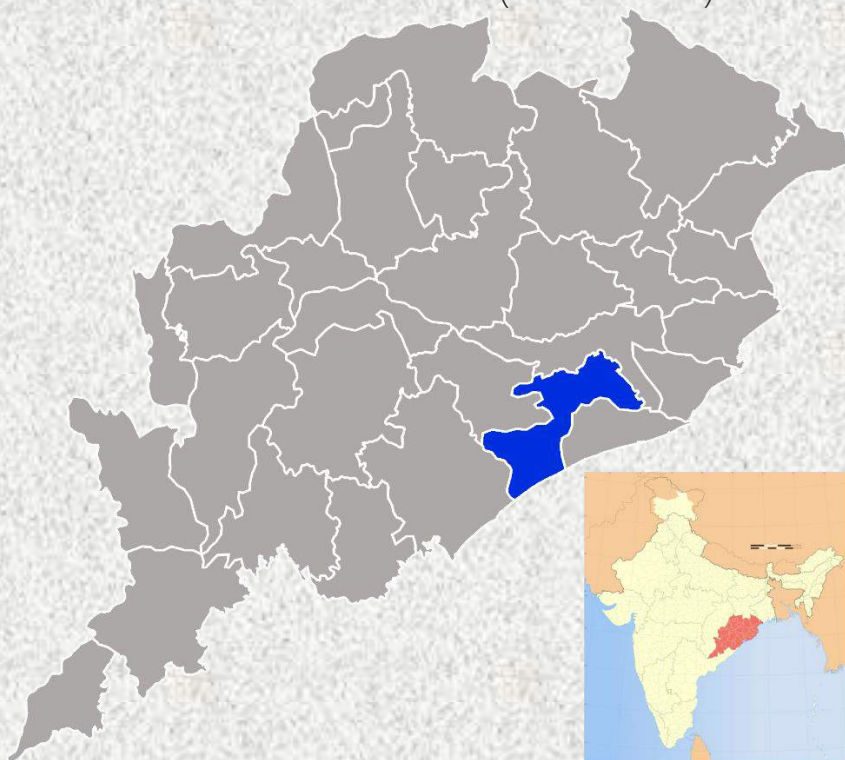




DISTRICT SURVEY REPORT (DSR) OF KHORDHA DISTRICT, ODISHA FOR RIVER SAND MINING

As per Notification No. S.O. 141(E), 15th January, 2016 & S.O. 3611(E), 25th July, 2018, New Delhi, MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE (MoEF & CC)



**COLLECTORATE KHORDHA
OCTOBER-2024**

CONTENTS

Point No.	DESCRIPTION	Page No.
	PREFACE	01
01	INTRODUCTION	02-04
02	OVERVIEW OF MINING ACTIVITY IN THE DISTRICT.	05-07
03	LIST OF MINING LEASE IN THE DISTRICT WITH LOCATION, AREA AND PERIOD OF VALIDITY.	08-20
04	DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS	21
05	DETAILS OF PRODUCTION OF SAND IN LAST THREE YEARS	22-23
06	PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT	23-26
07	GENERAL PROFILE OF THE DISTRICT.	27-33
08	LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC.	34-37
09	PHYSIOGRAPHY OF THE DISTRICT	38
10	RAINFALL: MONTH-WISE	39
11	GEOLOGY AND MINERAL WEALTH	40-42

LIST OF TABLES

SI No.	DESCRIPTION	Page No.
01	The list of mining leases in the district with location, area & period of validity.	8-20
02	Details of royalty or revenue received in last three years.	21
03	Detail of production of sand in last three years	22
04	Category of Forest Areas in Khordha Forest Division(Khordha District)	34
05	Category of Forest Areas in Chandaka Wildlife Division, Bhubaneswar	34
06	Category of Forest Areas in City Forest Division	35
07	Blockwise Land Utilization Pattern in Khordha District	36
08	Drainage system with description of main river:	42
09	Salient Features of Important Rivers & Streams	44-47

LIST OF ANNEXURE

SI No.	DESCRIPTION		Page No.
01	Annexure-I	Details of Sand/M-Sand Sources	47-48
02	Annexure-II	List of Potential Mining Leases (existing & proposed)	49-53
03	Annexure-III	Cluster & Contiguous Cluster details	54 -55
04	Annexure-IV	Transportation Routes for individual leases and leases in Cluster	56-61
05	Annexure-V	Final List of Potential Mining Leases (existing & proposed)	62-65
06	Annexure-VI	Final List of Cluster & Contiguous Cluster	66-67
07	Annexure-VI	Final Transportation Routes for Individual leases and leases in Cluster	68-73

LIST OF MAPS

SI No.	DESCRIPTION	Page No.
01	Index Map of the District	30
02	Map showing Tehsils of the District	31
03	Khordha District map of Odisha	32
04	Road & Railways Map of District	33
05	Forest Map of Khordha District	34
06	Mineral Map of Khordha District	38
07	Mining Leases marked on the map District of Odisha (Topo-Map & Satellite-Map)	74-75

PREFACE

The Erstwhile Ministry of Environment and Forests (MoEF), (the Government of India, made Environmental Clearance (EC) for mining of minerals mandatory through its Notification of 27th January, 1994 under the provisions of Environment Protection Act, 1986. Keeping in view the experience gained in environmental clearance process over a period of one decade, the Ministry came out with Environmental Impact Notification, SO 1533 (E), dated 14th September 2006. The Ministry of Environment, Forests & Climate Change (MoEF&CC), Government of India had amended the said vide notification S.O. 141(E) Dated 15th January, 2016. Now again Ministry of Environment, Forests & Climate Change (MoEF & CC), Government of India amended the notification S.O. 141(E) Dated 15th January, 2016 vide S.O. 3611(E) Dated 25th July, 2018. It has been made mandatory to obtain environmental clearance for different kinds of development projects as listed in Appendix-X of the Notification. In compliance to the notification issued by the Ministry of Environment and Forest and Climate Change Notification no. S.O.3611 (E) NEW DELHI dated 25-07-2018 the preparation of district survey report of sand mining has been prepared in accordance with Clause II of Appendix X of the notification. Every effort has been made to cover river sand mining locations, future potential areas and overview of sand mining activities in the district with all its relevant features pertaining to geology and mineral wealth. This report will act as a compendium of available mineral resources, geological set up, environmental and ecological set up of the district and based on data of various departments like Revenue, Water Resources, Forest, Geology and Mining in the district as well as statistical data uploaded by various state Government departments for preparation for district survey report. The main purpose of preparation of District Survey Report is to identify the mineral resources and developing the mining activities along with other relevant data of the district.

OBJECTIVES

The main objective of the preparation of District Survey Report is to ensure the following –

- Identification of mineral wealth in the district.
- Identification of areas of Minor Mineral having the potential mineral where mining can be allowed.
- Identification of areas of proximity to infrastructural structures and installations where mining should be prohibited.

01. INTRODUCTION.

Khordha is one of the new districts carved out of the former Puri District on 1st April, 1993. The other new district carved out of Puri was Nayagarh. In the year 2000, the district's name was changed from Khurda to Khordha. The district headquarters is located in Khordha Town, formerly known as Jajarsingh or Kurada, (Kurada means foul mouthed). The old milestones of the area had the word KURADA which have now been white washed and the word "Khordha" is written on them. About the origin of the word Khurda (as earlier called) it is also told that the word is derived from two Odia words- "Khura" and "Dhara", meaning razor and edge, probably because the soldiers of Khurda were as sharp and dreadful as the edge of a razor. Neither of the two origins, however, can be called authentic.

The history of Khordha depicts that in early days the area was densely populated by the Savaras, a tribal community who are still found in some pockets of the district. Over the period, however, its history is found closely associated with the history of Puri district. About the middle of the 10th century A.D. the rule of Bhoumakars was supplanted by that of the Somavamsis. Yayati-2, Mahasiva Gupta was the first Somavamsi king to occupy eastern Odisha. He and his son Udyot Mahabhava Gupta were great temple builders and the Lingaraj temple at Bhubaneswar has been attributed to them. The last king of this dynasty was Karnadeva, who was defeated and killed by Chodaganga Deva about 1110 A.D. Khordha ascended to eminence and glory at the time of the first King of Khordha dynasty Ramachandra Deva who selected Khordha as the capital of his kingdom in the later part of 16th Century. The reason was its strategic location as Khordha was guarded by Barunei Hill on one side and dense forest on the other. Despite repeated onslaughts from Maratha and Muslim cavalry, it managed to maintain the glory of its independence of royal fort till 1803. Therefore, the Royal Fort is spelt with reverence as "Khordhagada" and is referred as the "last independent fort" which remained free from the clutches of East India Company for a long period (from 1757, the Battle of Plassey after which the East India Company established company rule in Bengal till 1803).

However, Khordha came fully under occupation of East India Company in 1827. The delay was a consequence of the strong revolts of the Paikas of Khordha that greatly

affected the Company administration in this region. History witnessed the brawn and bravery of the Paikas of Khordha during the Paika Rebellion of 1817-18 under the command of Bakshi Jagabandhu.

This resistance movement of Odias was recorded by the British historians as "Paik Rebellion", which was in fact, the first Independence war of India. It originated in Khordha soil and spread to other parts of Orissa in 1817 much prior to the outbreak of the historical Sepoy Mutiny of 1857. Mr. Walter Ewer recorded his views in his report of 1818, excerpt of which reads as: "Now there is no need of assistance of Paiks at Khordha. It is dangerous to keep them in British armed forces. Thus, they should be treated and dealt as common Ryots and land revenue and other taxes should be collected from them. They must be deprived of their former Jagir lands (rent free lands given to the Paiks for their military service to the state)" Within a short period of time the fame of Paiks was forgotten. But even now where the Paiks are living as a group they have retained their previous aggressive nature. The British armed force advanced from Madras on 8th September 1803 and arrived at Puri on 16th September enroute Manikapatna. With the help of Fate Mohemmed of Malud (recruited by the Marathas as watchman) Colonel Harcourt reached Narasinghpatna after two days crossing the Chilika lake. The Britishers did not face any resistance while occupying Narasinghpatna and Puri. After occupying Jagannath temple of Puri, Colonel Harcourt proceeded to Cuttack crushing the feeble resistance of Marathas near Atharnala and Jagannath Sadak. The vanquished Maratha soldiers fled for life to Khordha jungle. Colonel Harcourt arrived at Cuttack enroute Barangagada crossing the river Kathajodi.

Under the able command of Captain Morgan, a detachment of British troop arrived at Jampada of Balasore Sea shore by ship and occupied the Maratha fort. Another detachment of British troop reached at Balasore enroute Medinipur (now Midnapore) under the command of Colonel Forgusson and joined the previous troop stationed at Balasore. The joint troops proceeded from Balasore to Cuttack and joined the soldiers of Colonel Harcourt and occupied the Barabati fort. In this way Odisha fell to the East India Company in the year 1803. Thus, the Company became the ruler of most parts of India except the territory of Khordha.

In 1804 AD the English soldiers seized the fort of Khordha for three weeks and razed it to the ground by canon firing. They proclaimed Raja Mukund Dev-II as rebel, dethroned him and made him a prisoner of war. Raja Mukunda Dev-II submitted an appeal to the British authority stating that as per the instruction of Jayee Rajguru he had fought with them and he was in no way responsible for the battle. Considering the appeal the Britishers pardoned him and offered him the responsibility of managing the temple of Jagannath. He was also ordered to remain at Puri. Jayee Rajguru being the kingpin of Khordha Rebellion of 1804 was sentenced to death and was hanged on a banyan tree at Baghitota of Medinipur. The gruesome murder of Jayee Rajguru by the Company authority caused much discontentment among the Paiks of Khordha who thereafter under Bakshi Jagabandhu Bidyadhar rebelled against the Company. Khordha was ultimately annexed to British territory in 1827, after the rebellion was fully crushed.

Khurda is an important centre of handloom industry. The lungi, Gamchha & Sarees produced here and popular outside Odisha for its quality. There are a few Hindu mathas in Gada Khurda i.e. the old fort area of the town. The civic affairs of the town are managed by Khordha Municipality.

The erstwhile Puri district was divided to form three new districts in April 1993 and as a result Khordha district was formed taking Khordha & Bhubaneswar sub-divisions of Puri district.

Khordha district is located in the south-eastern part of Odisha, adjoining the coastal area. It occupies an area of about 2887.5 sq km. The district is bounded by latitudes 19° 40' to 20° 25' and longitudes is 84° 56' to 86° 05' and occupies parts of degree sheets 73 H, L, P & 74 I,A,E. It is surrounded by Cuttack district to the north, Ganjam and part of Puri district to the south, Puri district to the east and Nayagarh district to the west. Bhubaneswar – Vizayanagaram segment of the East-coast railway runs through the district along NE –SW direction. National Highway No. 16 running almost sub-parallel to the East coast railway line, passes through Khordha, the district headquarters and Bhubaneswar the state capital Khordha is about 30 km from Bhubaneswar and 12 km from Jatani, the nearest railway station of East coast railway. It has an average elevation of 75 m (246ft).

02. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT.

Khordha district is indeed rich in minor minerals, which plays a vital role in supporting infrastructure development. The availability of minor minerals like stone, laterite, moorum, ordinary earth and sand sources contribute significantly to the local economy and construction industry. The artisan grade of khondalite does indeed occur in various parts of Khordha district. This mineral is known for its quality and is utilized in different applications, including construction and decorative purposes. The geology of Khordha provides a diverse range of materials that meet the demands of both residential and commercial construction.

The implementation of the i4ms system for minor minerals has brought about a more systematic approach to monitoring and managing these resources. Utilizing Drone surveys can improve operational efficiency by offering precise mapping and resource assessments, which aid in planning and management. The effective management and monitoring of these resources, along with the integration of technology, can significantly enhance sustainable development in the region, benefiting both the economy and the community.

Mineral Resources Overview:

- **Laterite:** Laterite occurs as capping and develops by intensive weathering of underlying parent rock. These are porous, vesicular, concretionary often forms a hard crust, and can reach thicknesses of up to 10 meters or more.
- **Road Metal/ black Stone:** Road metals typically consist of durable and hard rock types that are suitable for construction and road building. It constitutes granite gneiss, charnockite, pyroxene granulite, khondalite and its variants which are invariably fractured jointed and associated with hairline cracks and other microstructures.
- **Moorum:** Association of moorum with laterite is predominantly observed in the district. There are few moorum sources identified and proposed. Mainly these are used in filling up the project sites, laying out railway tracks etc.
- **Sand:** Daya, Bhargabi, Kuakhai and Kushabhadra rivers, emerging as distributaries from Mahanadi River system, drain southerly through the eastern flank of the district

and merge either with the Chilika lake or with the Bay of Bengal. The river system that carried sands into coasted depressions with their tributaries.

Ordinary earth: This material is typically found in low-lying areas where sediment tends to accumulate. Ordinary earth, often referred to as soil or fill material, is commonly used for filling in project sites or road.

Decorative Stone Lease:

Existing Sources: Narangarh Khondalite 1. Holder: M/s OMC Ltd.

Lease Area: 4.672 hectares

Commencement Date: 01.12.2020

Lease Period: 30 years

Current Status: Working

2. Tutumberpalli Granite, Lessee Sri Maa Granites

Lease Area: 3.399 hectares

Commencement Date: 08.04.2016

Lease Period: 20 years

Current Status: Mining operations are halted, pending Consent to Operate from the Odisha State Pollution Control Board (OSPCB).

Prospecting License Sources:

3. Source Name: Malipada Khondalite Block, Khordha

Area: 4.641 hectares

4. Source Name: Deuli Khondalite Block, Begunia

Area: 14.152 hectares

5. Source Name: Narangarh Khondalite Block. Khordha

Area: 2.215 hectares

6. **Proposal:** Routpada & Kurumapada Artisan grade stone (khondalite)

Department of water resources Govt. of Odisha has an ongoing project for Instream Storage structure Across river Kushabhadra (Revised) Near Village Ramachandrapur District – Khordha, Odisha. According to the TAC memorandum the department required to excavate a major part of river course tentatively about 20kms in district khordha upon Kushabhadra river(kms) & bhargavi river(kms).

The project will provide the following benefits: - River Rejuvenation, Domestic, Livestock, Fishery, River Rejuvenation & Ground Water Recharge & many more other aspects.

Hence a list of land schedule for the stretch of about 20 kms has been provided by the SDO of the concern Dept. for excavation of sand bed for success of the project.

03. THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA & PERIOD OF VALIDITY.

SL.N O.	NAME OF RIVER /STREAM	NAME OF THE MINERAL	NAME OF THE LESSEE	ADDRESS & CONTACT NO. OF LESEE	MINING LEASE GRANT ORDER NO. & DATE	AREA OF MINING LEASE (IN AC/HA)	PERIOD OF MINING LEASE (INITIAL)		DATE OF COMMENCE MENT OF MINING OPERATION	STATUS (WORKING NON WORKING/TE MP. WORKING FOR DESPATCH ETC.)	CAPTIV E/ NON CAPTIV E	OBTAINED ENVIRONVE NTAL CLEARANCE (Y/N) IF Y LETTER NO. WITH DATE OF GRANT OF E.C	LOCATION OF THE MINING LEASE LAND SCHEDULE AND (LATITUDE & LONGITUDE)
							FROM	TO					
1	2	3	4	5	6	7	8	9	10	11	12	13	14
NAME OF THE TAHASIL:- BALIANTA													
A1	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND QUARRY, PRATAPRUDRAPUR	KAMAL KUMAR PATRA	S/O- BAIRAGI CHARAN PATRA, AT/PO- GADASRIRAMPUR, PS- BALIANTA KHORDHA	LETTER NO-3858/DT:27.11.2020	12.2AC/4.94HA	4.10.2021	3.10.2026	4.10.2021	WORKING	NON-CAPTIVE	YES, LETTER NO-1648/SEIAA, DATED-06.07.2021	MOUZA-PRATAPRUDRAPUR, KHATA-1403, PLOT-343(P)-2.330AC, 377-8.720AC, 395(P)-1.150AC, KISSAM-NADI, LAT-20°13'30.35"N TO 20°13'45.28"N LONG-85°57'43.81"E TO 85°57'58.35"E
A2	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND QUARRY,- KUSHABHADRA RIVER, BHINGARPUR	DILLIP KUMAR JENA	PLOT NO- 2508, RABI TALKIES CHHAKA, LEWIS ROAD, BHUBANESWAR KHORDHA	LETTER NO-3859/DT:27.11.2020	12.00AC/4.85HA	29.07.2022	28.07.2027	29.07.2022	WORKING	NON-CAPTIVE	LETTER NO-2132/ SEIAA, DT: 09.08.2021	MOUZA- BHINGARPUR, KHATA-11.62, PLOT- 918(P)-8AC, 192(P)-4AC, KISSAM-NADI, LAT-20°15'46.32"N TO 20°16'03.20"N LONG-85°55'25.02"E TO 85°55'44.70"E

A3	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND QUARRY, MAHUKHANDA				12.00AC/4.85H A					NON-WORKING	NON-CAPTIVE	MOUZA-MAHUKHANDA , KHATA-529, PLOT-1219, KISSAM-NADI, LAT-20°11'16.11"N TO 20°11'26.67"N LONG-85°58'31.07"E TO 85°58'50.29"E
A4	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND QUARRY, BHUBANPUR				12.00AC/4.85H A					NON-WORKING	NON-CAPTIVE	MOUZA-BHUBANPUR, KHATA-336, PLOT-58(P), KISSAM-NADI, LAT-20.305 LONG-85.883
A5	KUAKHAI RIVER	KUAKHAI RIVER SAND QUARRY, ALARPUR				11.119AC/4.5H A					NON-WORKING	NON-CAPTIVE	MOUZA-ALARPUR, KHATA-340, PLOT-9, KISSAM-NADI, LAT-20.245 LONG-85.88
A6	KUAKHAI RIVER	KUAKHAI RIVER SAND QUARRY, CHADHEIDHAR				9.00AC/3.64HA					NON-WORKING	NON-CAPTIVE	MOUZA-CHADHEIDHAR, KHATA-207, PLOT-519 , AREA-9.00AC, KISSAM-NADI , LAT-20.18 , LONG-85.891

A7	BHARGABHI RIVER	BHARGABHI RIVER SAND QUARRY, JHINTISASAN	DILLIP KUMAR JENA	PLOT NO- 2508, RABI TALKIES CHHAKA, LEWIS ROAD, BHUBANESWAR KHORDHA	LETTER NO-612/ DT:02.02.2 021	12.2 AC/4.93HA					NON-WORKING	NON-CAPTIVE	YES, LETTER NO- 2272/SEIAA, DATED- 19.08.2021	MOUZA- JHINTISASAN, KHATA-1613, PLOT-2613(P) , KISSAM-NADI, LAT-20°09' 38.27"N TO 20°09'49.15"N LONG- 85°53'59'04"E TO 85°54'09.61"E
NEW SOURCES														
A8	BHARGABHI RIVER	BHARGABHI RIVER SAND QUARRY, JHINTISASAN				6.17AC/2.5HA					NON-WORKING	NON-CAPTIVE		MOUZA- JHINTISASAN, KHATA-1613, PLOT- 58, KISSAM- NADI, TENANT- AAA,LAT- 20°10'26.4"N LONG- 85°53'42.00"E
A9	BHARGABHI RIVER	BHARGABHI RIVER SAND QUARRY, PRATAPASASAN				11.11AC/4.50H A					NON-WORKING	NON-CAPTIVE		MOUZA- PRATAPASASAN, KHATA-2112, PLOT- 284 KISSAM- NADI, TENANT- AAA, LAT- 20°12'50.4"N LONG- 85°51'50.4"E
NAME OF THE TAHASIL:- BHUBANESWAR														
B1	KUAKHAI RIVER	KUAKHAI RIVER SAND QUARRY PANDRA				46AC/18.61HA								MOUZA- PANDRA, KHATA-1352, PLOT- 2414 KISSAM-NADI, LAT-20.31 LONG-85.879

B2	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND SOURCE, KESURA	SRI SIKHAR CHANDRA JENA	S/O- KALANDI JENA , AT- JHARAPADA, PS- LAXISAGAR, DIST KHORDHA	LETTER NO -12761, DATED- 08.08.2022	40.16AC/16.25 HA					NON-WORKING	NON-CAPTIVE	MOUZA- KESURA, KHATA-549, PLOT- 1000, KISSAM-NADI, LAT- 20°15'59.7"N TO 20°16'41.2"N LONG- 85°52'58.8"E TO 85°53'10.8"E
B3	KUAKHAI RIVER	KUAKHAI RIVER SAND SOURCE, KALYANPUR-B	SARAT BEHERA	S/O- KINU BEHERA, AT- KUNDITARAPATNA , PO- PAHAL, PS- BALIANTA	LETTER NO- 5988, DATED- 16.9.2021	49.95AC/20.21 HA					NON-WORKING	NON-CAPTIVE	MOUZA- KALYANPUR, KHATA- 221(AAA), PLOT- 1061 , KISSAM-NADI, LAT- 20°22'31.56"N TO 20°22' 54.64"N LONG- 85°52'20.52"E TO 85°52' 45.78"E
B4	KUAKHAI RIVER	KUAKHAI RIVER SAND SOURCE, KALYANPUR-A	MINAK SHI PRADHAN	W/O- LATE JAGANNATH PRADHAN , AT- SAMANTARAPUR , PS/DIST- KHORDHA	LATTER NO- 5210, DATED- 06/08/2020,	35.24AC/14.26 HA					NON-WORKING	NON-CAPTIVE	MOUZA- KALYANPUR , KHATA- 221(AAA), PLOT- 1058, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, KISSAM-NADI, LAT- 20°22'08.04"N TO 20°22'34.30"N LONG- 85°52'03.02"E TO 85°52'15.76"E

B5	KUAKHAI RIVER	KUAKHAI RIVER SAND SOURCE, GANDARPUR				29.99AC/12.14 06HA					NON- WORKING	NON- CAPTIVE		MOUZA- GANDARPUR, KHATA- 607(AAA), PLOT- 2538, KISSAM-NADI LAT- 20.387 LONG-85.869
NAME OF THE TAHASIL:- BALIPATANA														
C1	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND MARTHAPUR	SRI JAGADISH BARAL	S/O- JATINDRA NATH BARAL SANAPATASUNDARPUR, CUTTACK	LATTER NO- 4240, DATED- 28/10/2020,	11.54AC/4.670 HA	17.05.20 22	16.05.20 27	17.05.2022		NON- WORKING	NON- CAPTIVE	YES, LETTER NO- 1381/SEIAA, 24.05.2021	MOUZA- MARTHAPUR, KHATA-301, PLOT- 692,KISSAM- NADI, LAT- 20°08'10.213" N TO 20°08'40.571" N LONG- 86°00'22.239"E TO 86°00'31.114"E
C2	BHARGABHI RIVER	BHARGABHI RIVER SAND, SOMANASASAN	SAGAR KUMAR RAY	AT- MIG-19, STAGE-2, LAXINAGAR, PS- LAXMINAGA, THAHASIL	LETTER NO- 4231, DATED- 28.10.2020	12AC/4.856HA	10.1.202 3	9.1.2028	10.1.2023		WORKING	NON- CAPTIVE	YES, LETTER NO- 4630/SEIAA, DATED- 01.06.2022	MOUZA- SOMANASASA N, KHATA-550, PLOT- 1(P), KISSAMI-NADI, LAT- 20°07'46.52"N TO 20°08'01.71"N LONG- 85°53'05.90"E TO 85°53'17.68"E

C3	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND, ABHAYAMUKHI	KAMAL KUMAR PATRA	S/O- BAIRAGI CHARAN PATRA, AT/PO- GADASRIRAMPUR, PS- BALIANTA KHORDHA	LETTER NO- 4227, DATED- 28.10.2020	11.55AC/4.67H A	28.09.2022	27.9.2027	28.09.2022	WORKING	NON-CAPTIVE	YES, LETTER NO- 1063/SEIAA, DATED- 26.03.2021	MOUZA- ABHAYAMUKHI , KHATA-1649, PLOT- 4541, 4936, KISSAM-NADI, LAT- 20°06'44.14"N TO 20°07'01.89"N LONG- 86°00'35.03"E TO 86°00'43.66"E
C4	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND, BHANRANIJIGAR GA	KAMAL KUMAR PATRA	S/O- BAIRAGI CHARAN PATRA, AT/PO- GADASRIRAMPUR, PS- BALIANTA KHORDHA	LETTER NO- 4228, DATED- 28.10.2020	11.890AC/4.81 HA	28.09.2022	27.09.2027	28.09.2022	WORKING	NON-CAPTIVE	YES, LETTER NO- 792/SEIAA, DATED- 09.03.2021	MOUZA- BHANRANIJIGAR DA , KHATA-620, PLOT- 326(P), 181/1865, KISSAM-NADI, LAT- 20°09'25.64"N TO 20°09'58.70"N LONG- 86°00'10.82"E TO 86°00'44.38"E
C5	KUSHABHADRA RIVER	ATHANTAR& GIRINGO SAND QUARRY,- KUSHABHADRA RIVER	KAMAL KUMAR PATRA	S/O- BAIRAGI CHARAN PATRA, AT/PO- GADASRIRAMPUR, PS- BALIANTA KHORDHA	LETTER NO- 776, DATED- 28.10.2020	41.55AC/16.81 5HA				NON-WORKING	NON-CAPTIVE		MOUZA- ATHANTAR& GIRINGO , KHATA-330, 537, PLOT- 814& AMP; 1338, 9 & 679, KISSAM-NADI, LAT- 20°11'21.56"N TO 20°11'52.06"N LONG- 85°58'15.08" E TO 85°58'31.69"E

C6	KUSHABHADRA RIVER	KUSHABHADRA RIVER SAND SOURCE, BHAKRASAH				12.55AC/5.07				NON-WORKING	NON-CAPTIVE		MOUZA- BHAKRASAH , KHATA-1519, PLOT- 1567-4.2AC, 1708-8.35AC, KISSAM A-NADI, LAT-20°11'54.3"N TO 20°11'59.2"N LONG-86°00'55.2"E TO 86°00'58.3"E
C7	BHARGABHI RIVER	BHARGABHI RIVER SAND SOURCE, ACHYUTPUR				12.00AC/4.856 HA				NON-WORKING	NON-CAPTIVE		MOUZA- ACHYUTPUR , KHATA-221, PLOT- 1, KISSAM- NADI, LAT-20.15 LONG-85.903
C8	BHARGABHI RIVER	BHARGABHI RIVER SAND, MAKUNDASPU	SRI JAGADISH SANKAR SAHOO	MD SATYA MULTIPLEX PVT. LTD. , AT- PLOT NO - N-6/321, IRC VILLAGE, NAYAPALLI, BHUBANESWAR, KHORDHA	LETTER NO- 1888, DATED- 24.5.2021	56.58AC/22.89 HA				NON-WORKING	NON-CAPTIVE	YES, LETTER NO- 5171/SEIAA, DATED- 19.08.2022	MOUZA- MAKUNDASPU R, KHATA-771, PLOT- 199, KISSAM- NADI, LAT- 20°08'37.27"N TO 20°08'11.98"N LONG- 85°53'57.24" E TO 85°53'22.74"E
C9	BHARGABHI RIVER	BHARGABHI RIVER SAND, CHITALPUR				12AC/4.856HA				NON-WORKING	NON-CAPTIVE		MOUZA- CHITALPUR, KHATA-186, PLOT-20, KISSAM- NADI, LAT- 20.125, LONG-85.873 ,

Following list of land schedule for the stretch of about 20 kms has been provided by the authority of the water resource department for excavation of sand bed for construction of Reservoir & rejuvenation of Kushabhadra river of the project are as follows:-

Sl.No.	Name of River /Stream	Name of the Mineral	Name of the Lessee	Adress & Contact No. of lesee	Mining lease Grant Order No. & date	Area of Mining lease (in HA)	Date of commencement of mining operaion	Obtained Environmental clearance (Y/N) if Y letter No. with date of grant of E.C	Location of the mining lease Land Schedule and (Latitude & Longitute)
1	2	3	4	5	6	7	10	13	14
1	KUAKHAI	-	-	-	-	46.54	-	-	MOUZA-ଭୁବନେଶ୍ୱର ସହର ଯୁନିଟ ନଂ-38 ପାଣ୍ଡୁରା, KHATA-1352, PLOT- 2414, KISSAM-RIVER, TENANT- ସାଧାରଣ ପ୍ରଶାସନ ବିଭାଗ
2	KUAKHAI	-	-	-	-	11.17	-	-	MOUZA-ଭୁବନେଶ୍ୱର ସହର ଯୁନିଟ ନଂ-38 ପାଣ୍ଡୁରା, KHATA-1352, PLOT- 2408, KISSAM-RIVER, TENANT- ସାଧାରଣ ପ୍ରଶାସନ ବିଭାଗ
3	KUAKHAI	-	-	-	-	0.81	-	-	MOUZA- MANCHESWAR, KHATA-521,PLOT-2634, KISAM- PATITA, TENENT-ହରମୋହନ ନାଏକ, ରାଧା ମୋହନ ନାଏକ ପି: ରାମଚନ୍ଦ୍ର ନାଏକ, ଗଣେଶ୍ୱର ନାଏକ ପି: ନାରଣ ନାଏକ, ଚକ୍ରଧର ନାଏକ, ବିଶ୍ୱନାଥ ନାଏକ ପି: କପିଳ ନାଏକ, ଭାନୁମତୀ ବେକ୍ୟା ସ୍ୱା: ଗୋପି ନାଏକ, ସାଧୁ ନାଏକ ପି: ବାଲୁଧର ନାଏକ, ନିଧୁ ନାଏକ, ବିବାକର ନାଏକ ପି: ମଦନ ନାଏକ ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ମନ୍ଦର ନାଏକ, ସୁଧାକର ନାଏକ, ବ୍ରଜ ବିହାରୀ ନାଏକ, ଦୁର୍ଗା ଚରଣ ନାଏକ ପି: ଭ୍ରମର ନାଏକ, ବାବନ ନାଏକ ପି: କାଳନ୍ଦି ନାଏକ, ଅରୁଣ ନାଏକ ପି: ବୀର ନାଏକ, ଭରତ ନାଏକ ପି: ଗିରିଧାରୀ ନାଏକ ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଚାରି ପାହି ବା:; ଭଜନି ମହାନ୍ତି ପି: ବାଞ୍ଛାନିଧୁ ମହାନ୍ତି, ଭଦ୍ର ନାଥ ମହାନ୍ତି, ବିଦ୍ୟାଧର ମହାନ୍ତି ପି: ନଟବର ମହାନ୍ତି, ଫକିର ମହାନ୍ତି ପି: ମକୁନ୍ଦ ମହାନ୍ତି, ଭଗବାନ ମହାନ୍ତି, ଶତ୍ରୁଘ୍ନ ମହାନ୍ତି ପି: ଧୋବେଇ ମହାନ୍ତି ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅଗଣି ସ୍ୱାଇଁ, ସର୍ବେଶ୍ୱର ସ୍ୱାଇଁ ପି: ସତ୍ୟପିର ସ୍ୱାଇଁ, ଧୋବେଇ ସ୍ୱାଇଁ ପି: ନିଶାକର ସ୍ୱାଇଁ, ଲକ୍ଷ୍ମଣ ସ୍ୱାଇଁ ପି: ବାନାୟର ସ୍ୱାଇଁ, ବୀରବର ସ୍ୱାଇଁ ପି: ପଞ୍ଚୁ ସ୍ୱାଇଁ, ଭ୍ରମର ସ୍ୱାଇଁ, ବିଶା ସ୍ୱାଇଁ, ଅଧିକାରୀ ସ୍ୱାଇଁ ପି: ବିନୟ ସ୍ୱାଇଁ ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅନନ୍ତ ନାୟକ ପି: ଯୁଧି ନାୟକ, ଚରଣ ନାୟକ, ନୃସିଂହ ନାୟକ ପି: ଅଗଣି ନାୟକ, ସାନନ୍ଦ ନାୟକ ପି: ଭୋବନି ନାୟକ, ବିନୟ ନାୟକ ପି: ସୁର ନାୟକ, ହୃଦାନନ୍ଦ ନାୟକ ପି: କମ୍ଭୁ ନାୟକ ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:
4	KUAKHAI	-	-	-	-	0.56	-	-	MOUZA- MANCHESWAR, KHATA-521,PLOT-2632, KISAM- PATITA, TENENT-ହରମୋହନ ନାଏକ, ରାଧା ମୋହନ ନାଏକ ପି: ରାମଚନ୍ଦ୍ର ନାଏକ, ଗଣେଶ୍ୱର ନାଏକ ପି: ନାରଣ ନାଏକ, ଚକ୍ରଧର ନାଏକ, ବିଶ୍ୱନାଥ ନାଏକ ପି: କପିଳ ନାଏକ, ଭାନୁମତୀ ବେକ୍ୟା ସ୍ୱା: ଗୋପି ନାଏକ, ସାଧୁ ନାଏକ ପି: ବାଲୁଧର ନାଏକ, ନିଧୁ ନାଏକ, ବିବାକର ନାଏକ ପି: ମଦନ ନାଏକ ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ମନ୍ଦର ନାଏକ, ସୁଧାକର ନାଏକ, ବ୍ରଜ ବିହାରୀ ନାଏକ, ଦୁର୍ଗା ଚରଣ ନାଏକ ପି: ଭ୍ରମର ନାଏକ, ବାବନ ନାଏକ ପି: କାଳନ୍ଦି ନାଏକ, ଅରୁଣ ନାଏକ ପି: ବୀର ନାଏକ, ଭରତ ନାଏକ ପି: ଗିରିଧାରୀ ନାଏକ ଜା: ମହାଲାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ବତ ତିନି ଅଣା ଚାରି ପାହି ବା:; ଭଜନି ମହାନ୍ତି ପି:

									<p>ବାଞ୍ଛାନିଧି ମହାକ୍ତି, ଉଦୟ ନାଥ ମହାକ୍ତି, ବିଦ୍ୟାଧର ମହାକ୍ତି ପି: ନଟବର ମହାକ୍ତି, ଫକିର ମହାକ୍ତି ପି: ମକୁନ୍ଦ ମହାକ୍ତି, ଭଗବାନ ମହାକ୍ତି, ଶତ୍ରୁଘ୍ନ ମହାକ୍ତି ପି: ଧୋବେଇ ମହାକ୍ତି ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅଗଣି ସ୍ଵାଇଁ, ସର୍ବେଶ୍ଵର ସ୍ଵାଇଁ ପି: ସତ୍ୟପିର ସ୍ଵାଇଁ, ଧୋବେଇ ସ୍ଵାଇଁ ପି: ନିଶାକର ସ୍ଵାଇଁ, ଲକ୍ଷ୍ମଣ ସ୍ଵାଇଁ ପି: ବାନାୟର ସ୍ଵାଇଁ, ବୀରବର ସ୍ଵାଇଁ ପି: ପଞ୍ଚୁ ସ୍ଵାଇଁ, ଭ୍ରମର ସ୍ଵାଇଁ, ବିଶୀ ସ୍ଵାଇଁ, ଅଧିକାରୀ ସ୍ଵାଇଁ ପି: ବିନୟ ସ୍ଵାଇଁ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅନନ୍ତ ନାୟକ ପି: ଯୁଧି ନାୟକ, ଚରଣ ନାୟକ, ନୃସିଂହ ନାୟକ ପି: ଅଗଣି ନାୟକ, ସାନନ୍ଦ ନାୟକ ପି: ଭୋବନି ନାୟକ, ବିନୟ ନାୟକ ପି: ସୁର ନାୟକ, ହୃଦାନନ୍ଦ ନାୟକ ପି: କମ୍ଭୁ ନାୟକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:</p>
5	KUAKHAI	-	-	-	-	0.44	-	-	<p>MOUZA- MANCHESWAR, KHATA-521,PLOT-734, KISAM- Bilali DoFasal, TENENT- ହରମୋହନ ନାଏକ, ରାଧା ମୋହନ ନାଏକ ପି: ରାମଚନ୍ଦ୍ର ନାଏକ, ଗଣେଶ୍ଵର ନାଏକ ପି: ନାରଣ ନାଏକ, ଚକ୍ରଧର ନାଏକ, ବିଶ୍ଵନାଥ ନାଏକ ପି: କପିଳ ନାଏକ, ଭାନୁମତୀ ବେବ୍ୟା ସା: ଗୋପି ନାଏକ, ସାଧୁ ନାଏକ ପି: ବାଇଧର ନାଏକ, ନିଧୁ ନାଏକ, ଦିବାକର ନାଏକ ପି: ମଦନ ନାଏକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ମନ୍ଦର ନାଏକ, ସୁଧାକର ନାଏକ, ବ୍ରଜ ବିହାରୀ ନାଏକ, ଦୁର୍ଗା ଚରଣ ନାଏକ ପି: ଭ୍ରମର ନାଏକ, ବାବନ ନାଏକ ପି: କାଳନ୍ଦି ନାଏକ, ଅରୁଣ ନାଏକ ପି: ବୀର ନାଏକ, ଭରତ ନାଏକ ପି: ଗିରିଧାରୀ ନାଏକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଚାରି ପାହି ବା:; ଭଜନି ମହାକ୍ତି ପି: ବାଞ୍ଛାନିଧି ମହାକ୍ତି, ଉଦୟ ନାଥ ମହାକ୍ତି, ବିଦ୍ୟାଧର ମହାକ୍ତି ପି: ନଟବର ମହାକ୍ତି, ଫକିର ମହାକ୍ତି ପି: ମକୁନ୍ଦ ମହାକ୍ତି, ଭଗବାନ ମହାକ୍ତି, ଶତ୍ରୁଘ୍ନ ମହାକ୍ତି ପି: ଧୋବେଇ ମହାକ୍ତି ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅଗଣି ସ୍ଵାଇଁ, ସର୍ବେଶ୍ଵର ସ୍ଵାଇଁ ପି: ସତ୍ୟପିର ସ୍ଵାଇଁ, ଧୋବେଇ ସ୍ଵାଇଁ ପି: ନିଶାକର ସ୍ଵାଇଁ, ଲକ୍ଷ୍ମଣ ସ୍ଵାଇଁ ପି: ବାନାୟର ସ୍ଵାଇଁ, ବୀରବର ସ୍ଵାଇଁ ପି: ପଞ୍ଚୁ ସ୍ଵାଇଁ, ଭ୍ରମର ସ୍ଵାଇଁ, ବିଶୀ ସ୍ଵାଇଁ, ଅଧିକାରୀ ସ୍ଵାଇଁ ପି: ବିନୟ ସ୍ଵାଇଁ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅନନ୍ତ ନାୟକ ପି: ଯୁଧି ନାୟକ, ଚରଣ ନାୟକ, ନୃସିଂହ ନାୟକ ପି: ଅଗଣି ନାୟକ, ସାନନ୍ଦ ନାୟକ ପି: ଭୋବନି ନାୟକ, ବିନୟ ନାୟକ ପି: ସୁର ନାୟକ, ହୃଦାନନ୍ଦ ନାୟକ ପି: କମ୍ଭୁ ନାୟକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:</p>
6	KUAKHAI	-	-	-	-	0.23	-	-	<p>MOUZA- MANCHESWAR, KHATA-521,PLOT-733, KISAM- Bilali DoFasal, TENENT- ହରମୋହନ ନାଏକ, ରାଧା ମୋହନ ନାଏକ ପି: ରାମଚନ୍ଦ୍ର ନାଏକ, ଗଣେଶ୍ଵର ନାଏକ ପି: ନାରଣ ନାଏକ, ଚକ୍ରଧର ନାଏକ, ବିଶ୍ଵନାଥ ନାଏକ ପି: କପିଳ ନାଏକ, ଭାନୁମତୀ ବେବ୍ୟା ସା: ଗୋପି ନାଏକ, ସାଧୁ ନାଏକ ପି: ବାଇଧର ନାଏକ, ନିଧୁ ନାଏକ, ଦିବାକର ନାଏକ ପି: ମଦନ ନାଏକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ମନ୍ଦର ନାଏକ, ସୁଧାକର ନାଏକ, ବ୍ରଜ ବିହାରୀ ନାଏକ, ଦୁର୍ଗା ଚରଣ ନାଏକ ପି: ଭ୍ରମର ନାଏକ, ବାବନ ନାଏକ ପି: କାଳନ୍ଦି ନାଏକ, ଅରୁଣ ନାଏକ ପି: ବୀର ନାଏକ, ଭରତ ନାଏକ ପି: ଗିରିଧାରୀ ନାଏକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଚାରି ପାହି ବା:; ଭଜନି ମହାକ୍ତି ପି: ବାଞ୍ଛାନିଧି ମହାକ୍ତି, ଉଦୟ ନାଥ ମହାକ୍ତି, ବିଦ୍ୟାଧର ମହାକ୍ତି ପି: ନଟବର ମହାକ୍ତି, ଫକିର ମହାକ୍ତି ପି: ମକୁନ୍ଦ ମହାକ୍ତି, ଭଗବାନ ମହାକ୍ତି, ଶତ୍ରୁଘ୍ନ ମହାକ୍ତି ପି: ଧୋବେଇ ମହାକ୍ତି ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅଗଣି ସ୍ଵାଇଁ, ସର୍ବେଶ୍ଵର ସ୍ଵାଇଁ ପି: ସତ୍ୟପିର ସ୍ଵାଇଁ, ଧୋବେଇ ସ୍ଵାଇଁ ପି: ନିଶାକର ସ୍ଵାଇଁ, ଲକ୍ଷ୍ମଣ ସ୍ଵାଇଁ ପି: ବାନାୟର ସ୍ଵାଇଁ, ବୀରବର ସ୍ଵାଇଁ ପି: ପଞ୍ଚୁ ସ୍ଵାଇଁ, ଭ୍ରମର ସ୍ଵାଇଁ, ବିଶୀ ସ୍ଵାଇଁ, ଅଧିକାରୀ ସ୍ଵାଇଁ ପି: ବିନୟ ସ୍ଵାଇଁ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:; ଅନନ୍ତ ନାୟକ ପି: ଯୁଧି ନାୟକ, ଚରଣ ନାୟକ, ନୃସିଂହ ନାୟକ ପି: ଅଗଣି ନାୟକ, ସାନନ୍ଦ ନାୟକ ପି: ଭୋବନି ନାୟକ, ବିନୟ ନାୟକ ପି: ସୁର ନାୟକ, ହୃଦାନନ୍ଦ ନାୟକ ପି: କମ୍ଭୁ ନାୟକ ଜା: ମହାଲ୍ୟାଏକ ବା: ନହରକଣ୍ଠା,କିମ୍ପୁତ ତିନି ଅଣା ଦୁଇ ପାହି ବା:</p>
7	KUAKHAI	-	-	-	-	0.22	-	-	<p>MOUZA- MANCHESWAR, KHATA-555,PLOT-2630, KISAM- RIVER, TENENT-Abad ajogy Anabadi</p>

8	KUAKHAI	-	-	-	-	0.24	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-2631, KISAM- RIVER, TENENT-Abad ajogya Anabadi
9	KUAKHAI	-	-	-	-	0.24	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-2633, KISAM- RIVER, TENENT-Abad ajogya Anabadi
10	KUAKHAI	-	-	-	-	0.19	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-732, KISAM- RIVER, TENENT-Abad ajogya Anabadi
11	KUAKHAI	-	-	-	-	2.96	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-2629, KISAM- RIVER, TENENT-Abad ajogya Anabadi
12	KUAKHAI	-	-	-	-	9.16	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-735, KISAM- RIVER, TENENT-Abad ajogya Anabadi
13	KUAKHAI	-	-	-	-	0.13	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-731, KISAM- RIVER, TENENT-Abad ajogya Anabadi
14	KUAKHAI	-	-	-	-	0.25	-	-	MOUZA- MANCHESWAR, KHATA-557,PLOT-729, KISAM- RIVER, TENENT-Gramya Jangala
15	KUAKHAI	-	-	-	-	0.26	-	-	MOUZA- MANCHESWAR, KHATA-557,PLOT-728, KISAM- RIVER, TENENT-Gramya Jangala
16	KUAKHAI	-	-	-	-	0.2	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-727, KISAM- RIVER, TENENT-Abad ajogya Anabadi
17	KUAKHAI	-	-	-	-	1.69	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-726, KISAM- RIVER, TENENT-Abad ajogya Anabadi
18	KUAKHAI	-	-	-	-	55.44	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-725, KISAM- RIVER, TENENT-Abad ajogya Anabadi
19	KUAKHAI	-	-	-	-	12.62	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-1297, KISAM- RIVER, TENENT-Abad ajogya Anabadi
20	KUAKHAI	-	-	-	-	1.56	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-724, KISAM- RIVER, TENENT-Abad ajogya Anabadi
21	KUAKHAI	-	-	-	-	0.55	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-523, KISAM- RIVER, TENENT-Abad ajogya Anabadi
22	KUAKHAI	-	-	-	-	0.11	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-522, KISAM- RIVER, TENENT-Abad ajogya Anabadi
23	KUAKHAI	-	-	-	-	0.17	-	-	MOUZA- MANCHESWAR, KHATA-47,PLOT-524, KISAM- Patita, TENENT-ଅର୍ଜୁନ ସାଉ ପି: ନିଧୁ ସାଉ, କୃଷ୍ଣ ସାଉ ପି: କେଶବ ସାଉ, ରଘୁନାଥ ସାଉ ପି: ମକୁନ୍ଦ ସାଉ ଜା: ଶୁଣ୍ଠି ବା: ନହରକଣ୍ଠା
24	KUAKHAI	-	-	-	-	0.12	-	-	MOUZA- MANCHESWAR, KHATA-47,PLOT-534, KISAM- Patita, TENENT-ଅର୍ଜୁନ ସାଉ ପି: ନିଧୁ ସାଉ, କୃଷ୍ଣ ସାଉ ପି: କେଶବ ସାଉ, ରଘୁନାଥ ସାଉ ପି: ମକୁନ୍ଦ ସାଉ ଜା: ଶୁଣ୍ଠି ବା: ନହରକଣ୍ଠା
25	KUAKHAI	-	-	-	-	0.11	-	-	MOUZA- MANCHESWAR, KHATA-47,PLOT-533, KISAM- Patita, TENENT-ଅର୍ଜୁନ ସାଉ ପି: ନିଧୁ ସାଉ, କୃଷ୍ଣ ସାଉ ପି: କେଶବ ସାଉ, ରଘୁନାଥ ସାଉ ପି: ମକୁନ୍ଦ ସାଉ ଜା: ଶୁଣ୍ଠି ବା: ନହରକଣ୍ଠା
26	KUAKHAI	-	-	-	-	0.51	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-526, KISAM- RIVER, TENENT-Abad ajogya Anabadi
27	KUAKHAI	-	-	-	-	0.06	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-525, KISAM- RIVER, TENENT-Abad ajogya Anabadi

28	KUAKHAI	-	-	-	-	0.18	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-532, KISAM- RIVER, TENENT-Abad ajogya Anabadi
29	KUAKHAI	-	-	-	-	0.25	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-531, KISAM- RIVER, TENENT-Abad ajogya Anabadi
30	KUAKHAI	-	-	-	-	0.2	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-530, KISAM- RIVER, TENENT-Abad ajogya Anabadi
31	KUAKHAI	-	-	-	-	0.43	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-528, KISAM- RIVER, TENENT-Abad ajogya Anabadi
32	KUAKHAI	-	-	-	-	0.41	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-527, KISAM- RIVER, TENENT-Abad ajogya Anabadi
33	KUAKHAI	-	-	-	-	7.29	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-521, KISAM- RIVER, TENENT-Abad ajogya Anabadi
34	KUAKHAI	-	-	-	-	9.86	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-519, KISAM- RIVER, TENENT-Abad ajogya Anabadi
35	KUAKHAI	-	-	-	-	34.3	-	-	MOUZA- MANCHESWAR, KHATA-555,PLOT-520, KISAM- RIVER, TENENT-Abad ajogya Anabadi
36	KUAKHAI	-	-	-	-	18.32	-	-	MOUZA- NAHARKANTA, KHATA-748,PLOT-1, KISAM- RIVER, TENENT-Abad ajogya Anabadi
37	KUAKHAI	-	-	-	-	20.66	-	-	MOUZA- NAHARKANTA, KHATA-748,PLOT-441, KISAM- RIVER, TENENT-Abad ajogya Anabadi
38	KUAKHAI	-	-	-	-	2.04	-	-	MOUZA- NAHARKANTA, KHATA-,PLOT-441, KISAM- , TENENT-
39	KUAKHAI	-	-	-	-	0.29	-	-	MOUZA- NAHARKANTA, KHATA-31,PLOT-979, KISAM-Biali dofasal , TENENT-ଅନନ୍ତ ଚରଣ ଜେନା ପି: ବାଞ୍ଛାନିଧି ଜେନା, ପଦନ ଜେନା ପି: ଚିତ୍ରାମଣୀ ଜେନା, ବାସୁଦେବ ଜେନା, ସତ୍ୟାନନ୍ଦ ଜେନା, ଭ୍ରୀଲୋଚନ ଜେନା ପି: ମଦନ ଜେନା, ରାଜେନ୍ଦ୍ର କୁମାର ସାମନ୍ତସିଂହାର, ଜିତେନ୍ଦ୍ର କୁମାର ସାମନ୍ତସିଂହାର, ଧୀରେନ୍ଦ୍ର କୁମାର ସାମନ୍ତସିଂହାର, ଅମରେନ୍ଦ୍ର କୁମାର ସାମନ୍ତସିଂହାର ପି: ସୁରେନ୍ଦ୍ର ନାଥ ସାମନ୍ତସିଂହାର ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ
40	KUAKHAI	-	-	-	-	0.24	-	-	MOUZA- NAHARKANTA, KHATA-348,PLOT-971, KISAM-Patita , TENENT-ବଂଶୀଧର ଜେନା ପି: ଗଙ୍ଗାଧର ଜେନା, ବିର ଜେନା, ଚେମ ଜେନା, ନାଥ ଜେନା, ଗୌରାଙ୍ଗ ଜେନା ପି: ରଥ ଜେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ
41	KUAKHAI	-	-	-	-	0.33	-	-	MOUZA- NAHARKANTA, KHATA-348,PLOT-975, KISAM-Patita , TENENT-ବଂଶୀଧର ଜେନା ପି: ଗଙ୍ଗାଧର ଜେନା, ବିର ଜେନା, ଚେମ ଜେନା, ନାଥ ଜେନା, ଗୌରାଙ୍ଗ ଜେନା ପି: ରଥ ଜେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ
42	KUAKHAI	-	-	-	-	0.09	-	-	MOUZA- NAHARKANTA, KHATA-450,PLOT-972, KISAM-Patita , TENENT-ଭୁମିରବର ପାତ୍ର, ବସନ୍ତ ପାତ୍ର ପି: ଭୋବନାନନ୍ଦ ପାତ୍ର ଜା: ଖଣ୍ଡାୟତ ବା: ବେରଣା
43	KUAKHAI	-	-	-	-	0.16	-	-	MOUZA- NAHARKANTA, KHATA-,PLOT-974, KISAM- , TENENT-
44	KUAKHAI	-	-	-	-	0.08	-	-	MOUZA- NAHARKANTA, KHATA-32,PLOT-978, KISAM-RIVER , TENENT-Abad ajogya Anabadi
45	KUAKHAI	-	-	-	-	0.04	-	-	MOUZA- NAHARKANTA, KHATA-32,PLOT-979, KISAM-RIVER , TENENT-Abad ajogya Anabadi
46	KUAKHAI	-	-	-	-	0.07	-	-	MOUZA- NAHARKANTA, KHATA-149,PLOT-980, KISAM-ପାଳ ଦୁଇ, TENENT-ଚକ୍ର ପାଣି ପି:ଶାମ ପାଣି ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ

47	KUAKHAI	-	-	-	-	0.69	-	-	MOUZA- NAHARKANTA, KHATA-748,PLOT-981, KISAM-RIVER , TENENT-Abad ajogy Anabadi
48	KUAKHAI	-	-	-	-	0.26	-	-	MOUZA- NAHARKANTA, KHATA-124,PLOT-1001, KISAM-RIVER , TENENT-ଖିରୋଶୁର ଯେନା ପି: ଜଇରାମ ଯେନା, ଧନେଶ୍ୱର ଯେନା ପି: ରସାନନ୍ଦ ଯେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ
49	KUAKHAI	-	-	-	-	0.44	-	-	MOUZA- NAHARKANTA, KHATA-51,PLOT-1002, KISAM-ବିଆଳି ବୋଫସଲ , TENENT- ଅଭିରାମ ଜେନା, ପୂର୍ଣ୍ଣରାମ ଜେନା, ଭାବଗ୍ରାହି ଜେନା, ଇନ୍ଦ୍ରମଣି ଜେନା ପି: କୃଷିବିଦ୍ୟାଳୟ ଜେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ,କିମ୍ପୁତ ଚାରି ଅଣା ବା: ବାଳକୃଷ୍ଣ ଜେନା, ବିଜୟରାମ ଜେନା, ପୂର୍ଣ୍ଣ ଚନ୍ଦ୍ର ଜେନା ପି: ଦୁଃଖୀୟାମ ଜେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ,କିମ୍ପୁତ ଚିନି ଅଣା ବା: ଖିରୋଶୁର ଯେନା ପି: ଜଇରାମ ଯେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ,କିମ୍ପୁତ ଚିନି ଅଣା ବା: ଧନେଶ୍ୱର ଯେନା ପି: ରସାନନ୍ଦ ଯେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ,କିମ୍ପୁତ ଚିନି ଅଣା ବା: ବାହୁଡ଼ି ଯେନା ପି: ସପନି ଯେନା ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ,କିମ୍ପୁତ ଚିନି ଅଣା ବା:
50	KUAKHAI	-	-	-	-	0.48	-	-	MOUZA- NAHARKANTA, KHATA-748,PLOT-1056, KISAM-RIVER , TENENT-Abad ajogy Anabadi
51	KUAKHAI	-	-	-	-	93.97	-	-	MOUZA- BARIMUNDA, KHATA-742,PLOT-4336, KISAM-RIVER , TENENT-Abad ajogy Anabadi
52	KUAKHAI	-	-	-	-	16.85	-	-	MOUZA- BARIMUNDA, KHATA-742,PLOT-1079, KISAM-RIVER , TENENT-Abad ajogy Anabadi
53	KUAKHAI	-	-	-	-	2.55	-	-	MOUZA- BARIMUNDA, KHATA-734,PLOT-1078, KISAM-PATITA, TENENT-ଚନ୍ଦନ ବିଳାସିନି ଦାସୀ ସ୍ତ୍ରୀ: କାଳିକର ସରକାର, ହରିଶ୍ଚନ୍ଦ୍ର ଦତ୍ତ ପି: ଗଦାଧର ଦତ୍ତ, ବୀରକାନ୍ତ ଦାସ ପି: ଚାରାଚାନ୍ଦ ବୋଷ ଜା: କାସ୍ତୁ ବା: ଅଲିସାବଜାର, କଟକ
54	KUAKHAI	-	-	-	-	0.45	-	-	MOUZA- BARIMUNDA, KHATA-734,PLOT-1077, KISAM-PATITA , TENENT-ଚଉଧୁରୀ କୈଳାସ ଚନ୍ଦ୍ର ମିଶ୍ର ପି: ଚୌଧୁରୀ ଯଦୁନାଥ ମିଶ୍ର, ଚଉଧୁରୀ ବ୍ରଜନାଥ ମିଶ୍ର ପି: ଭବନନାଥ ରାୟଗୁରୁ, ଚଉଧୁରୀ ହରିପ୍ରସନ୍ନ ମିଶ୍ର ପି: ଦୁର୍ଗା ପ୍ରସନ୍ନ ମିଶ୍ର, ଚଉଧୁରୀ ଗୌର ପ୍ରସନ୍ନ ମିଶ୍ର ପି: ଚଉଧୁରୀ ନାଥ ମିଶ୍ର ଜା: ବ୍ରାହ୍ମଣ ବା: ଭେଡ଼ା ଥାନା. ସାଲେପୁର,କିମ୍ପୁତ ଛଅ ଅଣା ବା: ଚଉଧୁରୀ ରମାନାଥ ମିଶ୍ର, ଚଉଧୁରୀ ଭୀମକାନ୍ତ ମିଶ୍ର, ଚଉଧୁରୀ ହେମକାନ୍ତ ମିଶ୍ର ପି: ଚଉଧୁରୀ ରାଧାନାଥ ମିଶ୍ର ଜା: ବ୍ରାହ୍ମଣ ବା: ଭେଡ଼ା ଥାନା. ସାଲେପୁର,କିମ୍ପୁତ ପାଞ୍ଚ ଅଣା ବା: ଚଉଧୁରୀ ବିନୁଧର ମିଶ୍ର ପି: ଚଉଧୁରୀ ରଘୁନାଥ ପାଟୟୋଷି, ଚଉଧୁରୀ ରବିନ୍ଦ୍ର ନାଥ ମିଶ୍ର, ଚଉଧୁରୀ ରାଜ କିଶୋର ମିଶ୍ର, ଚଉଧୁରୀ ବିନୁଧର ମିଶ୍ର ପି: ଚଉଧୁରୀ ନଗେନ୍ଦ୍ର ନାଥ ମିଶ୍ର, ଚଉଧୁରୀ ପ୍ରମୋଦ କୁମାର ମିଶ୍ର, ଚଉଧୁରୀ ଗୋବିନ୍ଦ ଚନ୍ଦ୍ର ମିଶ୍ର ପି: ଚଉଧୁରୀ ପ୍ରିୟାନାଥ ମିଶ୍ର ଜା: ବ୍ରାହ୍ମଣ ବା: ଭେଡ଼ା ଥାନା. ସାଲେପୁର,କିମ୍ପୁତ ଦୁଇ ଅଣା ଥିଠ ପାହି ବା: ରଙ୍ଗବତୀ ବିବ୍ୟା ସ୍ତ୍ରୀ: ଚଉଧୁରୀ ପ୍ରାଣକୃଷ୍ଣ ମିଶ୍ର ଜା: ବ୍ରାହ୍ମଣ ବା: ଭେଡ଼ା ଥାନା. ସାଲେପୁର,କିମ୍ପୁତ ଦୁଇ ଅଣା ଚାରି ପାହି ବା:
55	KUAKHAI	-	-	-	-	0.39	-	-	MOUZA- BARIMUNDA, KHATA-742,PLOT-1076, KISAM-RIVER , TENENT-Abad ajogy Anabadi
56	KUAKHAI	-	-	-	-	7.94	-	-	MOUZA- BARIMUNDA, KHATA-742,PLOT-971, KISAM-RIVER , TENENT-Abad ajogy Anabadi
57	KUAKHAI	-	-	-	-	0.03	-	-	MOUZA- BARIMUNDA, KHATA-742,PLOT-1066, KISAM-RIVER , TENENT-Abad ajogy Anabadi
58	KUAKHAI	-	-	-	-	0.03	-	-	MOUZA- BARIMUNDA, KHATA-427,PLOT-1067, KISAM-PATITA , TENENT-ବଟକୃଷ୍ଣ ରାଉତ, ଅନାଦି ରାଉତ ପି: ଉତ୍ତମ ରାଉତ ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ

59	KUAKHAI	-	-	-	-	0.06	-	-	MOUZA- BARIMUNDA, KHATA-168,PLOT-1068, KISAM-PATITA , TENENT-ଘନ ନାଏକ ପି: ଆରତ ନାୟକ, ନବେଇ ନାଏକ ପି: ବାଇଧର ନାଏକ, କମଳା ବେବ୍ୟା ସ୍ତ୍ରୀ: ଧୋବେଇ ନାୟକ ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ,ଘନ ନାଏକ ଅଂଶ ପକ୍ଷେ ଖରିଦ ସୁତ୍ରେ ଦଖଲ :;କମଳା ବେବ୍ୟା ଖାତା ଆସାମୀ ରେଜେଷ୍ଟ୍ରି ଦଲିଲ ନମ୍ବର :;2665 ତା 30.05.45 ଜରସମନ ଟ200.00 ବା:
60	KUAKHAI	-	-	-	-	0.07	-	-	MOUZA- BARIMUNDA, KHATA-742,PLOT-1072, KISAM-RIVER , TENENT-Abad ajogy Anabadi
61	KUAKHAI	-	-	-	-	0.07	-	-	MOUZA- BARIMUNDA, KHATA-697,PLOT-1075, KISAM-PATITA , TENENT-ହଟ ଦାଶ ପି:ମାଗୁଣି ଦାଶ ଜା: ବ୍ରାହ୍ମଣ ବା: ନିଜଗାଁ

NB: in the above table omitted Columns are,

Column- 08 & 09 Period of Mining lease (Initial) -NA

Column-11 Use (Working/ Non-Working) - All Non-Working

Column-12 Use (Captive/ Non-Captive) - All Non-Captive

Column- 15 Method of Mining (Opencast/Underground) - All Open cast

REMARKS: Recommended water resource dept for construction of Resoivoir & rejuvenation of Kushabhadra river

04. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS.

REVENUE FOR SAND					
Sl. No.	Name of the Tahasil	Name of Source	Revenue Collected for last three years (in Rs)		
			2021-22	2022-23	2023-24
1	BALIANTA	Kushabhadra River Sand Quarry, Prataprudrapur	3063225	3063225	3063225
		Kushabhadra River Sand Quarry,-Kushabhadra River,Bhingarpur	500500	-	-
		Kushabhadra River Sand Quarry, Mahukhanda	-	-	-
		Kushabhadra River Sand Quarry,Bhubanpur	-	-	-
		Kuakhai River sand Quarry, Alarpur	-	3063225	-
		Kuakhai River sand Quarry, Chadheidhar	-	-	-
		Bhargavi River sand Quarry, Jhintيسان	-	-	-
2	BHUBANESWAR	Kuakhai River sand Quarry Pandra	-	-	-
		Kushabhadra River Sand Source, kesura	-	-	-
		Kuakhai River sand source, kalyanpur-B	-	-	-
		Kuakhai River sand source, kalyanpur-A	-	-	-
		Kuakhai River sand source, Gandarpur	-	-	-
3	BALIPATANA	Kushabhadra River sand Marthapur	-	5925000	-
		Bhargavi River Sand, Somanasasan	-	7784995	-
		Kushabhadra River Sand,Abhayamukhi	-	135600	135600
		Kushabhadra River Sand, Bhanranijigarga	-	547200	547200
		Athantar& Giringo Sand Quarry,-Kushabhadra River	-	-	-
		Kushabhadra River Sand Source,Bhakrasahi	-	-	-
		Bhargavi River sand source,Achyutpur	-	-	-
		Bhargavi River sand, Makundaspur	-	-	-
		Bhargavi river sand, chitalpur	-	-	-

05. DETAIL OF PRODUCTION OF SAND IN LAST THREE YEARS.

PRODUCTION OF SAND					
Sl. No.	Name of the Tahasil	Name of Source	Production for last three years (in Cum)		
			2021-22	2022-23	2023-24
1	BALIANTA	Kushabhadra River Sand Quarry, Prataprudrapur	21725	21725	21725
		Kushabhadra River Sand Quarry,-Kushabhadra River,Bhingarpur	5500	5500	5500
		Kushabhadra River Sand Quarry, Mahukhanda	-	-	-
		Kushabhadra River Sand Quarry,Bhubanpur	-	-	-
		Kuakhai River sand Quarry, Alarpur	-	63200	-
		Kuakhai River sand Quarry, Chadheidhar	-	-	-
		Bhargavi River sand Quarry, Jhintيسان	-	-	-
2	BHUBANESWAR	Kuakhai River sand Quarry Pandra	-	-	-
		Kushabhadra River Sand Source, kesura	-	-	-
		Kuakhai River sand source, kalyanpur-B	-	-	-
		Kuakhai River sand source, kalyanpur-A	-	-	-
		Kuakhai River sand source, Gandarpur	-	-	-
3	BALIPATANA	Kushabhadra River sand Marthapur	-	3000	-
		Bhargavi River Sand, Somanasasan	-	3407	-
		Kushabhadra River Sand,Abhayamukhi	-	1200	1200
		Kushabhadra River Sand, Bhanranjigarga	-	4800	4800
		Athantar& Giringo Sand Quarry,-Kushabhadra River	-	-	-
		Kushabhadra River Sand Source,Bhakrasahi	-	-	-
		Bhargavi River sand source,Achyutpur	-	-	-
		Bhargavi River sand, Makundaspur	-	-	-
		Bhargavi river sand, chitalpur	-	-	-

As per the data provided by the DDM the demand of the Sand mineral in the district is as follows,

SI No	Department	2021-22 (Cum)	2022-23 (Cum)	2023-24 (Cum)
1	Superintending Engineer M.I. Division, Khordha	5728.50	3740.14	6098.24
2	Executive Engineer BBSR, (R &B) Division No-V, BBSR	18357.16	7140.79	17526.88
3	Executive Engineer Khordha, (R &B) Division	41731	40686	33148
4	Executive Engineer BBSR, (R &B) Division No-IV, BBSR	31667.00	30203.00	32508.00
5	Executive Engineer BBSR, (R &B) Division No-II	34366	52331	61479
6	Superintending Engineer Prachi Division, BBSR	1258.55	1887.83	2517.11

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

The drainage of the district is mainly controlled by the following rivers i.e. Kuakhai, Kusabhadra, Bhargavi, Daya, Malaguni.

Kuakhai River:

The Kuakhai River, being a tributary of the Mahanadi, carries sediments that have already been eroded and transported by the Mahanadi River, as well as additional sediments from local erosion processes. Key sources of sediment in the Kuakhai River include:

- **Riverbank Erosion:** The banks of the Kuakhai are subject to erosion, particularly during the monsoon season when river discharge increases. This erosion contributes sediment to the river.
- **Upland Erosion:** Soil erosion from the agricultural lands and open spaces surrounding the river, caused by rainfall, deforestation, and poor land management practices, also increases the sediment load.
- **Floodwaters:** During heavy rainfall and flooding, the river gathers additional sediments from upstream, carrying them downstream toward the delta and floodplain areas.

The river typically carries sediments such as fine sand, silt, and clay, especially during high flow periods.

Kusabhadra River:

The deposition of sediments in the Kushabhadra River in Odisha is shaped by the river's hydrology, its connection to the Mahanadi River system, the local geography, and human activities in the region. The Kushabhadra River, a distributary of the Mahanadi, flows eastward through the Puri district before emptying into the Bay of Bengal. This river primarily drains a coastal plain, making sediment deposition an important process in shaping the surrounding landscape. Here's a detailed look at how sediment deposition occurs in the Kushabhadra River:

- **Riverbank Erosion:** The Kushabhadra River erodes its banks, particularly during the monsoon when the flow volume increases. This erosion introduces sediments like sand, silt, and clay into the river.
- **Upland Erosion:** Agricultural activities and deforestation in the catchment area contribute to soil erosion, which adds sediments to the river during rainfall events.
- **Sediment from the Mahanadi River:** Since the Kushabhadra is a distributary of the Mahanadi, it also carries some of the sediment load from the larger Mahanadi system, especially during the monsoon when the river's flow is higher.

The transported sediments include a mix of fine sand, silt, and clay. These sediments are moved downstream by the river's flow, particularly during periods of high discharge (e.g., during the monsoon).

Bhargavi River:

The process of sediment deposition in the Bhargavi River, a significant distributary of the Mahanadi River system in Odisha, is influenced by its low-gradient, coastal plain landscape, seasonal flooding, and human activities. The Bhargavi River branches from the Kuakhai River near Bhubaneswar and flows through Puri district before merging with Chilika Lake, the largest brackish water lagoon in India. Here's a detailed explanation of how sediment deposition occurs in the Bhargavi River:

- **Riverbank Erosion:** Erosion of the river's banks contributes to the sediment load, especially during the monsoon season when the flow is high. The softer soils of the coastal plain are easily eroded by the river's current, adding silt, sand, and clay to the water.
- **Upland Erosion:** The agricultural lands surrounding the Bhargavi River experience erosion due to heavy rainfall and runoff, contributing to the sediment load. Deforestation and poor land management practices exacerbate this.
- **Mahanadi River System:** As a distributary of the Mahanadi, the Bhargavi River also receives sediment from upstream, especially during high flow periods in the monsoon season.

These sediments, which include fine sand, silt, and clay, are transported downstream, particularly during the monsoon when the river carries a larger load of water and sediments.

Daya River:

The Daya River originates from the Kuakhai River (a distributary of the Mahanadi) and flows through a relatively flat landscape. Along its course, the river collects sediments from various sources:

The deposition of sediments in the Daya River of Odisha follows the general principles of river sedimentation, but it is influenced by the specific characteristics of the Daya River, its hydrology, and the geography of the region. The Daya River flows through the eastern part of Odisha and eventually empties into Chilika Lake, the largest brackish water lagoon in India. Here's a detailed look at the process of sediment deposition in the Daya River:

- **Erosion of riverbanks** and surrounding landscapes contributes to the sediment load.
- **Seasonal floods** during the monsoon period accelerate erosion and bring large amounts of sediment into the river system.
- **Human activities**, such as deforestation, agriculture, and construction, can also increase erosion in the region, adding to the sediment load in the river.

The sediments in the Daya River are typically composed of silt, clay, and fine sand, which are transported through suspension, as the river has a relatively low gradient and slower flow compared to mountainous rivers.

Malaguni River:

The Malaguni River is a tributary of the Daya River in Odisha, flowing through the districts of Khordha and Puri. As with many rivers in Odisha, the process of sediment deposition in the Malaguni River is influenced by seasonal flow variations, its relatively flat terrain, and human activities like agriculture and deforestation. The river eventually flows into Chilika Lake, a major brackish water lagoon in the region, and contributes to its sediment load.

Here's a detailed breakdown of the sediment deposition process in the Malaguni River:

- **Riverbank Erosion:** During the monsoon, the increased water flow causes erosion of the riverbanks, contributing sediments such as sand, silt, and clay. The softer alluvial soils of the region are particularly vulnerable to erosion.
- **Upland Erosion:** The river's catchment area includes agricultural lands and hilly terrain, where soil erosion due to rainfall contributes additional sediments to the river. Deforestation and poor agricultural practices intensify this erosion.
- **Sediment from Tributaries:** Small tributaries and streams feeding the Malaguni River also carry sediments eroded from the surrounding landscape.

The transported sediments primarily include fine sand, silt, and clay, which are carried downstream, especially during periods of high discharge in the monsoon.

07. GENERAL PROFILE OF THE DISTRICT.

a) Geographical Position:- Topographically, this district is located between latitude 19° 40' N to 20° 25' N and longitude 84° 55' E to 86° 22' E.

b) Area & Population :-

The district has an area of 2813 sq. km and 22.52 lakhs of population as per 2011 census. The district accounts for 1.81 percent of the states territory and shares 5.36 percent of the state's population. The density of population of the district is 800 per sq. Km as against 270 person per sq.km of the state. It has 1534 villages (including 178 un-inhabited villages) covering 10 blocks. 10 Tahasils and 2 sub-divisions. As per 2011 census the schedule caste population is 297472 (13.2%) and schedule tribe population 115051 (5.1 %). The literacy percentage of the district covers 86.9 against 72.9 of the state.

c) Climate:-

The climate condition of the district is generally hot with high humidity during April and May and cold during December and January The monsoon generally breaks during the month of July.

d) Industry & Mining:-

Khordha is an important centre of handloom industry. The lungi, napkin and saree produced here have an all Odisha market. Besides during the year 2014-15, 2187 nos. of small scale industries have been established with total capital investment of about Rs.10870.89 lakhs with 2176 nos. of Employment generated in the district. The district is also important for mining of minerals like decorative stone (Khondalite), building stone, laterite blocks, morrum & earth.

e) Power:-

Consumption of electricity in Khordha district during the year covers 1437.75 million units and revenue villages so far electrified as on 2013-14 is 1343 which constitutes 98.9 % to the total villages of the district.

f) Tourist Places:-

There are 19 nos. of tourist center such as Bhubaneswar, Dhauli , Khandagiri & Udayagiri, Nandankanan, Atri, Banapur, Barunei, Bhusandapur, Chilika (Barakul), Hirapur, Jayadev Kenduli, Gadamanitri, Rameswar, Madangiri (Mundiapada), Salia Dam-Barbara Hills, Kosalasuni, Thakuranipitha, Balipatna (Sisu Ananta Pitha), Shree Ananta purusottam Dev(Jagulaipatna) and Sankat Mochan Mahavir Temple identified by department of Tourism & Culture, Odisha.

g) Transport & Communication: -

NH- 162.98 km

SH- 25.97km

Major district Road- 2555.08 km

Other district road- 775.74 km

Rural road- 1188.89 km

Inter village road- 2424.00 km

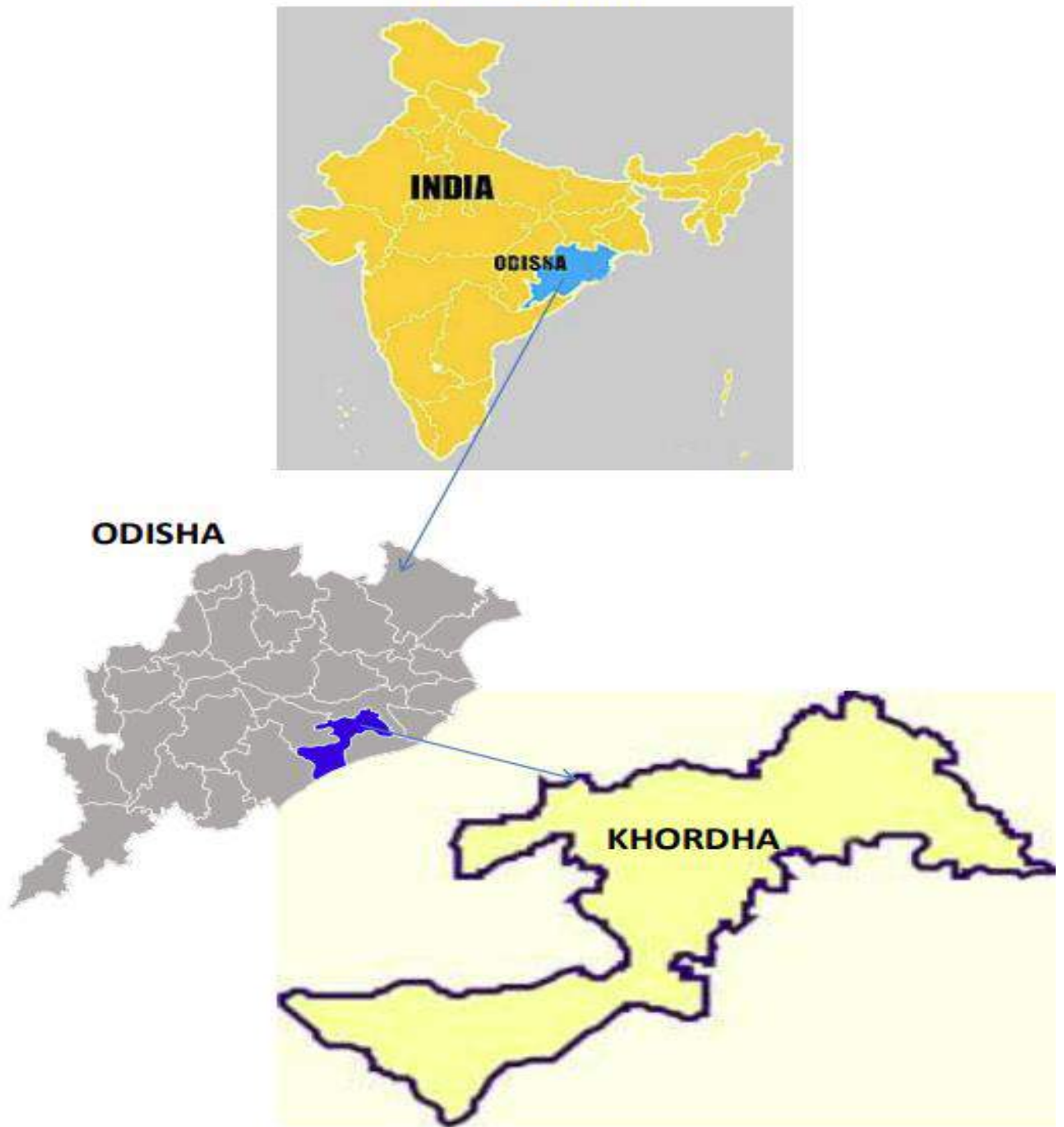
Intra village road- 1471.24 km

Besides, 117.39 Kms. of Railway lines with 23 nos. of railway stations and passenger halts are there in the district.

h) Health:-

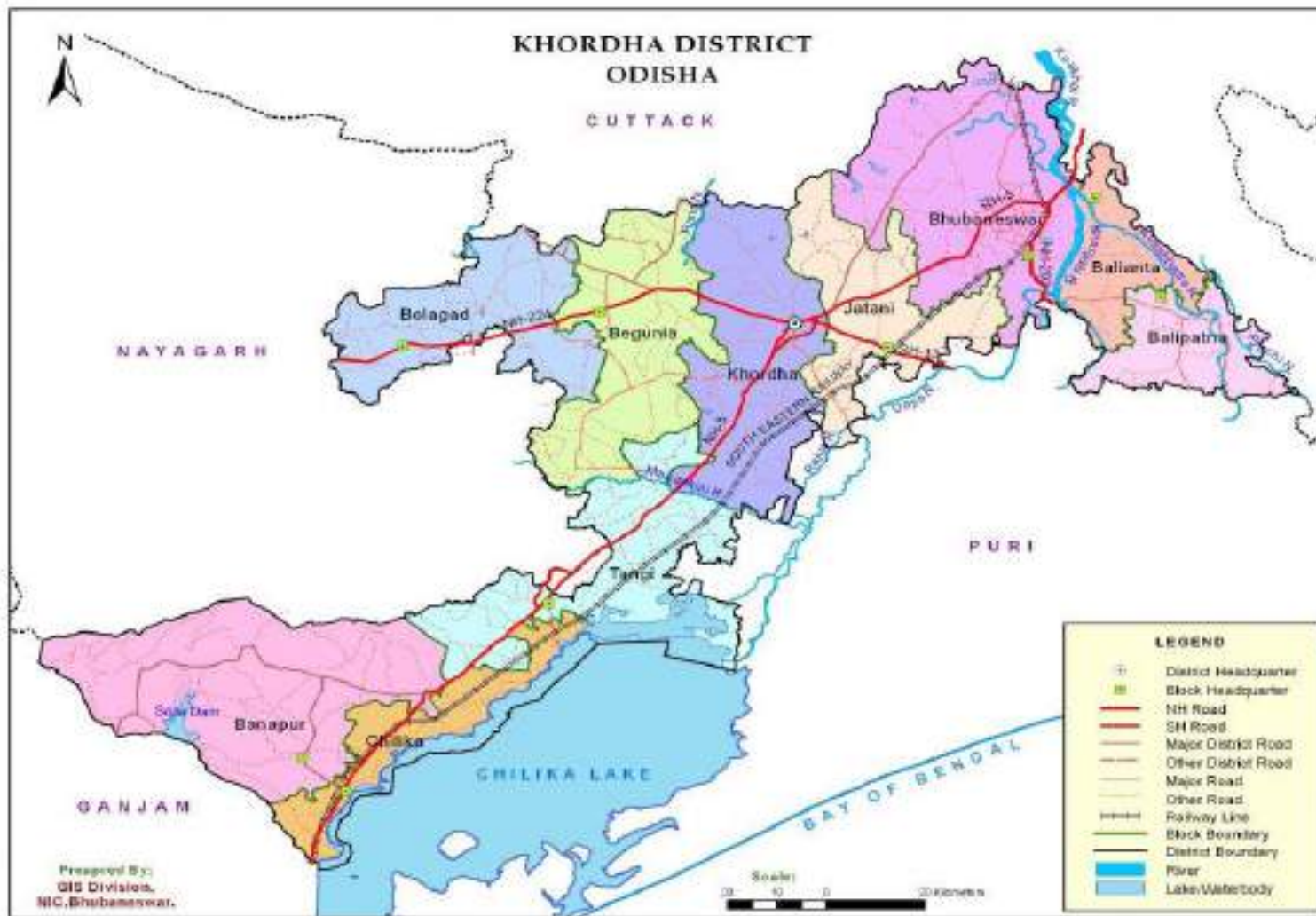
The medical facilities are provided by different agencies like Govt., Private individuals and voluntary organizations in the district. There were 282 nos. of the govt. Allopathic medical institutions with 965 beds facilities, 23 nos. of Homoeopathic dispensaries and 27 nos. of Ayurvedic dispensaries in the district during the year 2013-14.

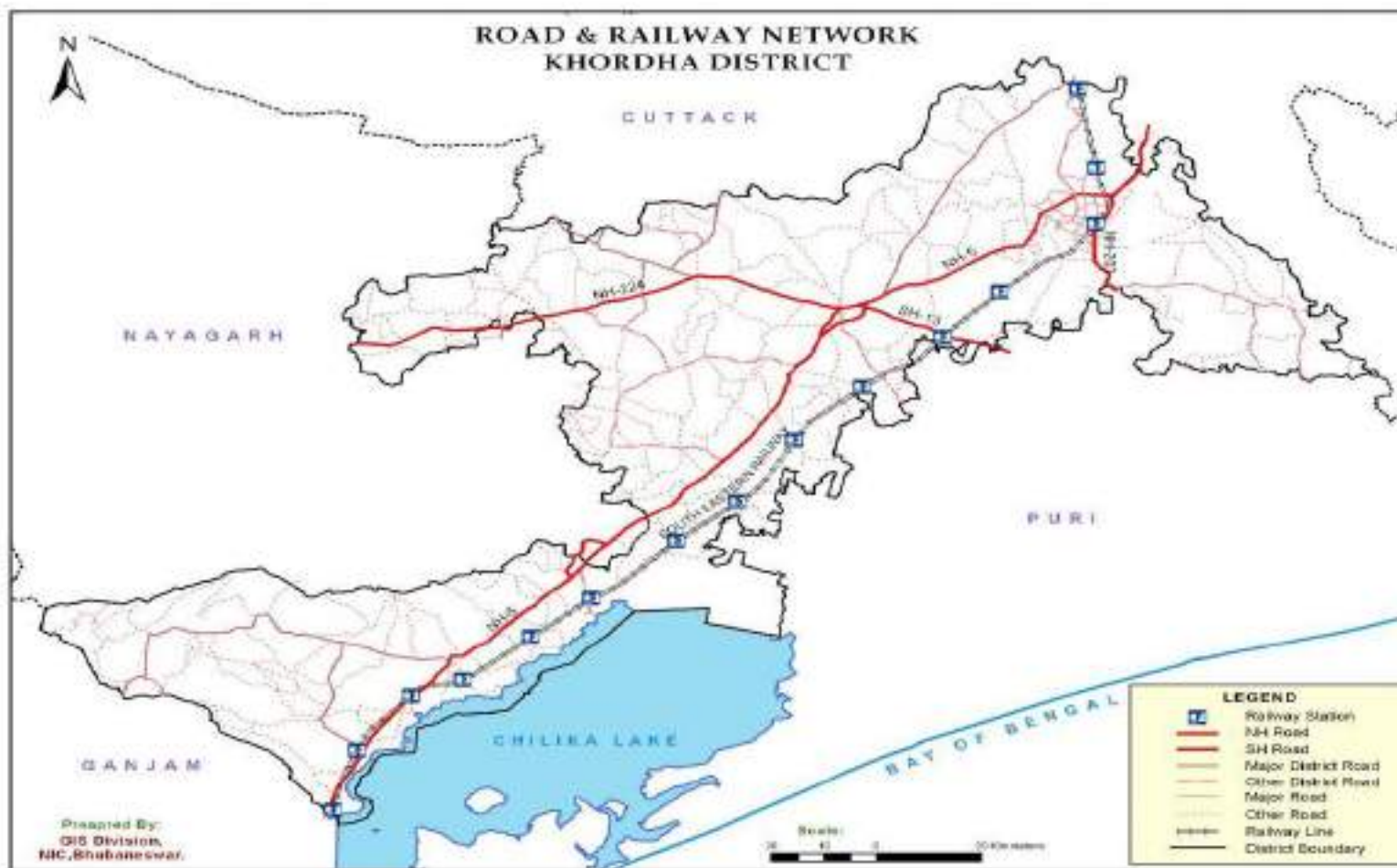
INDEX MAP



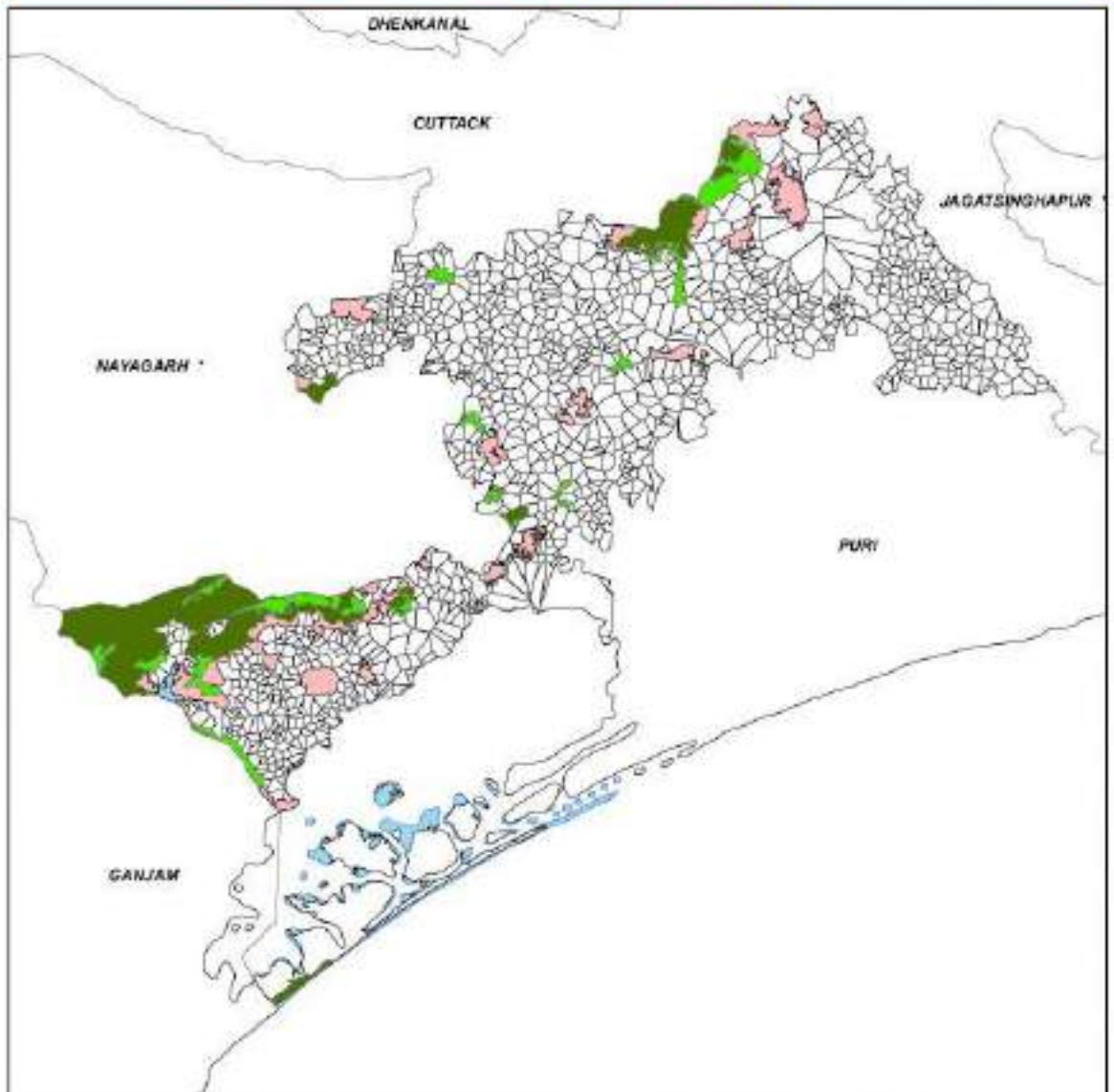
MAP SHOWING THE TAHASILS OF KHORDHA DISTRICT







DISTRICT ATLAS - KHORDHA



08. LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC.

Forest:

As per the data provided by the *Divisional Forest Officer, Khordha Division, Khordha*; the land use in the division is as follows

Category of Forest Areas in Khordha Forest Division(Khordha District)			
Category of Forest	Number of Blocks	Area in Ha.	Percentage(%)
Reserved Forest	13	19556.28	30.163
Proposed Reserved Forest	1	97.28	0.15
Demarcated Protected Forest	29	16602.59	25.608
Village Forest	103	677.945	1.046
Protected Forest	-	-	-
DLC Forest	278	5777.312	8.911
Revenue Forest	598	22123.443	34.123
Total Forest Area	1022	64834.85	100

As per the data provided by the *Divisional Forest Officer, Chandaka Wildlife Division, Bhubaneswar*; the land use in the division is as follows

Category of Forest Areas in Chandaka Wildlife Division, Bhubaneswar			
Category of Forest	Number of Blocks	Area in Ha.	Percentage(%)
Reserved Forest	7	9140.81	47.26
Proposed Reserved Forest	11	9219.19	47.67
Demarcated Protected Forest	1	53.87	0.27
Village Forest	0	0	0
Protected Forest	2	21.09	0.109
DLC Forest	0	20056.66	0
Revenue Forest	0	0	0
Total Forest Area	21	38491.62	-

As per the data provided by the **Divisional Forest Officer, City Forest Division, Bhubaneswar**; the land use in the division is as follows

Category of Forest Areas in City Forest Division			
Category of Forest	Number of Blocks	Area in Ha.	Percentage(%)
Reserved Forest	1	317.28	40%
Proposed Reserved Forest	-	-	-
Demarcated Protected Forest	-	-	-
Village Forest	5	27.1	-
Protected Forest	-	-	-
DLC Forest	-	616.1424	-
Revenue Forest	-	2708.527(Approx)	-
Total Forest Area		3669.0494	

As per the data provided by the **Divisional Forest Officer, Chilika Wildlife Division**; the land use in the division is as follows

Category of Forest Areas in Chilika Wildlife Division			
Category of Forest	Number of Blocks	Area in Ha.	Percentage (%)
Reserved Forest	Nil	-	-
Proposed Reserved Forest	Nil	-	-
Demarcated Protected Forest	1	212.47	
Village Forest	1	13.745	
Protected Forest	Nil	-	-
DLC Forest	2	212.074	
Revenue Forest	Not available	-	
Total Forest Area		438.289	0.71%

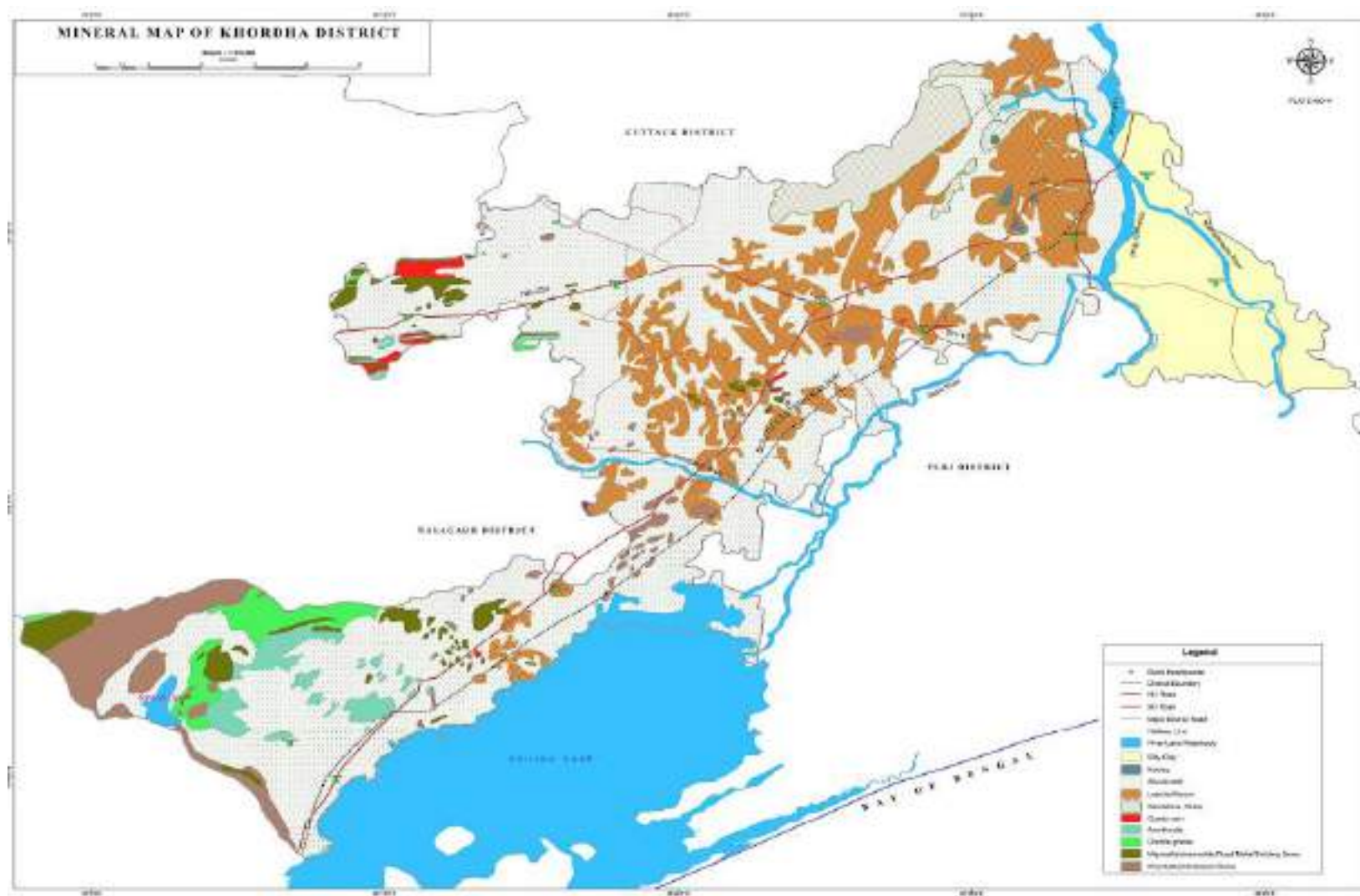
Agriculture & Horticulture:

Land utilization pattern in the district as per the department of agriculture & horticulture Khordha is as follows;

Blockwise Land Utilization Pattern in Khordha District												
SI No.	Name of the Blocks	Geographical Area	Forest Area	Misc Tree & Groves	Permanent pasture	Culturable Waste	Land put to non-agricultural use	Barren & Unculturable Land	Other Fallow	Cultivable Area	Current Fallow	Cultivated Area
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Khordha	31860	7060	320	345	182	4607	2533	2185	14627	27	14600
2	Begunia	30610	4374	1725	558	914	3954	1836	620	16629	69	16560
3	Bolagarh	25260	4515	673	569	102	2826	735	10	15830	0	15830
4	Tangi	34374	5010	3247	814	3935	7293	1265	50	12760	0	12760
5	Chilika	20172	1892	770	580	93	3093	1586	410	11748	28	11720
6	Banapur	40650	20720	287	524	118	3001	2339	980	12681	31	12650
7	BBSR	45729	12109	829	571	616	13242	1149	4435	12778	728	12050
8	Jatani	23447	5158	1890	999	331	3991	1195	1880	8003	103	7900
9	Balianta	14971	854	273	172	225	1068	886	1458	10035	95	9940
10	Balipatna	14227	175	354	366	35	1175	482	720	10920	280	10640
	District	281300	61867	10369	5498	6551	44250	14006	12748	126011	1361	124650

Mining:

The Khordha district of Odisha is known for mining a variety of minerals, including: Decorative stone (Khondalite), Building stone, Laterite blocks, Morrums, and Earth. The major mining activities are dependent upon laterite & stone mining. Whereas other associated mining activities are related to morrum, sand & ordinary earth mining. There are three no of khondalite decorative stone sources reported in the district. Hence the total mining area are different for different categories of mineral. Total mining area will be the sum of the lease areas present in the district, which can be abstracted from the mining lease details table annexed herewith.



09. PHYSIOGRAPHY OF THE DISTRICT.

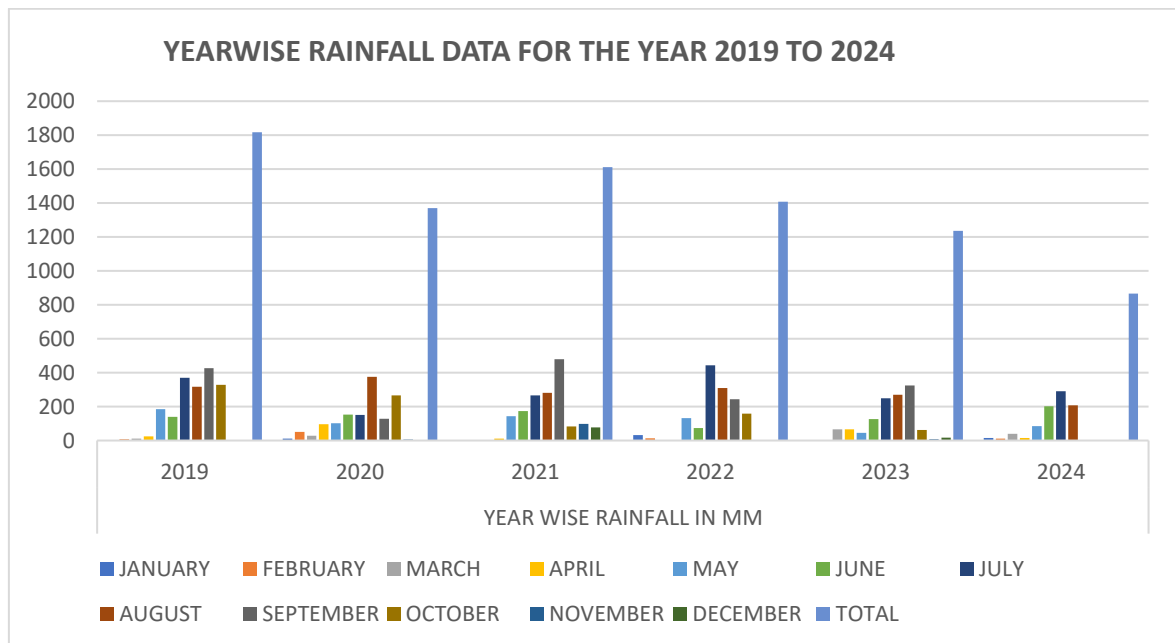
Western & south-western part of the district is occupied by the hilly terrain of Eastern Ghats. The hilly area in the west gradually passes on to the low undulating rugged terrain towards the central part of the district. In the northern, eastern and south-eastern sides, the district is surrounded by the flood plain and deltaic deposits of Mahanadi river basin. Parts of Chilika lake and its set of tributaries are the most conspicuous geomorphic features in the south. Daya, Bhargabi, Kuakhai and Kushabhadra rivers, emerging as distributaries from Mahanadi river system, drain southerly through the eastern flank of the district and merge either with the Chilika lake or with the Bay of Bengal. Kaipadar, about 10 km south west of Khurda, marks a water divide with Ran River flowing northerly to Mahanadi and Mandakini river flowing southerly to Chilika. The highest elevation attained in the district is at 568 mts. in its southwestern corner, while Chilika represents the lowest at mean sea level.

10. RAINFALL: MONTH-WISE.

The district is generally hot with high humidity during April and May and cold during December and January. The monsoon generally breaks during the month of July and continues till end of October. The temperature goes as high as up to 45°C in the summer and up to 7° -8° C during peak winter.

The rainfall statistics of the district for last four years is given below:

YEAR MONTH WISE RAINFALL REPORT (in mm) OF KHORDHA DISTRICT FOR THE YEAR 2019 - 2024													
Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	1.1	806	11.8	24.38	185.59	140.48	378.29	317.46	426.77	328.23	2.12	0	1816.28
2020	12.2	59.32	28.47	97.09	101.68	159.4	158.72	375.12	128.34	265.72	6.1	0	1369.16
2021	0	0	8	10.62	143.24	176.1	265.37	281.46	478.69	82.39	87.96	78.02	1612.05
2022	32.67	13.72	0	0.5	131.97	73.84	443.69	399.67	243.36	157.55	0	0	1467.17
2023	0	0	85.7	65.12	44.43	126.56	349.77	260.36	325.42	63.08	0	19.1	1236.54
2024	14.4	11.36	38.92	14.26	85.39	202.39	291.46	287.91	0	0	0	0	866.09



11. GEOLOGY AND MINERAL WEALTH.

The Major geology in the district can be broadly classified into Eastern Ghat Super Group of Archean to Proterozoic age, Proterozoic intrusive, Gondwana Super Group of Mesozoic and Pleistocene to Holocene age of Quaternary period of Cenozoic Era.

The rocks belonging to EGSG are mostly quartzite, khondalite and their variants, charnockite and pyroxene granulite. They are found mostly on the western and south western parts of the district. The Eastern Ghat Super Group of rocks have been intruded by plugs/apophyses of anorthosite, popularly known as Banpur anorthosite/ Chilika lake complex, and are found as cluster of anorthosite bodies around Banpur, Rambha and Balugaon region in the southern & western side of Chilika lake and partly within the lake also. This pluton is emplaced in the core of an antiform (Perraju, 1960). Sarkar et al. (1981) deciphered 3 phases of folding (F1-F3) in the khondalite host rocks and considered emplacement of anorthositic complex syntectonically with F3. Xenoliths of metasediments (khondalite and calc-silicate gneisses) and charnockite in anorthosite and locally developed pyroxene hornfels grade skarn zones indicate the intrusive nature of the complex.

The rocks of Eastern Ghat Supergroup show foliation in NE-SW direction. Joint planes, wherever present, follow the same structural alignment. A prominent fault running ENE-WSW is recorded in north-western part of the district. Major lineaments trend in NE-SW direction. The NE-SW trending lineament passing through Baghamari houses a sulphurous hot spring at Atri and is of immense tectonic significance.

Granite gneiss of Archean to Proterozoic age, exposed in the western part of the district, are well foliated and are often garnetiferous. Quartz veins cut across the granulitic country at random.

The exposures belonging to Athgarh formation of Upper Gondwanas (Lower Cretaceous) mostly occur as a cluster forming upland in the north, NE parts of the district, i.e. west of Bhubaneswar.

They are comprising dominantly of sandstones classified as quartz arenite, sub-lithic arenite and lithic wacke

(Mishra, 1988; Pal, 1990), characteristically lacking in feldspars in clastic components. This also includes conglomerates, grits, carbonaceous shale, variegated shale and fire clay; most of them as small lenticular bodies breaking the monotonous vastness of sandstones. Deep drilling in the coastal Odisha has indicated the extension of the formation below the alluvial cover of the Mahanadi delta and the coastal Tertiary succession (Pandya et al. 2000).

The earliest Quarternary deposit, the Bolgarh formation (Pleistocene age) occupies central and northern part of the district, overlying the khondalite group of rocks. It comprises hard crust laterite, latosol and also residual soil.

Brahmani formation (Pleistocene to Holocene) consists of residual soil and alluvium and occupies an appreciable part of the district and are particularly conspicuous in the eastern and southern part of the district adjoining Chilika lake. Bankigarh formation (Middle to Late Holocene) is occupied by north and NE part of the district i.e. east of Bhubaneswar. It mostly comprises brownish silty clay and occur in the flood plain / deltaic plains of Mahanadi River basin. The district lacks any major mineral deposit of economic significance. Few fire clay deposits located in the north-eastern part of the district are the only deposits of minor minerals that are being mined presently by Tata Refractories Ltd. The other deposits that are being profusely exploited as Dimension and decorative stone for construction material/polished slabs and artisan grade of khondalite around Tapanga and Kurumpada area. Ground water occurs in the porous sedimentary formations and in the fractured igneous and metamorphic rocks in unconfined to confined conditions. The nala and gully erosion in the tributaries and distributaries of Mahanadi river basin and in Chilika lake are quite common.

Stratigraphy:

Phanerozoic	Quarternary	Mid to Late Holocene	Bankigarh Fm	Brownish silty clay
		Pleistocene to Holocene	Brahmani/ Mahanadi Fm	Residual soil and alluvium
		Pleistocene	Bolagarh Fm	Laterite/Latosol
	Gondwana Sup Gp	Lr Cretaceous	Athagarh Fm	Sandstone, Shale
Precambrian	Archean to Proterozoic	Eastern Ghat Sup Gp		Quart vein Granite gneiss Anorthosite Chanockite gp of rocks Khondalite gp of rocks Quartzite

The district particularly the Khordha tahasil has good deposits of sand and cater to the need of the capital city of Bhubaneswar and to a periphery of 50km. Also, minor minerals like sand, laterite, morrum, earth and specified mineral like khondalite (dimension stone) are available in the district for excavation.

a. Detail of river/stream/other sand source-

Sand mining in the district is confined to three rivers namely Kusabhadra, Kuakhai & Bhargavi. Details of the lease areas & streams are in the following tables.

Drainage system with description of main river:

Sl. No	Name of the River	Area drained (Sq. Km)	% Area Drained in the District
1	Kushabhadra	212.32	48.86
2	Bhargavi	Nil	Nil
3	Kuakhai	21.85	45.60
4	Daya	10.10	51.80
5	Malaguni	8.40	62.50
6	Hada	0.92	60.87
7	Kusumidhar	1.32	100.00

Salient Features of Important Rivers & Streams:

Sl. No.	Name of the River or Stream	Total length in the District(in Km)	Place of origin	Altitude at Origin	Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession(in Km)	Average width of area recommended for mineral concession(in meters)	Area recommended for mineral concession(in Sq. M)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
1	Kushabhadra	30	Bhubanapur (khorda dist)	11.8m	Kushabhadra River Sand Quarry, Prataprudrapur	0.504	108	49400	124488
					Kushabhadra River Sand Quarry,- Kushabhadra River,Bhingarpur	0.646	82	48500	50868
					Kushabhadra River Sand Quarry, Mahukhanda	0.564	110.15	48500	31200
					Kushabhadra River Sand Quarry,Bhubanpur	0.233	105.32	48500	38568
					Kushabhadra River Sand Source, kesura	1.3	80	162500	504288
					Kushabhadra River sand Marthapur	0.93	79	202100	28021
					Kushabhadra River Sand,Abhayamukhi	0.553	44.5	46700	56060
					Kushabhadra River Sand, Bhanranijigarga	0.875	92	48100	57742
					Athantar& Giringo Sand Quarry,- Kushabhadra River	0.98	89	168150	27711
					Kushabhadra River Sand Source,Bhakrasahi	0.505	105.64	50700	91418

2	Bhargavi	14	Balakati (khordha dist)	7.80 m	Bhargavi River sand Quarry, Jhintيسان	1	87	49300	34204
					Bhargavi River sand Quarry, Jhintيسان	0.641	39002	25000	15000
					Bhargavi River sand Quarry, pratapasasan	0.914	49234	45000	27000
					Bhargavi River Sand, Somanasasan	0.484	92.21	48560	29137
					Bhargavi River sand source, Achyutpur	0.487	105.77	48560	29136
					Bhargavi River sand, Makundaspur	1.17	232.41	228900	274771
					Bhargavi river sand, chitalpur	1	56	48560	29136
3	Kuakhai	26.5	Mukameswra	25.92 m	Kuakhai River sand Quarry, Alarpur	0.34	93	45000	27000
					Kuakhai River sand Quarry, Chadheidhar	0.674	56	36400	34204.2
					Kuakhai River sand Quarry Pandra	0.7	265857	186100	186100
					Kuakhai River sand source, kalyanpur-B	0.84	750	202100	481492
					Kuakhai River sand source, kalyanpur-A	0.75	380	142600	118092
					Kuakhai River sand source, Gandarpur	1	86	121406	72843.6
4	Daya	10.1	Nathapur	18.180 m.	-	-	-	-	-
5	Malaguni	35	Baunshaga rh (nayagarh dist)	21.20m	-	-	-	-	-
6	Hada	14	Hatibari (Nayagarh dist)	19.80m	-	-	-	-	-
7	Kusumidhar	33	Randa (khordha dist)	60m	-	-	-	-	-

b. Availability of sand or gravel or aggregate resources-

Mineral Potential:

Boulder(MT)	Bajari(MT)	Sand(MT)	Total Mineable Mineral Potential(MT)	Annual Deposition
NA	NA	6845032.8	4263263.6	-

SI No.	River or Stream	Portion of the river or stream recommended for mineral concession	Length of area recommended for mineral concession(in km)	Average width of area recommended for mineral concession(in mt.)	Area recommended for mineral concession(in sq. m)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
1	Kushabhadra	Kushabhadra River Sand Quarry, Prataprudrapur	0.504	108	49400	124488
		Kushabhadra River Sand Quarry,-Kushabhadra River,Bhingarpur	0.646	82	48500	50868
		Kushabhadra River Sand Quarry, Mahukhanda	0.564	110.15	48500	31200
		Kushabhadra River Sand Quarry,Bhubanpur	0.233	105.32	48500	38568
		Kushabhadra River Sand Source, kesura	1.3	80	162500	504288
		Kushabhadra River sand Marthapur	0.93	79	202100	28021
		Kushabhadra River Sand,Abhayamukhi	0.553	44.5	46700	56060
		Kushabhadra River Sand, Bhanranijigarga	0.875	92	48100	57742
		Athantar& Giringo Sand Quarry,-Kushabhadra River	0.98	89	168150	27711

		Kushabhadra River Sand Source,Bhakrasahi	0.505	105.64	50700	91418
2	Bhargavi	Bhargavi River sand Quarry, Jhintيسان	1	87	49300	34204
		Bhargavi River sand Quarry, Jhintيسان	0.641	39002	25000	15000
		Bhargavi River sand Quarry, pratapasasan	0.914	49234	45000	27000
		Bhargavi River Sand, Somanasasan	0.484	92.21	48560	29137
		Bhargavi River sand source,Achyutpur	0.487	105.77	48560	29136
		Bhargavi River sand, Makundaspur	1.17	232.41	228900	274771
		Bhargavi river sand, chitalpur	1	56	48560	29136
3	Kuakhai	Kuakhai River sand Quarry, Alarpur	0.34	93	45000	27000
		Kuakhai River sand Quarry, Chadheidhar	0.674	56	36400	34204.2
		Kuakhai River sand Quarry Pandra	0.7	265857	186100	186100
		Kuakhai River sand source, kalyanpur-B	0.84	750	202100	481492
		Kuakhai River sand source, kalyanpur-A	0.75	380	142600	118092
		Kuakhai River sand source, Gandarpur	1	86	121406	72843.6
4	Daya	-	-	-	-	-
5	Malaguni	-	-	-	-	-
6	Hada	-	-	-	-	-
7	Kusumidhar	-	-	-	-	-

c. Detail of existing mining leases of sand and aggregates-

For details, Please refer Point no-3 & Annexure I to VII.

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)
Kushabhadra	74.83	Perennial
Bhargavi	18	Perennial
Kuakhai	89	Perennial
Daya	37	Perennial

b) De-Siltation Location: (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size(Ha)
DERAS DAM	Govt.	KANTABADA	KHORDHA	BHUBANESWAR	KANTABADA	45.8
JHUMUKA DAM	Govt.	KANTABADA	KHORDHA	BHUBANESWAR	KANTABADA	46
RANDA DAM	Govt.	MUNDILA	KHORDHA	KHORDHA	MUNDILA	40.2
SILIA DAM	Govt.	PANASADIHI	KHORDHA	BANAPUR	PANASADIHI	796
BADADANDA DAM	Govt.	HARIKUNDA	KHORDHA	BANAPUR	HARIKUNDA	1.18
PANKAL DAM	Govt.	BERUANBADI	KHORDHA	BANAPUR	BERUANBADI	14.8
KAMARKHUNTI REDERVOIR	Govt.	KAMARKHUNTI	KHORDHA	BHUBANESWAR	KAMARKHUNTI	18.1
KAJALA GANDA DAM	Govt.	MANGALPUR	KHORDHA	JATANI	MANGALPUR	13.4
GUPTA PADA DAM	Govt.	BHINJHAGIRI	KHORDHA	BHUBANESWAR	BHINJHAGIRI	4.63

c) Patta Lands/Khatedari Land:

Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
NA	NA	NA	NA	NA	NA	NA

d) M-Sand Plants:

Plant Name	Owner	District	Tehsil	Village	Geo- location	Quantity Tonnes/Annum
NA	NA	NA	NA	NA	NA	NA

List of Potential Mining Leases (existing & proposed)

Rivers:

Lease No.	River Details	Lease Details	Area (in Ha)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 3 meters	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
A1	Kushabhadra River	Kushabhadra River Sand Quarry, Prataprudrapur, Mouza- Prataprudrapur, Khata-1403, Plot-343(P)-2.330Ac, 377-8.720Ac, 395(P)-1.150Ac, Kissam-Nadi, Lat-20°13'30.35"N to 20°13'45.28"N Long-85°57'43.81"E to 85°57'58.35"E	4.94Ha	BR-0.17/PA-0.60	19.15	-	311220	186732	Existing
A2	Kushabhadra River	Kushabhadra River Sand Quarry,- Kushabhadra River, Bhingarapur, Mouza- Bhingarapur, Khata-11.62, Plot- 918(P)-8Ac, 192(P)-4Ac, Kissam-Nadi, Lat-20°15'46.32"N to 20°16'03.20"N Long-85°55'25.02"E to 85°55'44.70"E	4.85Ha	BR-0.66/ PA-0.28	13.5	-	127170	76302	Existing
A3	Kushabhadra River	Kushabhadra River Sand Quarry, Mahukhanda, Mouza- Mahukhanda, Khata-529, Plot-1219, Kissam-Nadi, Lat-20°11'16.11"N to 20°11'26.67"N long-85°58'31.07"E to 85°58'50.29"E	4.85Ha	BR-1.77/ PA-0.25	22.6	YES	78000	46800	Existing
A4	Kushabhadra River	Kushabhadra River Sand Quarry, Bhubanpur, Mouza- BHUBANPUR, Khata-336, Plot-58(P), Kissam-Nadi, Lat-20.305 long-85.883	4.85Ha	BR-1.08, PA-0.26	8	-	96421.5	57852.9	Existing

A5	Kuakhai River	Kuakhai River sand Quarry, Alarpur, Mouza- Alarpur, Khata-340, Plot-9, Kissam-Nadi, Lat- 20.245 Long-85.88	4.5Ha	BR-5.22, PA-0.66	10.1		67500	40500	Existing
A6	Kuakhai River	Kuakhai River sand Quarry, Chadheidhar, Mouza- Chadheidhar, Khata-207, Plot- 519 , Area-9.00Ac, Kissam-Nadi , Lat-20.18 , Long-85.891	3.64Ha	BR-2.78, PA-0.45	15.7	YES	54600	32760	Existing
A7	Bhargavi River	Bhargavi River sand Quarry, Jhintيسان, Mouza- Jhintيسان, Khata-1613, Plot-2613(P) , Kissam-Nadi, Lat-20°09'38.27"N to 20°09'49.15"N Long-85°53'59'04"E to 85°54'09.61"E	4.93Ha	BR-4.55, PA-0.17	17.6	-	85510.5	51306.3	Existing
A8	Bhargavi River	Bhargavi River sand Quarry, Jhintيسان, MOUZA- JHINTISAN, KHATA-1613, PLOT- 58, KISSAM- NADI, TENANT- AAA, LAT- 20°10'26.4"N LONG- 85°53'42.00"E	2.5Ha	BR-3.29, 0.58	16.76	YES	37500	22500	Proposed
A9	Bhargavi River	Bhargavi River Sand Quarry, Pratapasasan, MOUZA- Pratapsasan, KHATA-2112, PLOT- 284 KISSAM- NADI, TENANT- AAA, LAT- 20°12'50.4"N LONG- 85°51'50.4"E	4.50Ha	BR-2.8, PA-0.46	11	-	67500	40500	Proposed
B1	Kuakhai River	Kuakhai River sand Quarry Pandra, Mouza- Pandra, Khata-1352, Plot 2414 Kissam-Nadi, Lat-20.31 Long-85.879	18.61Ha	BR-0.4, PA-0.35	8.5	-	279150	167490	Existing
B2	Kushabhadra River	Kushabhadra River Sand Source, kesura, Mouza- KESURA, Khata-549, Plot- 1000, Kissam-Nadi, Lat- 20°15'59.7"N to 20°16'41.2"N Long- 85°52'58.8"E to 85°53'10.8"E	16.25Ha	BR-3.19, PA-0.38	9.5	-	1260720	756432	Existing
B3	Kuakhai River	Kuakhai River sand source, kalyanpur-B, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1061, Kissam-Nadi, Lat-20°22'31.56"N to 20°22'54.64"N Long-85°52'20.52"E to 85°52'45.78"E	20.21Ha	BR-7.14, PA-1.27	12	YES	1203732	722239.2	Existing

B4	Kuakhai River	Kuakhai River sand source, kalyanpur-A, Mouza- Kalyanpur , Khata-221(AAA), Plot- 1058,947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, Kissam-Nadi, Lat- 20°22'08.04"N to 20°22'34.30"N Long- 85°52'03.02"E to 85°52'15.76"E	14.26Ha	BR-6.16, PA-0.5	12.5	-	295230	177138	Existing
B5	Kuakhai River	Kuakhai River sand source, Gandarpur, Mouza- Gandarpur, Khata-607(AAA), Plot- 2538, Kissam-Nadi Lat- 20.387 Long-85.869	12.1406Ha	BR-8.2, PA-1.2	9.7	YES	182109	109265.4	Existing
C1	Kushabhadra River	Kushabhadra River sand Marthapur, Mouza- Marthapur, Khata-301, Plot- 692, Kissam-Nadi, Lat-20°08'10.213"N to 20°08'40.571"N long-86°00'22.239"E to 86°00'31.114"E	4.670Ha	BR-1.58, PA-0.2	28.4	-	70051.5	42030.9	Existing
C2	Bhargavi River	Bhargavi River Sand, Somanasasan, Mouza- Somanasasan, Khata-550, Plot- 1(P), Kissami-Nadi, Lat-20°07'46.52"N to 20°08'01.71"N Long-85°53'05.90"E to 85°53'17.68"E	4.856Ha	BR-2.77, PA-0.35	20	YES	72843	43705.8	Existing
C3	Kushabhadra River	Kushabhadra River Sand, Abhayamukhi, Mouza- Abhayamukhi, Khata-1649, Plot- 4541, 4936, Kissam-Nadi, Lat- 20°06'44.14"N to 20°07'01.89"N Long- 86°00'35.03"E to 86°00'43.66"E	4.67Ha	BR-1.14, PA-0.27	29.5	-	140151	84090.6	Existing
C4	Kushabhadra River	Kushabhadra River Sand, Bhanranijigarga, Mouza- BHANRANIJIGADA , Khata-620, Plot- 326(P), 181/1865, Kissam-Nadi, Lat- 20°09'25.64"N to 20°09'58.70"N long- 86°00'10.82"E to 86°00'44.38"E	4.81Ha	BR-1.87, PA-0.51	28	-	144354	86612.4	Existing

C5	Kushabhadra River	Athantar& Giringo Sand Quarry,- Kushabhadra River, Mouza- Athantar& Giringo , Khata-330, 537, Plot- 814& amp; 1338, 9 & amp; 679,Kissam-Nadi, Lat-20°11'21.56"N to 20°11'52.06"N long-85°58'15.08" E to 85°58'31.69"E	16.815Ha	BR-1.03, PA-0.44	21.9	YES	69277.5	41566.5	Existing
C6	Kushabhadra River	Kushabhadra River Sand Source,Bhakrasahi, Mouza- Bhakrasahi , Khata-1519, Plot- 1567- 4.2Ac, 1708-8.35Ac,Kisama-Nadi, Lat-20°11'54.3"N to 20°11'59.2"N Long-86°00'55.2"E to 86°00'58.3"E	5.07Ha	BR-0.76, PA-0.27	25.2	-	228546	137127.6	Existing
C7	Bhargavi River	Bhargavi River sand source,Achyutpur, Mouza- Achyutpur , Khata-221, Plot- 1, Kissam- Nadi, Lat-20.15 Long-85.903	4.856Ha	BR-5.30, PA-0.12	24.6	YES	72840	43704	Existing
C8	Bhargavi River	Bhargavi River sand, Makundaspur ,Mouza- Makundaspur, Khata-771, Plot-199,Kisama-Nadi,Lat- 20°08'37.27"N to 20°08'11.98"N Long- 85°53'57.24" Eto 85°53'22.74"E	22.89Ha	BR-3.87, PA-0.17	23.9	YES	686928	412156.8	Existing
C9	Bhargavi River	Bhargavi river sand, chitalpur,Mouza- Chitalpur, Khata- 186, plot-20, Kissam- Nadi, Lat- 20.125, Long-85.873 ,	4.856Ha	BR-1.16, PA-0.4	22.24	-	72840	43704	Existing

Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing /Proposed
NA	NA	NA	NA	NA	NA	NA	NA	NA

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing & proposed)

Name of Reservoir/Dams	Maintain /Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)	Quantity MT/Year	Existing /Proposed
NA	NA	NA	NA	NA	NA	NA	NA	NA

M-Sand Plants:(existing & proposed)

Plant Name	Owner	District	Tehsil	Village	Geo- location	Quantity Tonnes/Annum	Existing/Proposed
NA	NA	NA	NA	NA	NA	NA	NA

Cluster & Contiguous Cluster details

Clusters:

River Name	Cluster No.	Lease No	Location (Riverbed / Patta Land)	Village	Area (in Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Kushabhadra River	1	A3	Kushabhadra River Sand Quarry, Mahukhanda Mouza- Mahukhanda, Khata-529, Plot- 1219, Kissam-Nadi, Lat-20°11'16.11"N to 20°11'26.67"N long-85°58'31.07"E to 85°58'50.29"E	Mahukhanda	4.85	78000	46800
		C5	Athantar& Giringo Sand Quarry,- Kushabhadra River Mouza-Athantar& Giringo , Khata-330, 537, Plot- 814& amp; 1338, 9 & amp; 679, Kissam-Nadi, Lat-20°11'21.56"N to 20°11'52.06"N long-85°58'15.08" E to 85°58'31.69"E	Athantar& Giringo	16.815	69277.5	41566.5
Bhargavi River	2	C2	Bhargavi River Sand, Somanasasan Mouza- Somanasasan, Khata-550, Plot-1(P), Kissami-Nadi, Lat-20°07'46.52"N to 20°08'01.71"N Long-85°53'05.90"E to 85°53'17.68"E	Somanasasan	4.856	72843	43705.8
		C7	Bhargavi River sand source, Achyutpur Mouza-Achyutpur , Khata-221, Plot- 1, Kissam- Nadi, Lat-20.15 Long-85.903	Achyutpur	4.856	72840	43704
		C8	Bhargavi River sand, Makundaspur Mouza- Makundaspur, Khata-771, Plot-199, Kisama-Nadi, Lat-20°08'37.27"N to 20°08'11.98"N Long-85°53'57.24" E to 85°53'22.74"E	Makundaspur	22.89	22.89	13.734

Kuakhai River	3	A6	Kuakhai River sand Quarry, Chadheidhar Mouza- Chadheidhar, Khata-207, Plot- 519 , Area-9.00Ac, Kissam-Nadi , Lat-20.18 , Long- 85.891	Chadheidhar	3.64	54600	32760
		A8	Bhargavi River sand Quarry, Jhintيسان MOUZA- JHINTISAN, KHATA-1613, PLOT- 58, KISSAM- NADI, TENANT- AAA,LAT- 20°10'26.4"N LONG- 85°53'42.00"E	Jhintيسان	2.5	37500	22500
Kuakhai River	4	B3	Kuakhai River sand source, kalyanpur-B Mouza- Kalyanpur, Khata-221(AAA), Plot- 1061,Kissam-Nadi, Lat-20°22'31.56"N to 20°22'54.64"N Long-85°52'20.52"E to 85°52'45.78"E	Kalyanpur	20	1203732	722239.2
		B5	Kuakhai River sand source, Gandarpur Mouza- Gandarpur, Khata-607(AAA), Plot- 2538, Kissam-Nadi Lat- 20.387 Long-85.869	Gandarpur	12.14	182109	109265.4

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (Riverbed/ Patta Land)	Distance between clusters	Village	Area of Cluster (Ha)	Total Mineral Excavation. (Ton)
NA	NA	NA	NA	NA	NA	NA	NA	NA

Annexure-IV

Transportation Routes for individual leases and leases in Cluster

Lease No.	Transportation Route No.	Number of tippers /day of lease	Number of tippers/day of all the lease on route	Length of route in KM	Type of road(Black Topped/unpaved)	Recommendation for road (Black Topped/unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
A1	Kushabhadra River Sand Quarry, Prataprudrapur, Mouza- Prataprudrapur, Khata-1403, Plot- 343(P)-2.330Ac, 377-8.720Ac, 395(P)-1.150Ac ,Kissam-Nadi, Lat-20°13'30.35"N to 20°13'45.28"N Long-85°57'43.81"E to 85°57'58.35"E	NH-316A	4	6.37KM FROM NH	Black Topped	Black Topped	Govt	Location- Prataprudrapur, HR-:0.07KM-PR-:6.3KM-NH-316A
A2	Kushabhadra River Sand Quarry,-Kushabhadra River,Bhingarpur, Mouza-Bhingarpur, Khata-11.62, Plot-918(P)-8Ac, 192(P)-4Ac ,Kissam-Nadi,Lat-20°15'46.32"N to 20°16'03.20"N Long-85°55'25.02"E to 85°55'44.70"E	NH-316A	1	7.7KM FROM NH	Black Topped	Black Topped	Govt	Location- Bhingarpur, HR-:0.9KM-PR-:6.8KM-NH-316A
A3	Kushabhadra River Sand Quarry, Mahukhanda, Mouza-Mahukhanda, Khata-529, Plot-1219,Kissam-Nadi, Lat-20°11'16.11"N to 20°11'26.67"N long-85°58'31.07"E to 85°58'50.29"E	NH-316A	1	9KM FROM NH	Black Topped	Black Topped	Govt	Location- Mahukhanda, HR-:0.8KM-PR-:8.2KM-NH-316A
A4	Kushabhadra River Sand Quarry,Bhubanpur, Mouza-BHUBANPUR, Khata-336, Plot-58(P),Kissam-Nadi,Lat-20.305 long-85.883	NH-16	3	1.66KM FROM NH	Black Topped	Black Topped	Govt	Location- BHUBANPUR, HR-:0.16KM-PR-:1.5KM-NH-16A

A5	Kuakhai River sand Quarry, Alarpur, Mouza- Alarpur, Khata-340, Plot-9, Kissam-Nadi, Lat-20.245 Long-85.88	NH-316	5	5	3.18KM FROM NH	Black Topped	Black Topped	Govt	Location- Alarpur, HR-:0.08KM-PR-:3.1KM-NH-316A
A6	Kuakhai River sand Quarry, Chadheidhar, Mouza- Chadheidhar, Khata-207, Plot-519, Area-9.00Ac, Kissam-Nadi, Lat-20.18, Long- 85.891	NH-316			5.52KM FROM NH	Black Topped	Black Topped	Govt	Location- Chadheidhar, HR-:0.22KM-PR-:5.3KM-NH-316A
A7	Bhargavi River sand Quarry, Jhintيسان, Mouza- Jhintيسان, Khata-1613, Plot-2613(P), Kissam-Nadi, Lat-20°09'38.27"N to 20°09'49.15"N Long- 85°53'59'04"E to 85°54'09.61"E	NH-316	3	3	6.7KM FROM NH	Black Topped	Black Topped	Govt	Location- Jhintيسان, HR-:0.2KM-PR-:6.5KM-NH-316
A8	Bhargavi River sand Quarry, Jhintيسان, MOUZA- JHINTISAN, KHATA-1613, PLOT- 58, KISSAM- NADI, TENANT- AAA, LAT- 20°10'26.4"N LONG- 85°53'42.00"E	NH-316			6.35KM FROM NH	Black Topped	Black Topped	Govt	Location- JHINTISAN, HR-:0.15KM-PR-:6.2KM-NH-316
A9	Bhargavi River sand Quarry, pratapasasan, Mouza- Pratapsasan, Khata-2112, Plot-284 Kissam- Nadi, Tenant- AAA, LAT- 20°12'50.4"N LONG- 85°51'50.4"E	NH-316			2.4KM FROM NH	Black Topped	Black Topped	Govt	Location- PRATAPSASAN, HR-:0.2KM-PR-:2.2KM-NH-316
B1	Kuakhai River sand Quarry Pandra, Mouza- Pandra, Khata-1352, Plot- 2414 Kissam-Nadi, Lat-20.31 Long-85.879	NH-16	-	-	0.63KM FROM NH	Black Topped	Black Topped	Govt	Location- Pandra, HR-:0.21KM-PR-:0.42KM-NH-16

B2	Kushabhadrha River Sand Source, kesura, Mouza- KESURA, Khata-549, Plot- 1000, Kissam-Nadi, Lat- 20°15'59.7"N to 20°16'41.2"N Long-85°52'58.8"E to 85°53'10.8"E	NH-316	17	17	6.58KM FROM NH	Black Topped	Black Topped	Govt	Location- KESURA, HR- :0.08KM-PR- :6.5KM-NH-316
B3	Kuakhai River sand source, kalyanpur-B, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1061, Kissam-Nadi, Lat- 20°22'31.56"N to 20°22'54.64"N Long-85°52'20.52"E to 85°52'45.78"E	NH-16	-	-	2.4KM FROM NH	Black Topped	Black Topped	Govt	Location- Kalyanpur, HR- :0.2KM-PR- :2.2KM-NH-16
B4	Kuakhai River sand source, kalyanpur-A, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1058, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, Kissam-Nadi, Lat- 20°22'08.04"N to 20°22'34.30"N Long-85°52'03.02"E to 85°52'15.76"E	NH-16	4	4	5.79KM FROM NH	Black Topped	Black Topped	Govt	Location- Kalyanpur, HR- :0.19KM-PR- :5.6KM-NH-16
B5	Kuakhai River sand source, Gandarpur, Mouza- Gandarpur, Khata-607 (AAA), Plot- 2538, Kissam-Nadi Lat- 20.387 Long-85.869	NH-16		-	2.97KM FROM NH	Black Topped	Black Topped	Govt	Location- Gandarpur, HR- :0.9KM-PR- :1.89KM-NH-16
C1	Kushabhadrha River sand Marthapur, Mouza- Marthapur, Khata-301, Plot- 692, Kissam-Nadi, Lat-20°08'10.213"N to 20°08'40.571"N long- 86°00'22.239"E to 86°00'31.114"E	NH-316A	1	10	6.52KM FROM NH	Black Topped	Black Topped	Govt	Location- Marthapur, HR- :0.22KM-PR- :6.3KM-NH-316A

C2	Bhargavi River Sand, Somanasasan, Mouza-Somanasasan, Khata-550, Plot-1 (P), Kissami-Nadi, Lat-20°07'46.52"N to 20°08'01.71"N Long-85°53'05.90"E to 85°53'17.68"E	NH-316A	1		2.94KM FROM NH	Black Topped	Black Topped	Govt	Location-Somanasasan, HR:-0.13KM-PR-:2.81KM-NH-316A
C3	Kushabhadra River Sand, Abhayamukhi, Mouza-Abhayamukhi, Khata-1649, Plot- 4541, 4936, Kissam-Nadi, Lat-20°06'44.14"N to 20°07'01.89"N Long-86°00'35.03"E to 86°00'43.66"E	NH-316A	1		10.6KM FROM NH	Black Topped	Black Topped	Govt	Location-Abhayamukhi, HR:-0.1KM-PR-:10.5KM-NH-316A
C4	Kushabhadra River Sand, Bhanranijigarga, Mouza-BHANRANIJIGADA , Khata-620, Plot- 326(P), 181/1865, Kissam-Nadi, Lat-20°09'25.64"N to 20°09'58.70"N long-86°00'10.82"E to 86°00'44.38"E	NH-316A	1		8.17KM FROM NH	Black Topped	Black Topped	Govt	Location-BHANRANIJIGADA, HR:-0.07KM-PR-:8.1KM-NH-316A
C5	Athantar & Giringo Sand Quarry, -Kushabhadra River, Mouza-Athantar & Giringo , Khata-330, 537, Plot- 814 & 1338, 9 & 679, Kissam-Nadi, Lat-20°11'21.56"N to 20°11'52.06"N long-85°58'15.08" E to 85°58'31.69"E	NH-316A	3		9.32KM FROM NH	Black Topped	Black Topped	Govt	Location-Athantar & Giringo , HR-:0.12KM-PR-:9.2KM-NH-316A

C6	Kushabhadra River Sand Source, Bhakrasahi, Mouza- Bhakrasahi , Khata-1519, Plot- 1567-4.2Ac, 1708-8.35Ac, Kisama-Nadi, Lat- 20°11'54.3"N to 20°11'59.2"N Long-86°00'55.2"E to 86°00'58.3"E	NH-316A	3		6.4KM FROM NH	Black Topped	Black Topped	Govt	Location- Bhakrasahi, HR- :0.2KM-PR- :6.2KM-NH-316A
C7	Bhargavi River sand source, Achyutpur, Mouza- Achyutpur , Khata-221, Plot- 1, Kissam- Nadi, Lat-20.15 Long-85.903	NH-316	-	-	6.65KM FROM NH	Black Topped	Black Topped	Govt	Location- Achyutpur, HR- :0.15KM-PR- :6.5KM-NH-316
C8	Bhargavi River sand, Makundaspur ,Mouza- Makundaspur, Khata-771, Plot- 199, Kisama-Nadi, Lat- 20°08'37.27"N to 20°08'11.98"N Long-85°53'57.24" E to 85°53'22.74"E	NH-316	7	7	3.38KM FROM NH	Black Topped	Black Topped	Govt	Location- Makundaspur, HR-:0.18KM-PR- :3.2KM-NH-316
C9	Bhargavi river sand, chitalpur, Mouza- Chitalpur, Khata-186, plot-20, Kissam- Nadi, Lat- 20.125, Long-85.873 ,	NH-316	-	-	1.58KM FROM NH	Black Topped	Black Topped	Govt	Location- Chitalpur, HR- :0.9KM-PR- :0.68KM-NH-316

Cluster No.	Transportation Route No.	Number of tippers/day of cluster	Number of tippers/day of all the cluster on route	Length of route in KM	Type of road (Black Topped/unpaved)	Recommendation for road (Black Topped/unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
1	NH-316A	1	4	9KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.8KM-PR-:8.2KM-NH-316A
	NH-316A	3		9.32KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.12KM-PR-:9.2KM-NH-316A
2	NH-316A	1	-	2.94KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.13KM-PR-:2.81KM-NH-316A
	NH-316			6.65KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.15KM-PR-:6.5KM-NH-316
	NH-316	7		3.38KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.18KM-PR-:3.2KM-NH-316
3	NH-316	-	-	5.52KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.22KM-PR-:5.3KM-NH-316A
	NH-316	-		6.35KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.15KM-PR-:6.2KM-NH-316
4	NH-16	-	-	2.4KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.2KM-PR-:2.2KM-NH-16
	NH-16	-		2.97KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.9KM-PR-:1.89KM-NH-16

**Final List of Potential Mining Leases (existing & proposed)
Rivers**

Lease No.	River Details	Lease Details	Area (in Ha)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 3 meters	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
A1	KUSHABHADRA RIVER	Kushabhadra River Sand Quarry, Prataprudrapur, Mouza- Prataprudrapur, Khata-1403, Plot-343(P)-2.330Ac, 377-8.720Ac, 395(P)-1.150Ac, Kissam-Nadi, Lat-20°13'30.35"N to 20°13'45.28"N Long-85°57'43.81"E to 85°57'58.35"E	4.94Ha	BR-0.17/PA-0.60	19.15	-	311220	186732	Existing
A2	KUSHABHADRA RIVER	Kushabhadra River Sand Quarry,- Kushabhadra River, Bhingarapur, Mouza- Bhingarapur, Khata-11.62, Plot- 918(P)-8Ac, 192(P)-4Ac ,Kissam-Nadi, Lat-20°15'46.32"N to 20°16'03.20"N Long-85°55'25.02"E to 85°55'44.70"E	4.85Ha	BR-0.66/ PA-0.28	13.5	-	127170	76302	Existing
A3	KUSHABHADRA RIVER	Kushabhadra River Sand Quarry, Mahukhanda, Mouza- Mahukhanda, Khata-529, Plot-1219, Kissam-Nadi, Lat-20°11'16.11"N to 20°11'26.67"N long-85°58'31.07"E to 85°58'50.29"E	4.85Ha	BR-1.77/ PA-0.25	22.6	YES	78000	46800	Existing
A4	KUSHABHADRA RIVER	Kushabhadra River Sand Quarry, Bhubanpur, Mouza- BHUBANPUR, Khata-336, Plot-58(P), Kissam-Nadi, Lat-20.305 long-85.883	4.85Ha	BR-1.08, PA-0.26	8	-	96421.5	57852.9	Existing

A5	KUAKHAI RIVER	Kuakhai River sand Quarry, Alarpur, Mouza- Alarpur, Khata-340, Plot-9, Kissam-Nadi, Lat- 20.245 Long-85.88	4.5Ha	BR-5.22, PA-0.66	10.1	-	67500	40500	Existing
A6	KUAKHAI RIVER	Kuakhai River sand Quarry, Chadheidhar, Mouza- Chadheidhar, Khata-207, Plot- 519 , Area-9.00Ac, Kissam-Nadi , Lat-20.18 , Long- 85.891	3.64Ha	BR-2.78, PA-0.45	15.7	YES	54600	32760	Existing
A7	BHARGAVI RIVER	Bhargavi River sand Quarry, Jhintيسان, Mouza- Jhintيسان, Khata-1613, Plot-2613(P) , Kissam-Nadi, Lat-20°09'38.27"N to 20°09'49.15"N Long-85°53'59'04"E to 85°54'09.61"E	4.93Ha	BR-4.55, PA-0.17	17.6	-	85510.5	51306.3	Existing
A8	BHARGAVI RIVER	Bhargavi River sand Quarry, Jhintيسان, MOUZA- JHINTISASAN, KHATA-1613, PLOT- 58, KISSAM-NADI, TENANT- AAA, LAT- 20°10'26.4"N LONG- 85°53'42.00"E	2.5Ha	BR-3.29, 0.58	16.76	YES	37500	22500	Proposed
A9	BHARGAVI RIVER	Bhargavi River sand Quarry, pratapasasan, MOUZA- PRATAPSASAN, KHATA-2112, PLOT- 284 KISSAM- NADI, TENANT- AAA, LAT- 20°12'50.4"N LONG- 85°51'50.4"E	4.50Ha	BR-2.8, PA-0.46	11	-	67500	40500	Proposed
B1	KUAKHAI RIVER	Kuakhai River sand Quarry Pandra, Mouza- Pandra, Khata-1352, Plot- 2414 Kissam-Nadi, Lat-20.31 Long-85.879	18.61Ha	BR-0.4, PA-0.35	8.5	-	279150	167490	Existing
B2	KUSHABHADRA RIVER	Kushabhadra River Sand Source, kesura, Mouza- KESURA, Khata-549, Plot- 1000, Kissam-Nadi, Lat-20°15'59.7"N to 20°16'41.2"N Long-85°52'58.8"E to 85°53'10.8"E	16.25Ha	BR-3.19, PA-0.38	9.5	-	1260720	756432	Existing

B3	KUAKHAI RIVER	Kuakhai River sand source, kalyanpur-B, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1061, Kissam-Nadi, Lat- 20°22'31.56"N to 20°22'54.64"N Long-85°52'20.52"E to 85°52'45.78"E	20.21Ha	BR-7.14, PA-1.27	12	YES	1203732	722239.2	Existing
B4	KUAKHAI RIVER	Kuakhai River sand source, kalyanpur-A, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1058, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, Kissam-Nadi, Lat- 20°22'08.04"N to 20°22'34.30"N Long-85°52'03.02"E to 85°52'15.76"E	14.26Ha	BR-6.16, PA-0.5	12.5	-	295230	177138	Existing
B5	KUAKHAI RIVER	Kuakhai River sand source, Gandarpur, Mouza- Gandarpur, Khata-607 (AAA), Plot- 2538, Kissam-Nadi Lat- 20.387 Long- 85.869	12.1406Ha	BR-8.2, PA-1.2	9.7	YES	182109	109265.4	Existing
C1	KUSHABHADRA RIVER	Kushabhadra River sand Marthapur, Mouza- Marthapur, Khata-301, Plot- 692, Kissam-Nadi, Lat-20°08'10.213"N to 20°08'40.571"N long-86°00'22.239"E to 86°00'31.114"E	4.670Ha	BR-1.58, PA-0.2	28.4	-	70051.5	42030.9	Existing
C2	BHARGAVI RIVER	Bhargavi River Sand, Somanasasan, Mouza- Somanasasan, Khata-550, Plot- 1 (P), Kissami-Nadi, Lat- 20°07'46.52"N to 20°08'01.71"N Long-85°53'05.90"E to 85°53'17.68"E	4.856Ha	BR-2.77, PA-0.35	20	YES	72843	43705.8	Existing
C3	KUSHABHADRA RIVER	Kushabhadra River Sand, Abhayamukhi, Mouza- Abhayamukhi, Khata-1649, Plot- 4541, 4936, Kissam-Nadi, Lat- 20°06'44.14"N to 20°07'01.89"N Long-86°00'35.03"E to 86°00'43.66"E	4.67Ha	BR-1.14, PA-0.27	29.5	-	140151	84090.6	Existing

C4	KUSHABHADRA RIVER	Kushabhadra River Sand, Bhanranijigarga, Mouza-BHANRANIJIGADA , Khata-620, Plot- 326(P), 181/1865,Kissam-Nadi, Lat-20°09'25.64"N to 20°09'58.70"N long-86°00'10.82"E to 86°00'44.38"E	4.81Ha	BR-1.87, PA-0.51	28	-	144354	86612.4	Existing
C5	KUSHABHADRA RIVER	Athantar& Giringo Sand Quarry,- Kushabhadra River, Mouza-Athantar& Giringo , Khata-330, 537, Plot- 814& amp; 1338, 9 & amp; 679,Kissam-Nadi, Lat-20°11'21.56"N to 20°11'52.06"N long-85°58'15.08" E to 85°58'31.69"E	16.815Ha	BR-1.03, PA-0.44	21.9	YES	69277.5	41566.5	Existing
C6	KUSHABHADRA RIVER	Kushabhadra River Sand Source,Bhakrasahi, Mouza-Bhakrasahi , Khata-1519, Plot-1567-4.2Ac, 1708-8.35Ac,Kisama-Nadi, Lat-20°11'54.3"N to 20°11'59.2"N Long-86°00'55.2"E to 86°00'58.3"E	5.07Ha	BR-0.76, PA-0.27	25.2	-	228546	137127.6	Existing
C7	BHARGAVI RIVER	Bhargavi River sand source,Achyutpur, Mouza-Achyutpur , Khata-221, Plot- 1, Kissam- Nadi, Lat-20.15 Long-85.903	4.856Ha	BR-5.30, PA-0.12	24.6	YES	72840	43704	Existing
C8	BHARGAVI RIVER	Bhargavi River sand, Makundaspur ,Mouza-Makundaspur, Khata-771, Plot-199,Kisama-Nadi,Lat-20°08'37.27"N to 20°08'11.98"N Long-85°53'57.24" Eto 85°53'22.74"E	22.89Ha	BR-3.87, PA-0.17	23.9	YES	686928	412156.8	Existing
C9	BHARGAVI RIVER	Bhargavi river sand, chitalpur,Mouza- Chitalpur, Khata-186, plot-20, Kissam- Nadi, Lat-20.125, Long-85.873 ,	4.856Ha	BR-1.16, PA-0.4	22.24	-	72840	43704	Existing

Final List of Cluster & Contiguous Cluster

Clusters:

River Name	Cluster No.	Lease No	Location (Riverbed / Patta Land)	Village	Area (in Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Kushabhadra River	1	A3	Kushabhadra River Sand Quarry, Mahukhanda Mouza- Mahukhanda, Khata-529, Plot- 1219, Kissam-Nadi, Lat-20°11'16.11"N to 20°11'26.67"N long-85°58'31.07"E to 85°58'50.29"E	Mahukhanda	4.85	78000	46800
		C5	Athantar& Giringo Sand Quarry,- Kushabhadra River Mouza-Athantar& Giringo , Khata-330, 537, Plot- 814& amp; 1338, 9 & amp; 679, Kissam-Nadi, Lat-20°11'21.56"N to 20°11'52.06"N long-85°58'15.08" E to 85°58'31.69"E	Athantar& Giringo	16.815	69277.5	41566.5
Bhargavi River	2	C2	Bhargavi River Sand, Somanasasan Mouza- Somanasasan, Khata-550, Plot-1(P), Kissami-Nadi, Lat-20°07'46.52"N to 20°08'01.71"N Long-85°53'05.90"E to 85°53'17.68"E	Somanasasan	4.856	72843	43705.8
		C7	Bhargavi River sand source, Achyutpur Mouza-Achyutpur , Khata-221, Plot- 1, Kissam- Nadi, Lat-20.15 Long-85.903	Achyutpur	4.856	72840	43704
		C8	Bhargavi River sand, Makundaspur Mouza- Makundaspur, Khata-771, Plot-199, Kisama-Nadi, Lat-20°08'37.27"N to 20°08'11.98"N Long-85°53'57.24" E to 85°53'22.74"E	Makundaspur	22.89	22.89	13.734

Kuakhai River	3	A6	Kuakhai River sand Quarry, Chadheidhar Mouza- Chadheidhar, Khata-207, Plot- 519 , Area-9.00Ac, Kissam-Nadi , Lat-20.18 , Long- 85.891	Chadheidhar	3.64	54600	32760
		A8	Bhargavi River sand Quarry, Jhintيسان MOUZA- JHINTISASAN, KHATA-1613, PLOT- 58, KISSAM- NADI, TENANT- AAA,LAT- 20°10'26.4"N LONG- 85°53'42.00"E	Jhintيسان	2.5	37500	22500
Kuakhai River	4	B3	Kuakhai River sand source, kalyanpur-B Mouza- Kalyanpur, Khata-221(AAA), Plot- 1061, Kissam-Nadi, Lat-20°22'31.56"N to 20°22'54.64"N Long-85°52'20.52"E to 85°52'45.78"E	Kalyanpur	20	1203732	722239.2
		B5	Kuakhai River sand source, Gandarpur Mouza- Gandarpur, Khata-607(AAA), Plot- 2538, Kissam-Nadi Lat- 20.387 Long-85.869	Gandarpur	12.14	182109	109265.4

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (Riverbed/ Patta Land)	Distance between clusters	Village	Area of Cluster (Ha)	Total Mineral Excavation. (Ton)
NA	NA	NA	NA	NA	NA	NA	NA	NA

Final Transportation Routes for Individual leases and leases in Cluster

Lease No.	Transportation Route No.	Number of tippers /day of lease	Number of tippers/day of all the lease on route	Length of route in KM	Type of road(Black Topped/unpaved)	Recommendation for road (Black Topped/unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
A1	Kushabhadra River Sand Quarry, Prataprudrapur, Mouza- Prataprudrapur, Khata-1403, Plot- 343(P)-2.330Ac, 377-8.720Ac, 395(P)-1.150Ac, Kissam-Nadi, Lat-20°13'30.35"N to 20°13'45.28"N Long-85°57'43.81"E to 85°57'58.35"E	NH-316A	4	6.37KM FROM NH	Black Topped	Black Topped	Govt	Location- Prataprudrapur, HR:-0.07KM-PR:-6.3KM-NH-316A
A2	Kushabhadra River Sand Quarry,-Kushabhadra River,Bhingarpur, Mouza-Bhingarpur, Khata-11.62, Plot-918(P)-8Ac, 192(P)-4Ac ,Kissam-Nadi,Lat-20°15'46.32"N to 20°16'03.20"N Long-85°55'25.02"E to 85°55'44.70"E	NH-316A	1	7.7KM FROM NH	Black Topped	Black Topped	Govt	Location- Bhingarpur, HR:-0.9KM-PR:-6.8KM-NH-316A
A3	Kushabhadra River Sand Quarry, Mahukhanda, Mouza-Mahukhanda, Khata-529, Plot-1219,Kissam-Nadi, Lat-20°11'16.11"N to 20°11'26.67"N long-85°58'31.07"E to 85°58'50.29"E	NH-316A	1	9KM FROM NH	Black Topped	Black Topped	Govt	Location- Mahukhanda, HR:-0.8KM-PR:-8.2KM-NH-316A

A4	Kushabhadra River Sand Quarry, Bhubanpur, Mouza- BHUBANPUR, Khata-336, Plot-58(P),Kissam-Nadi,Lat-20.305 long-85.883	NH-16	3	3	1.66KM FROM NH	Black Topped	Black Topped	Govt	Location- BHUBANPUR, HR- :0.16KM-PR- :1.5KM-NH-16A
A5	Kuakhai River sand Quarry, Alarpur, Mouza- Alarpur,Khata-340,Plot-9, Kissam-Nadi, Lat-20.245 Long-85.88	NH-316	5	5	3.18KM FROM NH	Black Topped	Black Topped	Govt	Location- Alarpur, HR- :0.08KM-PR- :3.1KM-NH-316A
A6	Kuakhai River sand Quarry, Chadheidhar,Mouza- Chadheidhar, Khata-207, Plot-519 , Area-9.00Ac, Kissam-Nadi , Lat-20.18 , Long- 85.891	NH-316	-	-	5.52KM FROM NH	Black Topped	Black Topped	Govt	Location- Chadheidhar, HR-:0.22KM-PR- :5.3KM-NH-316A
A7	Bhargavi River sand Quarry, Jhintيسان, Mouza- Jhintيسان, Khata-1613, Plot-2613(P) , Kissam-Nadi,Lat-20°09'38.27"N to 20°09'49.15"N Long- 85°53'59'04"E to 85°54'09.61"E	NH-316	3	3	6.7KM FROM NH	Black Topped	Black Topped	Govt	Location- Jhintيسان, HR- :0.2KM-PR- :6.5KM-NH-316
A8	Bhargavi River sand Quarry, Jhintيسان, MOUZA- JHINTISASAN, KHATA-1613, PLOT- 58, KISSAM- NADI, TENANT- AAA,LAT- 20°10'26.4"N LONG- 85°53'42.00"E	NH-316	-	-	6.35KM FROM NH	Black Topped	Black Topped	Govt	Location- JHINTISASAN, HR- :0.15KM-PR- :6.2KM-NH-316
A9	Bhargavi River sand Quarry, pratapasasan, MOUZA- PRATAPSASAN, KHATA-2112, PLOT- 284 KISSAM- NADI, TENANT- AAA, LAT- 20°12'50.4"N LONG- 85°51'50.4"E	NH-316	-	-	2.4KM FROM NH	Black Topped	Black Topped	Govt	Location- PRATAPSASAN, HR-:0.2KM-PR- :2.2KM-NH-316
B1	Kuakhai River sand Quarry Pandra, Mouza- Pandra, Khata-1352, Plot- 2414 Kissam-Nadi, Lat-20.31 Long-85.879	NH-16	-	-	0.63KM FROM NH	Black Topped	Black Topped	Govt	Location- Pandra, HR- :0.21KM-PR- :0.42KM-NH-16

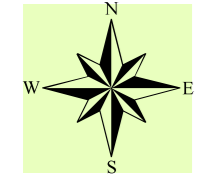
B2	Kushabhadra River Sand Source, kesura, Mouza- KESURA, Khata-549, Plot- 1000, Kissam-Nadi, Lat- 20°15'59.7"N to 20°16'41.2"N Long-85°52'58.8"E to 85°53'10.8"E	NH-316	17	17	6.58KM FROM NH	Black Topped	Black Topped	Govt	Location- KESURA, HR- :0.08KM-PR- :6.5KM-NH-316
B3	Kuakhai River sand source, kalyanpur-B, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1061, Kissam-Nadi, Lat- 20°22'31.56"N to 20°22'54.64"N Long-85°52'20.52"E to 85°52'45.78"E	NH-16	-	-	2.4KM FROM NH	Black Topped	Black Topped	Govt	Location- Kalyanpur, HR- :0.2KM-PR- :2.2KM-NH-16
B4	Kuakhai River sand source, kalyanpur-A, Mouza- Kalyanpur, Khata-221 (AAA), Plot- 1058, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, Kissam-Nadi, Lat- 20°22'08.04"N to 20°22'34.30"N Long-85°52'03.02"E to 85°52'15.76"E	NH-16	4	4	5.79KM FROM NH	Black Topped	Black Topped	Govt	Location- Kalyanpur, HR- :0.19KM-PR- :5.6KM-NH-16
B5	Kuakhai River sand source, Gandarpur, Mouza- Gandarpur, Khata-607 (AAA), Plot- 2538, Kissam-Nadi Lat- 20.387 Long-85.869	NH-16	-	-	2.97KM FROM NH	Black Topped	Black Topped	Govt	Location- Gandarpur, HR- :0.9KM-PR- :1.89KM-NH-16
C1	Kushabhadra River sand Marthapur, Mouza- Marthapur, Khata-301, Plot- 692, Kissam-Nadi, Lat-20°08'10.213"N to 20°08'40.571"N long- 86°00'22.239"E to 86°00'31.114"E	NH-316A	1	10	6.52KM FROM NH	Black Topped	Black Topped	Govt	Location- Marthapur, HR- :0.22KM-PR- :6.3KM-NH-316A

C2	Bhargavi River Sand, Somanasasan, Mouza- Somanasasan, Khata-550, Plot-1 (P), Kissami-Nadi, Lat-20°07'46.52"N to 20°08'01.71"N Long-85°53'05.90"E to 85°53'17.68"E	NH-316A	1		2.94KM FROM NH	Black Topped	Black Topped	Govt	Location- Somanasasan, HR-:0.13KM-PR- :2.81KM-NH-316A
C3	Kushabhadra River Sand, Abhayamukhi, Mouza- Abhayamukhi, Khata-1649, Plot- 4541, 4936, Kissam-Nadi, Lat-20°06'44.14"N to 20°07'01.89"N Long- 86°00'35.03"E to 86°00'43.66"E	NH-316A	1		10.6KM FROM NH	Black Topped	Black Topped	Govt	Location- Abhayamukhi, HR-:0.1KM-PR- :10.5KM-NH-316A
C4	Kushabhadra River Sand, Bhanranijigarga, Mouza- BHANRANIJIGADA , Khata-620, Plot- 326(P), 181/1865, Kissam-Nadi, Lat-20°09'25.64"N to 20°09'58.70"N long-86°00'10.82"E to 86°00'44.38"E	NH-316A	1		8.17KM FROM NH	Black Topped	Black Topped	Govt	Location- BHANRANIJIGAD A, HR-:0.07KM-PR- :8.1KM-NH-316A
C5	Athantar & Giringo Sand Quarry, -Kushabhadra River, Mouza-Athantar & Giringo , Khata-330, 537, Plot- 814 & 1338, 9 & 679, Kissam-Nadi, Lat-20°11'21.56"N to 20°11'52.06"N long-85°58'15.08" E to 85°58'31.69"E	NH-316A	3		9.32KM FROM NH	Black Topped	Black Topped	Govt	Location- Athantar & Giringo , HR- :0.12KM-PR- :9.2KM-NH-316A

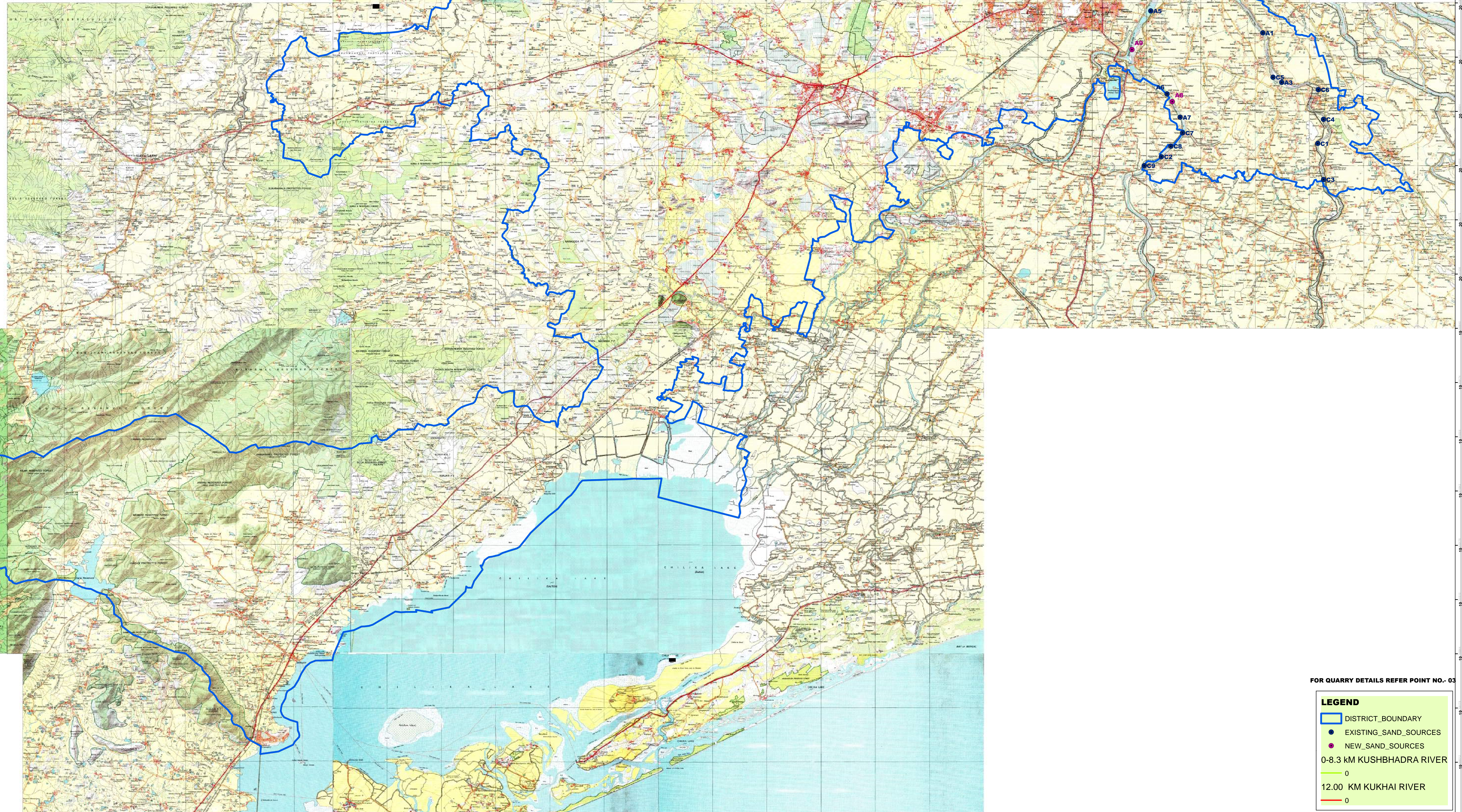
C6	Kushabhadra River Sand Source, Bhakrasahi, Mouza- Bhakrasahi , Khata-1519, Plot- 1567-4.2Ac, 1708-8.35Ac, Kisama-Nadi, Lat- 20°11'54.3"N to 20°11'59.2"N Long-86°00'55.2"E to 86°00'58.3"E	NH-316A	3		6.4KM FROM NH	Black Topped	Black Topped	Govt	Location- Bhakrasahi, HR- :0.2KM-PR- :6.2KM-NH-316A
C7	Bhargavi River sand source, Achyutpur, Mouza- Achyutpur , Khata-221, Plot- 1, Kissam- Nadi, Lat-20.15 Long-85.903	NH-316	-		6.65KM FROM NH	Black Topped	Black Topped	Govt	Location- Achyutpur, HR- :0.15KM-PR- :6.5KM-NH-316
C8	Bhargavi River sand, Makundaspur ,Mouza- Makundaspur, Khata-771, Plot-199, Kisama-Nadi, Lat- 20°08'37.27"N to 20°08'11.98"N Long-85°53'57.24" E to 85°53'22.74"E	NH-316	7	7	3.38KM FROM NH	Black Topped	Black Topped	Govt	Location- Makundaspur, HR-:0.18KM-PR- :3.2KM-NH-316
C9	Bhargavi river sand, chitalpur, Mouza- Chitalpur, Khata-186, plot-20, Kissam- Nadi, Lat- 20.125, Long-85.873	NH-316	-		1.58KM FROM NH	Black Topped	Black Topped	Govt	Location- Chitalpur, HR- :0.9KM-PR- :0.68KM-NH-316

Cluster No.	Transportation Route No.	Number of tippers/day of cluster	Number of tippers/day of all the cluster on route	Length of route in KM	Type of road (Black Topped/unpaved)	Recommendation for road (Black Topped/unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
1	NH-316A	1	4	9KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.8KM-PR-:8.2KM-NH-316A
	NH-316A	3		9.32KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.12KM-PR-:9.2KM-NH-316A
2	NH-316A	1	-	2.94KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.13KM-PR-:2.81KM-NH-316A
	NH-316			6.65KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.15KM-PR-:6.5KM-NH-316
	NH-316	7		3.38KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.18KM-PR-:3.2KM-NH-316
3	NH-316	-	-	5.52KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.22KM-PR-:5.3KM-NH-316A
	NH-316	-		6.35KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.15KM-PR-:6.2KM-NH-316
4	NH-16	-	-	2.4KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.2KM-PR-:2.2KM-NH-16
	NH-16	-		2.97KM FROM NH	Black Topped	Black Topped	Govt	HR-:0.9KM-PR-:1.89KM-NH-16

MINING LEASES(SAND) MARKED ON THE DISTRICT TOPO-MAP OF KHORDHA



SCALE-1:120000

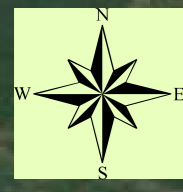


FOR QUARRY DETAILS REFER POINT NO.- 03

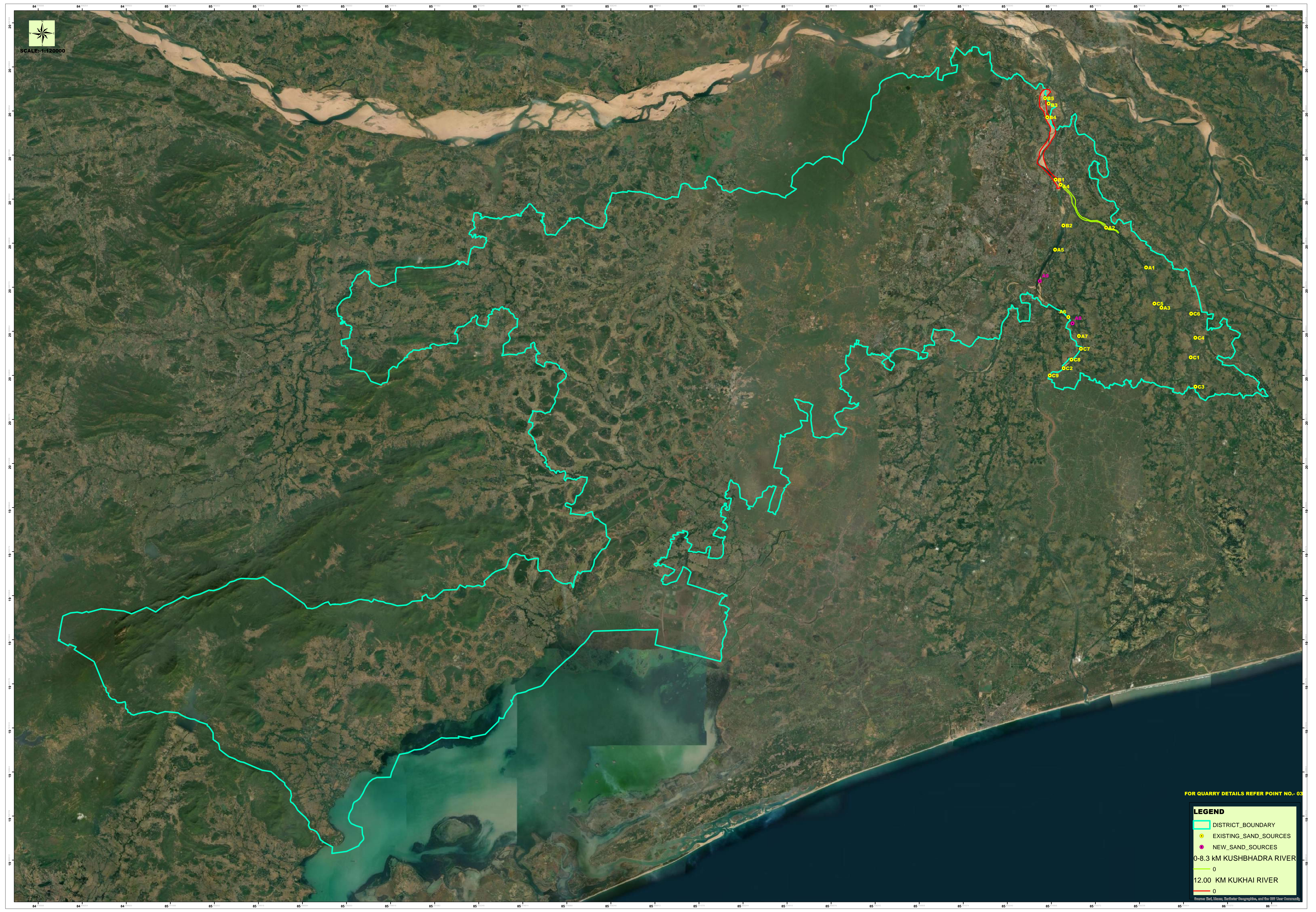
LEGEND

- DISTRICT_BOUNDARY
- EXISTING_SAND_SOURCES
- NEW_SAND_SOURCES
- 0-8.3 KM KUSHBHADRA RIVER
- 12.00 KM KUKHAI RIVER

MINING LEASES(SAND) MARKED ON THE DISTRICT SATELLITE-MAP OF KHERDHA



SCALE: 1:120000



FOR QUARRY DETAILS REFER POINT NO.- 03

LEGEND

- DISTRICT_BOUNDARY
- EXISTING_SAND_SOURCES
- NEW_SAND_SOURCES
- 0-8.3 KM KUSHBHADRA RIVER
- 12.00 KM KUKHAI RIVER