugumma Tahasil

Kudumulugumma	Gotiguda Sand Quarry	11252100139	Village Road	Govt. Land	Gotiguda	4	12	3	Unpaved	Unpaved	Lease Owner
Kudumulugumma	Chitapari Sand Quarry	11252100156	Village Road	Govt. Land	Chitapari	1	3	0.1	Unpaved	Unpaved	Lease Owner
Kudumulugumma	Maheswarpur & Kondelguda Sand Bed	NA	Village Road	Govt. Land	Maheswarpur & Kondelguda	5	11	4	Unpaved	Unpaved	Lease Owner

Malkangiri Tahasil

Malkangiri	Chidupali Sand Bed-B	11232200733	Village Road	Govt. Land	Chidupali	5	14	4	Unpaved	Unpaved	Lease Owner
Malkangiri	Pulimetla Sand Quarry	11232200555	Village Road	Govt. Land	Pulimetla	3	6	5	Unpaved	Unpaved	Lease Owner
Malkangiri	Kodelmetla Sand Quarry	11232101074	Village Road	Govt. Land	Kodelmetla	6	8	6	Unpaved	Unpaved	Lease Owner

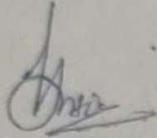
Motu Tahasil

Motu	Uskalbag Sand Bed	11242300163	Village Road	Govt. Land	Uskalbag	2	2	3	Unpaved	Unpaved	Lease Owner
Motu	Alma Sand	NA	Village Road	Govt. Land	Alma	2	3	4	Unpaved	Unpaved	New

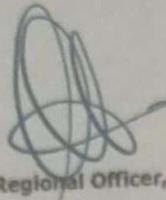
Cluster No.	Transportation Route number	Number of tippers/ day of Cluster	Number Of tippers /day of all the Cluster on route	Length of Route in K.M	Type of Road (Blacktopped/ unpaved)	Recommendation for road (Black Topped/ Unpaved)	The road will be constructed by Government/Lease Owner	Route map and location
Cluster-1	Quarry Road	8	11	7	Unpaved	Unpaved	New	

River Sand Mining

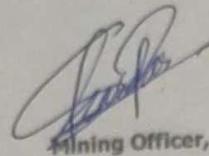
DSR of Malkangiri District



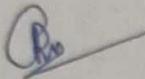
S.D.O, Irrigation Division,
Malkangiri



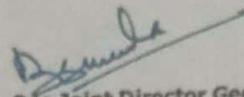
Regional Officer,
OSPCB, Koraput



Mining Officer,
Malkangiri



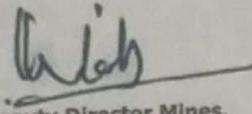
A.C.F, Malkangiri Forest Division
Malkangiri



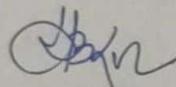
Geologist, O/o Joint Director Geology
Koraput



Deputy Director Mines
Jeypore



Deputy Director Mines,
Koraput



Sub-Collector
Sub-Divisional Committee, Malkangiri

[Redacted signature]