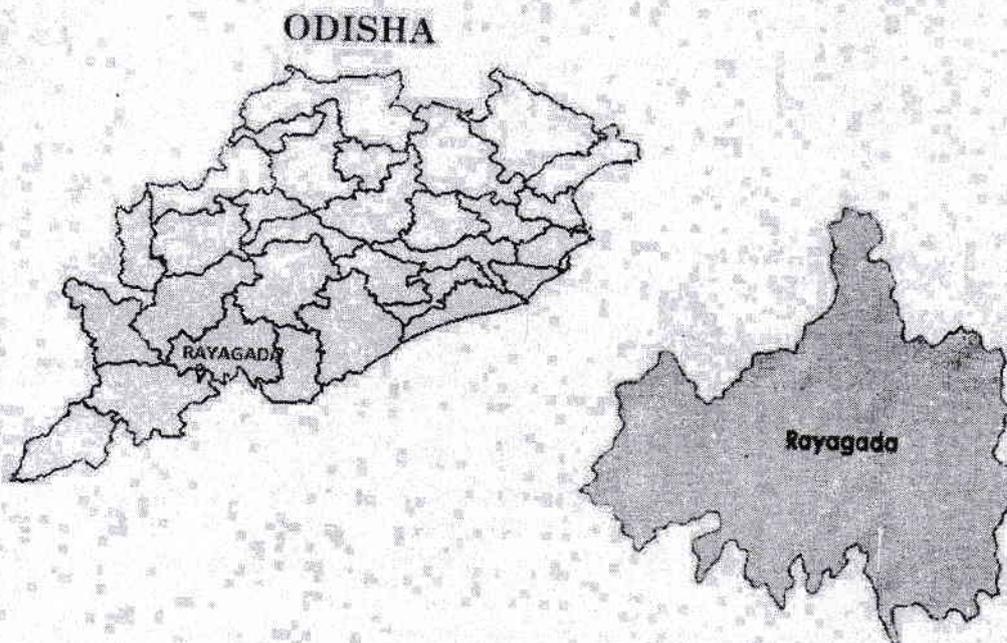




**DRAFT DISTRICT SURVEY REPORT (DSR)  
OF  
RAYAGADA DISTRICT, ODISHA  
FOR  
RIVER SAND**

**(FOR PLANNING & EXPLOITING OF MINOR  
MINERAL RESOURCES)**



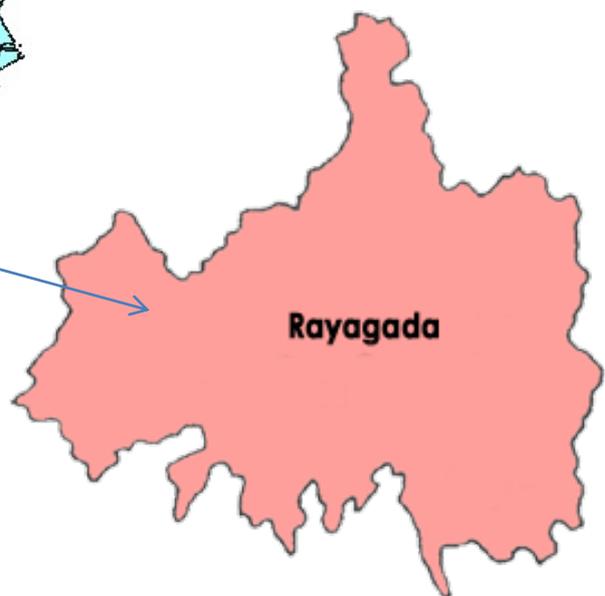
As per Notification No. S.O. 3611(E) New Delhi,  
25<sup>th</sup> July, 2018  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(MoEF & CC)

**COLLECTORATE, RAYAGADA**

# INDEX MAP



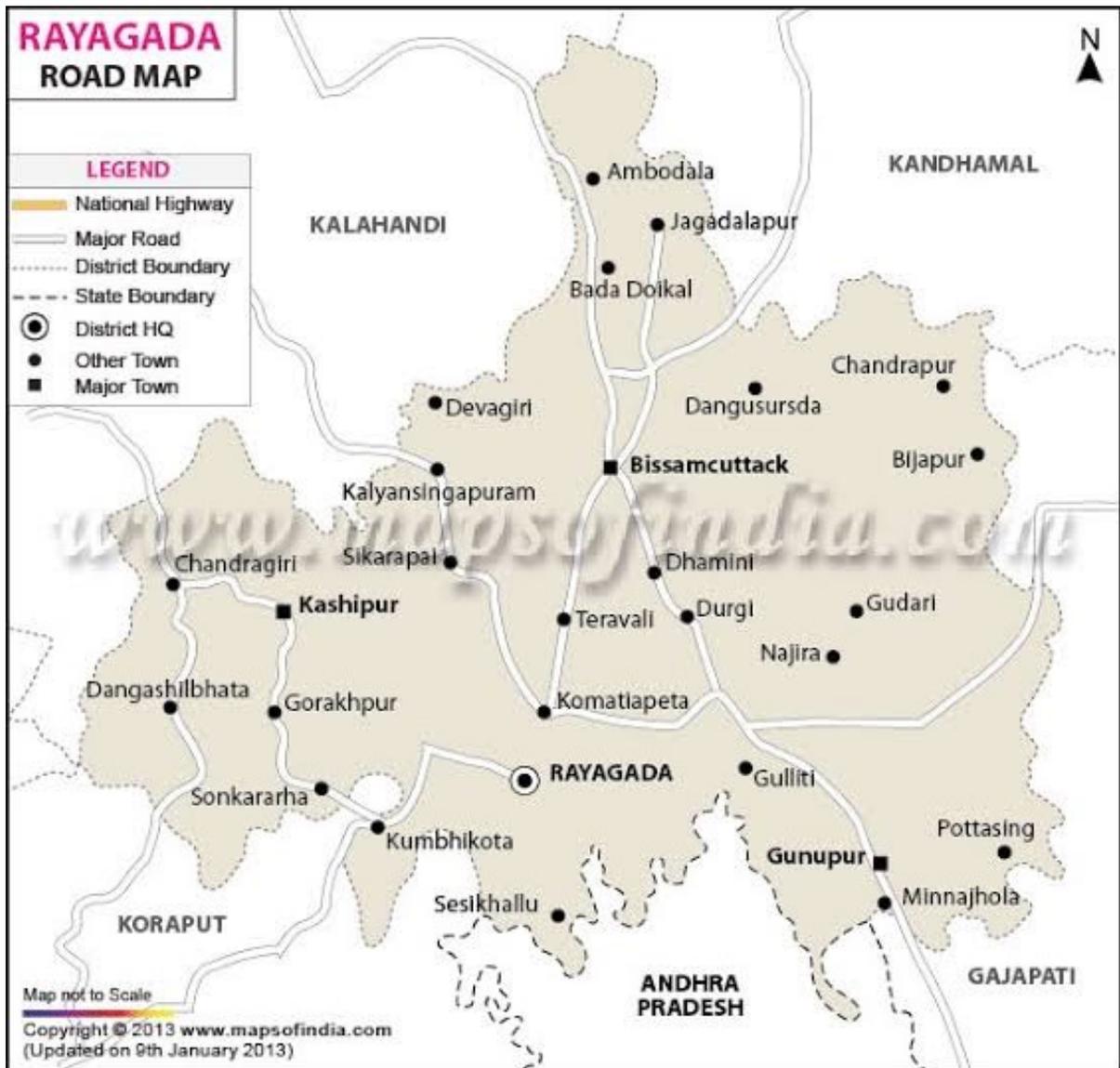
ODISHA



MAP SHOWING THE TAHASILS OF RAYAGADA DISTRICT



MAP SHOWING THE MAJOR ROADS OF RAYAGADA DISTRICT



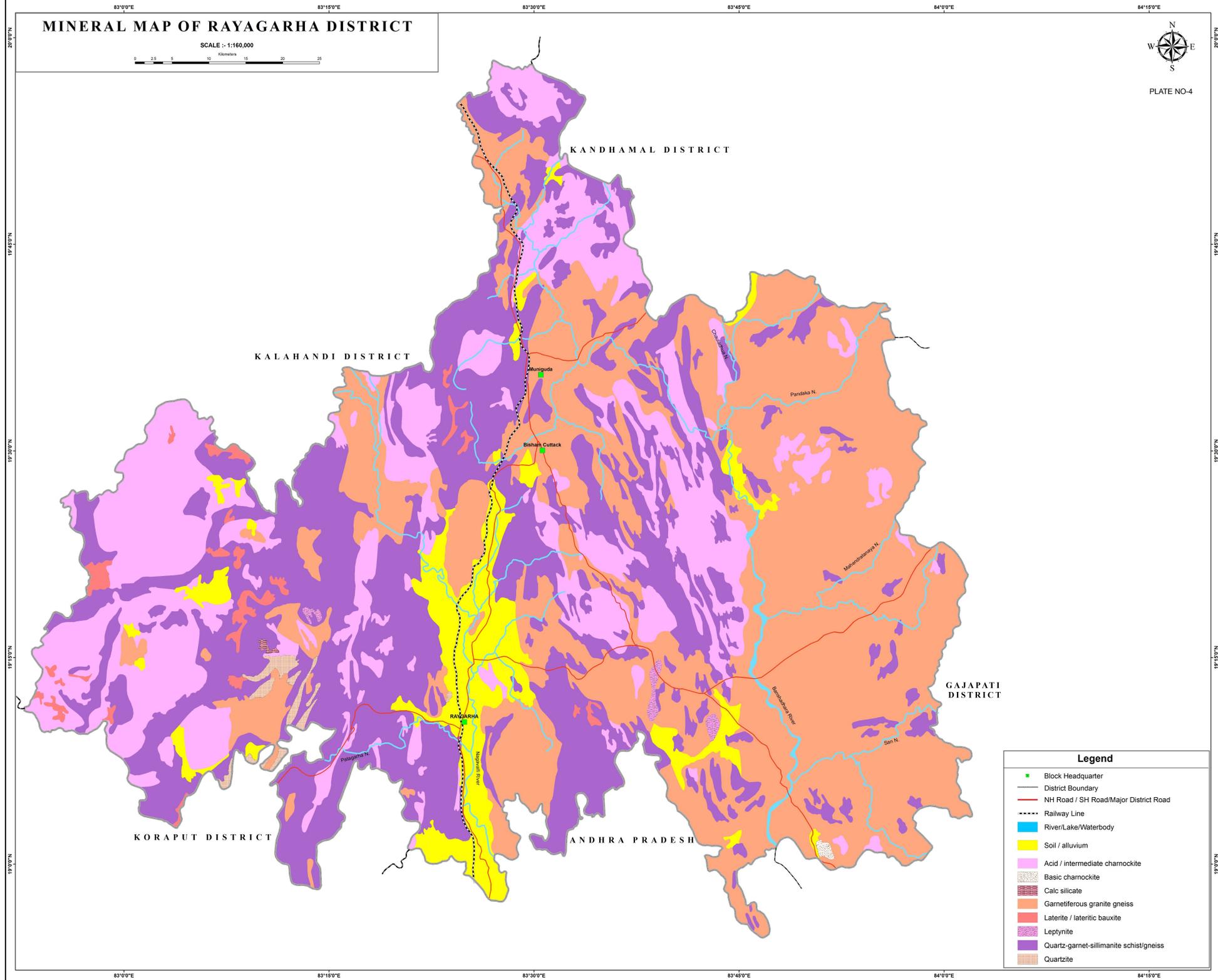
# MINERAL MAP OF RAYAGARHA DISTRICT

SCALE :- 1:160,000

0 2.5 5 10 15 20 25  
Kilometers



PLATE NO-4



**Legend**

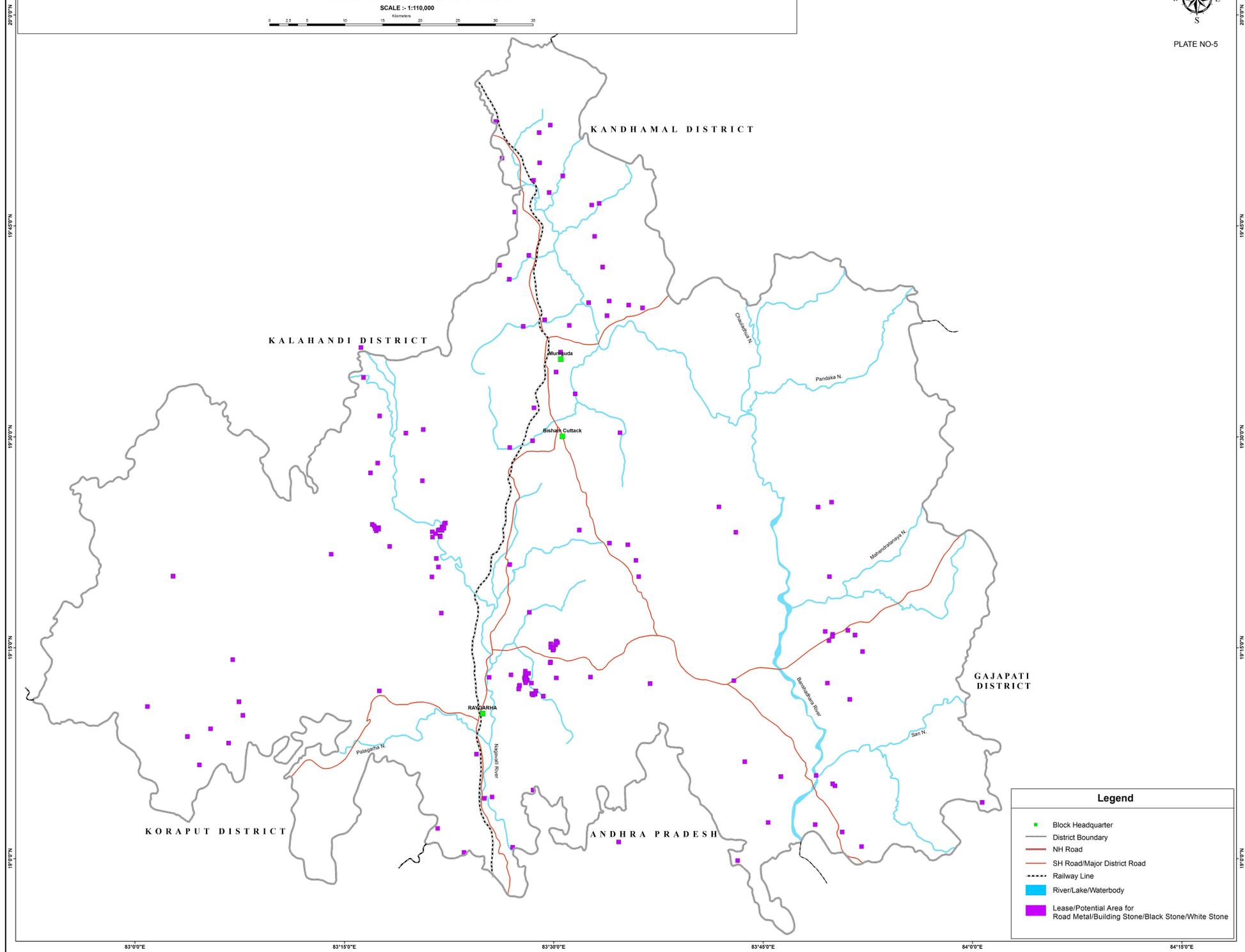
- Block Headquarter
- District Boundary
- NH Road / SH Road/Major District Road
- Railway Line
- River/Lake/Waterbody
- Soil / alluvium
- Acid / intermediate charnockite
- Basic charnockite
- Calc silicate
- Garnetiferous granite gneiss
- Laterite / lateritic bauxite
- Leptynite
- Quartz-garnet-sillimanite schist/gneiss
- Quartzite

# LEASE/POTENTIAL MAP OF ROAD METAL/BUILDING STONE/BLACK STONE/WHITE STONE IN RAYAGARHA DISTRICT

SCALE :- 1:110,000  
Kilometers



PLATE NO-5



Legend	
	Block Headquarter
	District Boundary
	NH Road
	SH Road/Major District Road
	Railway Line
	River/Lake/Waterbody
	Lease/Potential Area for Road Metal/Building Stone/Black Stone/White Stone

# LEASE/POTENTIAL MAP OF SAND IN RAYAGARHA DISTRICT

SCALE :- 1:160,000

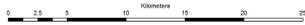
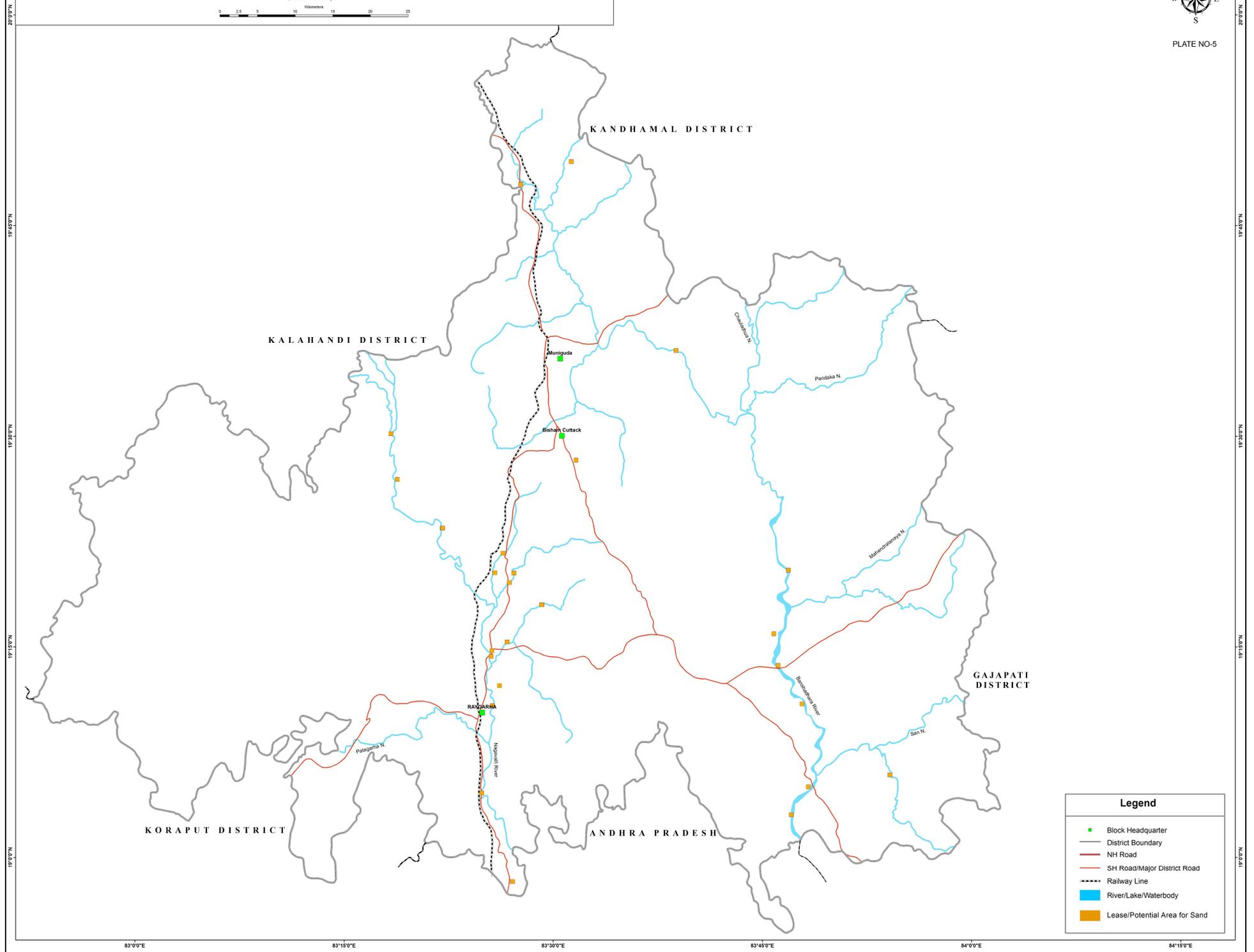


PLATE NO-5



Legend	
	Block Headquarter
	District Boundary
	NH Road
	SH Road/Major District Road
	Railway Line
	River/Lake/Waterbody
	Lease/Potential Area for Sand

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DESCRIPTION	ANNEXURE NO
List of River sand Executed leases	I
List of leases auctioned bout not executed	II
Potential of river sand	III

## PREFACE

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 road metal/building stone 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.

### 1. INTRODUCTION

**Rayagada** is a district in southern Odisha, a state in India, which became a separate district in October 1992. Its population consists mainly of tribes, primarily the Khonds and the Soras. In addition to Odia, Kui and Sora are spoken by the district's indigenous population.

Rayagada covers an area of 7,584.7 square kilometres (2,928.5 sq mi), and is divided into eleven blocks. Agriculture is the chief source of income and paddy, wheat, ragi, green and black gram, groundnut, sweet potato and maize being the district's major crops.

Rayagada district is known as the most famous region of the state because of its longest human history. It has long and glorious historical records evident by copper plates, rock inscriptions as well as different coins, which clearly indicate the region was the centre of attraction in all ages. In the third century B.C., during the reign of Ashoka the Great, it was covered under Kalinga empire.

The district is surrounded by Kandhmal district in the North, Gajapati district in the East, Koraput district and state of AP in the South and Kalahandi in the West.

## 1. OVERVIEW OF MINING ACTIVITIES IN THE DISTRICT.

Rayagarha district has a potential reserve of graphite, manganese, bauxite, chinaclay, limestone, quartz, gemstones etc. The following paragraphs are a brief account of the minerals of the district.

### **Bauxite**

The district has many high level bauxite occurrences. Important bauxite deposits of the district are Sijimali, Kutrumali, Baphilimali, Sashubhumali, Lakharasi. Kutrumali and Sijimali deposits extend into both Rayagada and Kalahandi districts.

Gibbsite is the main aluminous mineral.  $Al_2O_3$  content ranges from 44 to 57.80%,  $SiO_2$  content is between 0.40 to 8.74%,  $Fe_2O_3$  content ranges between 16.2 to 27%. The resource of bauxite in the district is more than 600 Mt. However, this figure is likely to be much higher in view of numerous occurrences of smaller plateaux whose potentiality has not been quantified through detailed exploration. Almost all the plateaux rising more than 900 m above MSL contain bauxite which have been explored by Directorate of Geology and GSI.

### **Manganese**

Manganese Ore deposits in the district are associated with khondalite suite of rocks belonging to Eastern Ghat Supergroup. Nishikhal manganese deposit is the most important, single largest deposit in the area with a reserve of nearly 10.2mt (Mn-28-38%). It is currently being mined by OMC and fed to Vishakapatnam Steel Plant. The other deposits in the area are Podakona-Taldhodshi(7mt), Kuttinga-Debjholla(1mt) etc. Manganese occurrences have been reported around Devajhola, Kutingpadar, Nisikhal, Rukunibadi, Paikaranipinda, Kandharanipinda, Taladoshi, Upardoshi, Podakona, Kinchikhal, Koka, Liliguma, Sirlijodi, Balkapai, Bhitardulki, Sikapai, Pariguda, Katubadi, Sunakhunti, Anjorhi, Bada Siringul, Purunapani, Mandhara etc. Manganese content varies from 7% to 38%.

## **Graphite**

Graphite occupies a very prominent position in the district with regard to its extension, reserve and number of deposits. There are quite a number of graphite deposits in the district occurring at the contact of the khondalite and the granite gneiss. The important occurrences which are under active mining are in the famous Tumudibandh belt. Nearly 150 occurrences of graphite have been identified. The most important occurrences of the district are Bandhamandi, Solagudi, Birida, Naringponga, Jagdalpur, Dukkum, Pangadi, Hajaridangu, Sada, Minahala, Pichaliguda, Rauli, Bhitardulki, Jholaguda, Sikabarhi, Kaliapalli, Patrani, Gandrugam, Dallurgam, Malimunda, Disidaku, Deulbadi, Alanda, Budaguda, Murkakona, Ajaygarh, Pipliguda, Bhitarsaja, Kumbhikota, Boragaon, Dongipadar, Tutter etc. Graphite is mostly of crystalline & flaky variety. It occurs in form of disseminations, veins, pockets, lenses and also as bedded deposits. Mineralisation is controlled by lithology, stratigraphy and structure. Graphite is associated with khondalite, calc-granulite, and granite gneiss and also with pegmatites and quartz veins. The fixed carbon value in low grade and high grade graphite occurrences varies between 5 to 25 % and 30 to 80 % respectively.

## **Limestone**

Limestone occurrences in the district has been reported from Talasaja, Salimi, Gummigurha, Sikarpai, Ranjabadi, Bhitarijhol, Bheja, Santinagar, Nilabadi, Karlakona etc. Limestone occurs as lenticular bands associated with calc-granulite. The average CaO content varies from 28 % to 52 %.

## **Chinaclay / Kaolin**

Chinaclay / kaolin occurrences have been reported in the district from Ambadola, Bandhamandi, Pipliguda, Kanipai, Bondichuan, Ladiponga, Loharahira, Bantichura etc. These occurrences are associated with khondalite, granite gneiss as pockets & lenses. The occurrences are highly gritty.

## **Quartz**

Quartz veins of different dimensions are reported in the district. Among them, the notable occurrences are found around Bainibasa, Jamraguda, Bhaliapadar,

Dangipada, Torumohra, Gudikhal, Sikampadar, Machhkhunti, Srirampur, Purlikona, Chitikapangu, Kusumpadar, Kasli etc.

### **Quartzite**

There are several quartzite bands analysing more than 97% SiO<sub>2</sub> content in the Eastern Ghats Super Group of rocks. Notable among them are the occurrences around Kondakora, Karlakona, Sana Kuanga, Loharasahi, Malkajuba, Pordiguda, Bhitarijhola, Matiguda, Adabarhi, Guriaguda and Sikarpai etc.

### **Calc-Tufa**

Minor occurrences of calc-tuffa have been reported from Kiribiri, Durgi, Podabai, areas of Rayagada district. These occur as pockets in khondalites.

### **Red-Ochre**

Red-ochre has been reported to occur at Marichakona with Fe<sub>2</sub>O<sub>3</sub> content of 20.4 to 42.8% and Al<sub>2</sub>O<sub>3</sub> content of 28.58 to 42.4 %. Red-ochre has also been found at Ganiabhadra with Fe<sub>2</sub>O<sub>3</sub> of 36.16-36.69%, SiO<sub>2</sub> of 12.40-12.56% and also at Budharaja Parbat with Fe<sub>2</sub>O<sub>3</sub> of 25.20-42.44%, Al<sub>2</sub>O<sub>3</sub>-28.58-42.44% and SiO<sub>2</sub> of 0.03-0.85%

### **Gemstones**

**(i) Garnet:** Hessonite garnets are reported around Bandhaguda, Hata dahikhal, Lataguda.

**(ii) Chrysoberyl:** Gem quality chrysoberyl occurrences are reported in the area around Dhakalguda, Berhu. Often, the chrysoberyl exhibits cat's eye effects.

**(iii) Sillimanite Cat's eye:** Fibrolite variety of this group with excellent cat's eye effect is reported from the areas around Hamsa, Anabadi, Bada irkubadi.

### **Dimension and decorative stones**

The district has good potential as regards to the occurrences of dimension and decorative stones. The massive granite and charnockite serve as excellent construction material extensively used in foundation structures, roads and buildings. Of these, the pink granite of Gurumulu, porphyritic granites of Chatikona, granite gneiss of Bissamcuttack are important.

Other than the above mentioned minerals, minor minerals such as river sand, laterite slabs, building stone/black stone/road metals, morrum, brick earth etc. are also available in the district.

## 2. LIST OF LEASES WITH LOCATION, AREA AND PERIOD OF VALIDITY

Enclosed as Annexure I

## 3. DETAILS OF ROYALTY COLLECTED (Rs)

Sl.No	Name of Tahasil	2015-16	2016-17	2017-18	2018-19
1	Kolnara	0	38500	71400	0
2	Rayagada	2099257	2284224	2342212	0
3	Gunupur	0	0	0	0
4	Kalyansinghpur	0	0	0	0
5	Muniguda	0	0	0	0
6	Kashipur	0	0	0	0
7	Ram	700000	700000	700000	0
<b>TOTAL</b>		<b>2799257</b>	<b>3022724</b>	<b>3113612</b>	<b>0</b>

## 4. DETAILS OF PRODUCTION OF SAND (cum)

Sl.No	Name Of Tahasil	2015-16	2016-17	2017-18	2018-19
1	Kolnara	840	1940	2040	0
2	Rayagada	27500	28900	43275	0
3	Gunupur	0	0	0	0
4	Kalyansinghpur	0	0	0	0
5	Muniguda	0	0	0	0
6	Kashipur	0	0	0	0
7	Ram	49000	49000	49000	0
<b>TOTAL</b>		<b>77340</b>	<b>79840</b>	<b>94315</b>	<b>0</b>

## 5. PROCESS OF DEPOSIT OF SEDIMENTS IN THE RIVERS

There are four main river streams flows through this District. They are Sana Nala Tributary, Badanala Tributary, Sikarpai Tributary and Bhanginalla Tributary which are the tributaries of the main River Nagavalli and River Bansadhara. During rainy season the river water carries sand which is formed due to disintegration of rock bodies along with other suspensions. After recession of the water flow the sand gets deposited in the locations where there is less energy.

## 6. GENERAL PROFILE

### a. Administrative set up:

SI No	Item	Unit	Magnitude
1	Location		
	Longitude	Degree	82 <sup>o</sup> 54' to 84 <sup>o</sup> 02' East
	Latitude	Degree	19 <sup>o</sup> 00' to 19 <sup>o</sup> 58' North
2	Geographical area	Sq.Km.	7073
3	Sub-division	Numbers	2
4	Tahasils	Numbers	11
5	C D Blocks	Numbers	11
6	Municipalities	Numbers	2
7	NACs	Numbers	1
8	Police Stations	Numbers	17
9	Gram Panchayats	Numbers	182
10	Villages	Numbers	2665
	Inhabited	Numbers	2468
	Uninhabited	Numbers	197
11	Assembly constituencies	Numbers	3

### b. Area and Population:

The district has an area of 7073 sq.kms and 9.68 lakhs of population as per 2011 census. The district accounts for 4.54 percent of the states territory and shares 2.31. percent of the states population. The density of population of the district is 137 per sq. kms. As against 270 person per sq.km of the state. It has 2667 villages (including 200 un-inhabited villages) covering 11 blocks, 11 Tahasils and 2 Subdivisions. As per 2011 census the schedule caste population is 139514 ( 14.4 %) and schedule tribe population 541905( 56.0%). The literacy percentage of the district covers 49.8 against 72.9 of the state.

### c. Climate :

The climate condition of the district is generally hot with high humidity during May and June and cold during November and December. The monsoon generally breaks during the month of June. Annual rainfall of the district was 1165.8 m.m in 2011 which is lower than the normal rainfall (1285.9 m.m).

### d. Economy:

The district is rich in bauxite deposit suitable for alumina plant for which mining of bauxite and alumina plant have become the second source of income of the district next to agriculture.

### e. Industry:

No. of MSME units set up	Investment (In Rs. crores)	Employment Generated				Employment of women
		SC	ST	General	Total	
1721	9457.17	1030	1277	2237	4544	125

### f. Agriculture:

During the year 2017-18 the net area sown was 174 thousand hectares against 5356 thousand hectares of the state. The production of was as below:

Name	Paddy	Wheat	Maize	Mung	Biri	Kulthi	TIL	Groundnut	Mustard	Potatoes	Jute	Sugarcane
Production in 000 MT	193.11	0.20	46.50	1.42	5.27	4.37	2.20	3.58	1.53	0.00	3.60	29.97

During 2017-18, the total fertilizers used in the district was about

Type of fertiliser	Nitrogenous	Phosphatic	Pottasic	Total	Consumption per Ha
Quantity in MT	10204	3632	1532	15368	69.25

### g. Power:

Consumption of electricity in Rayagada district during the year covers 130.790 million units and villages so far electrified as on 2010-11 is 710 which constitutes 28.8 % to the total villages of the district.

#### **h. Transport & Communication:**

Railway route length (14-15) km	176.69
No of Rly stations and PH(14-15)	27
Forest road (17-18) km	210.51
National Highway (16-17) km	122.70
State Highway (17-18) km	171.81
Major district road (17-18) km	97.30
Other dist road (17-18) km	274.95
Rural road(17-18) km	1670.32
Inter village road (16-17) km	3812.36
Intra village road (16-17) km	2537.12

#### **i. Health:**

The medical facilities are provided by different agencies like Govt., Private individuals and voluntary organizations in the district.

Sub divisional hospitals including mobile	20 No
Beds facilities	291 No
Homoeopathic dispensaries	19 No
Ayurvedic dispensaries	14 No

#### **j. Tourist places:**

There are 7 nos. of tourist center such as Bissam-Cuttack, Chatikona, Devagiri, Hatipathar, Minajhola, Niyamgiri hill and Padmapur identified by department of Tourism and Culture, Odisha. During 2010-11, the numbers of Domestic tourists were 374095 and foreign tourists were 435 who visited the tourists spots of the district.

#### **k. Forest areas:**

<b>Category of forest</b>	<b>Area in sq km</b>
Reserve Forest	771.62
Unclassified Forest	0.96
Demarcated Protected Forest (DRF)	1147.19
Undemarcated Protected Forest	0
Other forest under Revenue Dept	892.56
<b>Total</b>	<b>2812.33</b>

## I. Education:

Primary School (2017-18)	No. of Schools	1345
	Enrolment (No)	110686
	Pupil Teacher Ratio	22.14
Upper Primary School 2017-18	No. of Schools	573
	Enrolment (No)	51686
	Pupil Teacher Ratio	19.74
General College 2017-18	Junior	31
	Degree	11
Secondary School	No. of Schools	233
	Enrolment (No)	23074
	Pupil Teacher Ratio	31.70
Literacy Rate, 2011	Male	61.0
	Female	39.2
	Total	49.8

## 7. LAND UTILISATION PATTERN

SI No	Landuse	Area in '000Ha
1	Forest Area	281
2	Misc. trees & Grooves	18
3	Permanent Pasture	26
4	Culturable Waste	22
5	Land put to Non Agril Use	124
6	Barren & Unculturable Land	38
7	Current Fallow	19
8	Other Fallow	5
9	Net Area Sown	174
10	Mining	
	Geographical Area	707

## 8. PHYSIOGRAPHY

The district has varied geomorphological features. The geomorphic units are

- (i) Lateritic Upland
- (ii) Pediplane
- (iii) Denudational Hills

- (iv) Flood Plain
- (v) Structural Hills
- (vi) Inselberg
- (vii) Mesa & Butte
- (viii) Residual Hills
- (ix) Intermontane Valleys
- (x) Bazada

## 9. RAINFALL

The climate of the district is typically tropical to sub tropical with three distinct seasons e.g. Summer, Winter and Monsoon. December is the coldest month with mean daily average temperature of 20 degree celcius which reaches 42 degree celcius in May. The rain fall in the area is mostly from the South west monsoon lats from middle of June to October. The average annal rainfall varies varies from 1031.21 mm to 1569.50 mm.

<b>MONTH WISE RAINFALL (mm) DATE OF THE DISTRICT (LAST 3 YEARS) (DISTRICT OFFICE)</b>													
<b>F. year /month</b>	<b>APRIL</b>	<b>MAY</b>	<b>JUNE</b>	<b>JULY</b>	<b>AUG</b>	<b>SEPT</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>	<b>JAN</b>	<b>FEB</b>	<b>MAR CH</b>	<b>TOTAL</b>
<b>2015-16</b>	114.2	63.2	257.2	152.4	244.9	266.2	25.4	13.6	8.5	8.0	5.9	37.6	1196.9
<b>2016-17</b>	25.9	78.7	188.0	267.8	239.2	199.3	87.7	0.8	0.0	3.9	0.0	46.3	1137.6
<b>2017-18</b>	5.1	70.4	221.2	363.6	281.7	184.7	178.7	26.1	0.0	0.0	0.0	0.5	1331.9
<b>2018-19</b>	111.2	80.4	136.1	457.9	392.4	153.5	120.0	0.9	61.7	1.2	3.4	11.4	1530.0
<b>AVG</b>	27.8	20.1	34.0	114.5	98.1	38.4	30.0	0.2	15.4	0.3	0.8	2.9	382.5

## 10. GEOLOGY AND MINERAL WALTH

The rock types exposed in the district can broadly be grouped into Eastern Ghat Supergroup, granite gneiss and Quaternary formations. Eastern Ghat Supergroup are represented by quartz-garnet-sillimanite graphite schist, garnet sillimanite schist, quartzite, calc granulite etc. belonging to khondalite group and acid to intermediate charnockite with minor basic charnockites constitute the Charnockite Group. These are intimately associated with garnetiferous granite gneiss and leptynite. The Eastern extremity of the district is occupied by granite gneiss. The litho boundaries and structure show a general north-south strike with easterly dip. All the rock types have attained granulite facies of metamorphism. Except for the lateritic patches over the granulites, Quaternary formations are mostly confined to the Nagabaili and Banshadhara river basins and catchment area.

The geological succession in the district is as follows:

### STRATIGRAPHY:

Age	Super Group	Group	Lithology
Late Holocene		Present flood deposit	day plain Soil/Alluvium
Cainozoic			Laterite/ Lateritic bauxite
Archaean	Eastern Ghat Super Group	Charnockite Group	Garnetiferous Granite gneiss Leptynite Acid/intermediate charnockite Basic charnockite
		Khondalite Group	Quartz-garnet-sillimanite schist/gneiss Quartzite Calc silicate

- a. Detail of river/stream/other sand source- Sand mining in the district is confined to tributaries of the main River Nagavalli and River Bansadhara.

- b. Availability of maximum sand or gravel or aggregate resources- sand- 20,40,720 cum (Annexure II), Gravel- Nil, Aggregate- Nil
- c. Detail of existing mining leases of sand and aggregates- For sand pl refer Annexure I. Aggregate- Nil

**DRAINAGE SYSTEM AND DESCRIPTION OF SALIENT FEATURES OF MAIN RIVERS AND STREAMS**

Sl.No	Name of the river	Place of origin	Altitude at origin (RL in Mtr.)	Total length in the district (in KM)	Area drained (Sq.Km)	% Area drained in the District	Process of deposition of sediments	volume of sand deposited in last 3 Yrs. ( Year -wise)
A	B	C	D	E	F	G	H	I
1	Sananalla (Tributary of Nagavali River) (Kalyani )	Singari	560.00	15.00	61.00	100.00	Not Available	Not Available
2	Badanala (Tributary of Nagavali River) (Hatimunda)	Singari	550.00	30.00	180.00	100.00	Not Available	Not Available
3	Sikarpai (Tributary of Nagavali River)	Kharjada	580.00	25.00	60.00	100.00	Not Available	Not Available
4	Bhanginalla (Tributary of Bansadhara River)	Mundipadar	540.00	20.00	166.00	100.00	Not Available	Not Available
5	A.Jagannathpur	Local Nalla	-	10.00	8.00	100.00	Not Available	Not Available
6	Arbinalla MIP	Local Nalla	-	15.00	73.00	100.00	Not Available	Not Available
7	Badabankily	Local Nalla	-	8.00	36.00	100.00	Not Available	Not Available
8	Badanalla	Local Nalla	-	5.00	24.00	100.00	Not Available	Not Available
9	Baghadunguri	Local Nalla	-	4.00	8.00	100.00	Not Available	Not Available
10	Bandhamundi	Local Nalla	-	5.00	28.00	100.00	Not Available	Not Available
11	Baridi	Local Nalla	-	25.00	123.00	100.00	Not Available	Not Available
12	Bethiapada	Local Nalla	-	3.00	10.00	100.00	Not Available	Not Available

13	Binishpur	Local Nalla	-	5.00	14.00	100.00	Not Available	Not Available
14	Champikota	Local Nalla	-	15.00	103.60	100.00	Not Available	Not Available
15	Dhani	Local Nalla	-	3.00	4.00	100.00	Not Available	Not Available
16	Dukumu	Local Nalla	-	6.00	14.00	100.00	Not Available	Not Available
17	Gorakhpur	Local Nalla	-	2.00	3.00	100.00	Not Available	Not Available
18	Gurugram	Local Nalla	-	4.00	10.00	100.00	Not Available	Not Available
19	Jagadalpur	Local Nalla	-	15.00	65.00	100.00	Not Available	Not Available
20	Jagannathpur	Local Nalla	-	10.00	20.00	100.00	Not Available	Not Available
21	Jangidi	Local Nalla	-	17.00	38.85	100.00	Not Available	Not Available
22	Kanjijodi	Local Nalla	-	35.00	254.00	100.00	Not Available	Not Available
23	Karanjanalla	Local Nalla	-	6.00	6.00	100.00	Not Available	Not Available
24	Karanjanalla	Local Nalla	-	17.00	48.23	100.00	Not Available	Not Available
25	Kharikuti	Local Nalla	-	22.00	107.44	100.00	Not Available	Not Available
26	Kodesu	Local Nalla	-	4.00	10.00	100.00	Not Available	Not Available
27	Kuli	Local Nalla	-	12.00	37.50	100.00	Not Available	Not Available
28	Lower Godagada	Local Nalla	-	18.00	36.00	100.00	Not Available	Not Available
29	Majhiguda	Local Nalla	-	10.00	21.00	100.00	Not Available	Not Available
30	Muchilipanga	Local Nalla	-	4.00	4.00	100.00	Not Available	Not Available
31	Nalapanka	Local Nalla	-	5.00	20.00	100.00	Not Available	Not Available
32	Narayanpur	Local Nalla	-	7.00	36.00	100.00	Not Available	Not Available
33	Nawada	Local Nalla	-	4.00	6.00	100.00	Not Available	Not Available
34	Ompera	Local Nalla	-	1.00	1.00	100.00	Not Available	Not Available

35	Puhundi	Local Nalla	-	5.00	19.00	100.00	Not Available	Not Available
36	Putta	Local Nalla	-	6.00	10.00	100.00	Not Available	Not Available
37	Randikona	Local Nalla	-	7.00	12.00	100.00	Not Available	Not Available
38	Regada	Local Nalla	-	3.00	6.20	100.00	Not Available	Not Available
39	Sakota	Local Nalla	-	10.00	41.00	100.00	Not Available	Not Available
40	Siriguda	Local Nalla	-	2.00	4.00	100.00	Not Available	Not Available
41	Sitapurgeda	Local Nalla	-	2.00	3.00	100.00	Not Available	Not Available
42	Sitarampur	Local Nalla	-	15.00	33.00	100.00	Not Available	Not Available
43	Tandipur	Local Nalla	-	8.00	53.00	100.00	Not Available	Not Available
44	Upper Panimunda	Local Nalla	-	8.00	28.00	100.00	Not Available	Not Available
45	Uppergodagoda	Local Nalla	-	7.00	26.00	100.00	Not Available	Not Available

Detail of the potential of river sand of the district is submitted as Annexure II.

## ANNEXURE I

### SAND SAIRATS ALREADY LEASED OUT AND EXECUTED

Sl no	Name of Tahasil	River or stream and Name of Village & date of Registration of lease deed	Status	Portion of the River or Stream leased for mineral concession (GPS co-ordinates or Khata & Plot No) (Sketch map to be attached)	Longitude			Latitude			Period of Validity of mining Lease		Method of Mining	Length of area leased for mineral concession (in km)	Average width of area leased for mineral concession (in km)	Area leased for mineral concession (in sq m)	Mineable mineral potential as per approved mining plan (in cum)
					Degree	Minute	Second	Degree	Minute	Second	From	To					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Kolnara	Nala	Running	K- 46 , Plot No. 53	83	26	51.52	19	19	34.27	2015-16	2019-20	Non-Captive	0.5	0.1	50707.11	4200
2	Kolnara	Nala	Running	K- 27,32,44, P-13, 117/163, 1/2, 1	83	26	41.75	19	15	20.94	2016-17	2020-21	Non-Captive	0.49	0.1	49998.91	6500
3	Rayagada	River	Running	, K-52, P-397	19	12	14.2	83	25.3	51	2015-16	2019-20	Non-Captive	0.52	0.13	60702	32875
4	Rayagada	River	Running	K-64, P-351	19	10.31	30	83	25	39.09	2015-16	2019-20	Non-Captive	0.26	0.20	52609	14792
5	Rayagada	River	Running	K-18,P-153	19	04	35.25	83	24	52.2	2015-16	2019-20	Non-Captive	0.42	0.13	58679	45068
6	Rayagada	River	Running	BEHERAGUDA K-3, P-92/1	19	07	36.62	85	25	37.89	2015-16	2019-20	Non-Captive	0.48	0.11	52609	42283
7	Rayagada	River	Running	BAHINIPATIKER ADA K-35, P-192/2	18	58	15.59	83	27	4.44	2015-16	2019-20	Non-Captive	0.76	0.10	76080	57750
8	Rayagada	River	Running	GURURAJGUDA K-18 P-56	19	02	54.3	19	03	10	2015-16	2019-20	Non-Captive	0.57	0.1	57060	40796
9	Gunupur	Vanshadhara, Gunupur	Running	K-330, P-692,710/1624, And 702/ 1623 &K-12, P-79	19	05	1.5	83	48	17.7	2015-16	2019-20	Non-Captive	0.365	0.144	52610	150000
10	Chandrapu	Vanshadhara, C.pur	Running	K No.-51, P- 22	19	36	6.2	83	38	48.1	2015-16	2019-20	Non-Captive	.401	0.145	58272.16	156618

11	Ramnaguda	Vanshadhara, Ramanaguda	Running	Khata no.28, Plot no.05,	19	10	56	83	47	50.7	2015-16	2019-20	Non-Captive	0.52	0.1	52000	50000
12	Ramnaguda	Vanshadhara, Ramanaguda	Running	Khata no.19, Plot no151, Area-13.00 AC	19	14.6	80	83	45	49.3	2015-16	2019-20	Non-Captive	0.52	0.1	52000	45000
13	Muniguda	Vanshadhara, Muniguda	Running	Khata No. 114 Plot No 611	19	39'	19.2"	83°	32'	19.9"	2015-16	2019-20	Non-Captive	0.74	0.6	47550 Sq m	86201
14	Gudari	Vanshadhara, Gudari	Running	Khata no.75, Plot no- 396, 87	19	20	27.6	83	46	51.6	2015-16	2019-20	Non-Captive	0.25	0.2	50000	9360
15	Padmapur	Vanshadhara, Padmapur	Running	k- 53 P-1	19	13	40.4	83	46	7.4	2015-16	2019-20	Non-Captive	0.07	0.03	228	0

## ANNEXURE II

### SAND SOURCES ALREADY AUCTIONED BUT NOT EXECUTED (LOI ISSUED)

Sl. No.	Name of Tahasil	Name of village	Name of Minor Mineral	Name of the Successful auction holder	Address & Contact No of Letter of Intent Holder	Letter of Intent Grant Order No. & date	Validity of Lol	Use (Captive/Non-Captive)	Location of the Source recommended for mineral concession (GPS coordinates or Khata & Plot No) (Sketch map to be attached)	Longitude			Latitude			Area of the mineral potential patch (in sq m)	Average length of potential patch (in km)	Average width of potential patch (in km)	Mineable mineral potential (in cum)
										Degree	Minute	Second	Degree	Minute	Second				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1	Muniguda	Dhobagudi	Dhobagudi	Akhya Kumara	At/po-Muniguda	LN 1444/DT 1.5.2017	2017-18 to 2021-22(5 Years)	Non CAP	Khata No 22, Plot No. 51	83	33	57.13	19	37	23.41	22249	0.2	0.11	11100

2	Kolnara	Khedapada	Khedapada	Sadanda Ganta	Pindapadar, Theruballi	LN: 3010 DT. 30.12.2015	2015-16 to 2019-20	Non CAP	Kh No. 17 Plot NO. 42,122, 438, 478, 379/496	83	26	24.22	19	21	40.15	50423.83	0.9	0.5	9500
3	Gunupur	Penguda	Penguda	J.Venkate Rao	Ukkumbada, Dist-Rayagada	L.No.1622, dt.06.04.2018	2017-18 to 2021-22(5 Years)	Non CAP	Khata no.61, plot no.249	83	47	4.36	19	03	2.48	12140.5	0.7	0.170	185556
4	Gunupur	Jaltar	Jaltar	Nirod Jena	Jaltar, Dist-Rayagada	L.no.1744/18 dt.12.04.2018	2017-18 to 2021-22	Non CAP	Khata No 109 Plot No 278	83	54	35.97	19	05	52.69	32218	0.9	0.35	9601
5	Gunupur	Gunupur	Gunupur-I	J.venkaterao	Ukkumbada, Dist-Rayagada	L.no.3814/19 dt.19.10.2019	2019-20 to 2023-24(5 Years)	Non CAP	Khata No 330 Plot No 522 Area-12.25 ac	83	48	17.7	19	05	01.5	6007	0.9	0.6	16452
6	Rayagada	Badahansa	Badahansa	Braghuram	Kerada	3175/16.8.19	2019-20 to 2023-24	Non CAP	K-31, P-130	83	25	34.52	19	04	23.47	78911	0.78	0.1	65988
7	Rayagada	Hatseskhahal	Hatseskhahal	Braghuram	Kerada	3174/16.8.19	2019-20 to 2023-24	Non CAP	K-21, P-93/165	83	25	34.52	19	04	23.47	78911	0.78	0.1	65988
8	Rayagada	Khilmisguda	Khilmisguda	China apudupuala	Khilmisguda	3176/16.8.19	2019-20 to 2023-24	Non CAP	K-41, P- 57	83	27	03.12	19	00	48.72	91057	0.91	0.1	78267
9	Rayagada	Kadambariguda	Kadambariguda	M.k.sahu	Kotapeta	4092/06.10.18	2018-19 to 2022-23	Non CAP	K-10, P- 71	83	25	22.3	19	12	53.5	41302.3	0.41	0.1	33256.3
10	Kashipur	Ekkadeli	Ekkadeli Sand Quarry	Amitkumar nayak	Tikiri dist-rayagada	1800 dtd.13.11.2020	5 years	Non CAP	Khata No.62 Plot No.987	83	10	39.77	19	08	37.02	0.22	0.1	2211	4799
11	Kashipur	Boriguma	Brigumaas and Quarry Qiu	Jogijiban Naik	Kashipur Dist-Rayagada	1799 dt.13.11.2020	5 years	Non CAP	Khata No.25 Plot No.304	83	9	42.81	19	7	41.33	0.56	0.1		10485

## ANNEXURE III

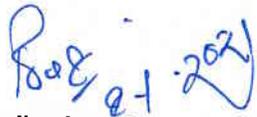
## POTENTIAL SAND SAIRATS OF THE DISTRICT

Sl. No	Name of Tahasil	River or stream	Status	Portion of the River or Stream recommended for mineral concession (GPS co-ordinates or Khata & Plot No) (Sketch map to be attached)	Longitude			Latitude			Name of village	Length of area recommended for mineral concession (in km)	Average width of area recommended for mineral concession (in km)	Area recommended for mineral concession (in sq m)	Maximum Mineable sand (in cum) (60% of total potential)
					Degree	Minute	Second	Degree	Minute	Second					
1	2	4	3	5	6	7	8	9	10	11	12	13	14	15	16
1	Kolnara	Nala	Running	Gunakhal Sand bed Kh N- 46 Plot No. 53	83	26	51.52	19	19	34.27	Gunakhal	0.5	0.1	50707.11	91272.8
2	Kolnara	Nala	Running	Sanopadia Sand Bed Kh N- 27,32,44, Plot No. 13, 117/163, 1/2, 1	83	26	41.75	19	15	20.94	Sanopadia	0.49	0.1	49998.91	89998.04
3	Kolnara	Nala	New	Arabi K: 49 Plot:47/1	83	29	10.6	19	18	0.3	Arabi	0.9	0.48	43504.65	78308.37
4	rayagada	Nagabali	New	K-61, P-755	83	25	36.23	19	14	44.2	CHANDILI	0.9	0.84	76365.84	137458.5
5	rayagada	Nagabali	New	K-73, P-814	83	25	33.08	19	14	19.53	KOMTALPET A	0.52	0.1	52609	94696.2
6	Rayagada	River	Running	K-52, P-397	83	25.3	51	19	12	14.2	KOTAPETA	0.52	0.116	60702	109263.6
7	Rayagada	River	Running	K-64, P-351	83	25	39.09	19	10.31	30	TUMBIGUDA	0.52	0.1	52609	94696.2
8	Rayagada	River	Running	K-18,P-153	83	24	52.2	19	04	35.25	PRATAPUR	0.48	0.139	58679	105622.2
9	Rayagada	River	Running	K-3, P-92/1	85	25	37.89	19	07	36.62	BEHERAGUDA	0.52	0.1	52609	94696.2
10	Rayagada	River	Running	K-35, P-192/2	83	27	4.44	18	58	15.59	BAHINIPATIKERADA	0.76	0.1	76080	136944
11	Rayagada	River	Running	GURURAJGUDA K-18 P-56	19	03	10	19	02	54.3	GURURAJGUDA	0.57	0.1	57060	102708

12	K.Singhpur	Nagabali	New	K No-30 P No 329	83	22	3.88	19	23	27.31	Belakana	0.9	0.1	99000	178200
13	K.Singhpur	Nagabali	New	K No -19 P No 251	83	18	49	19	26	56	Krishanapatraguda	0.5	0.5	2500	4500
14	K.Singhpur	Nagabali	New	K No -13 P No 205&207	83	30	78	19	48	93	Lokaguda	0.6	0.6	3600	6480
15	K.Singhpur	Nagabali	LOI	Khata No 109 P 278	83	18	21.5	19	30	10.5	K.Singhpur	0.8	0.4	32218	57992.4
16	Gunupur	Vanshadhara River	Running	K no.330,P-522 and 702/1623 &K no.12, p .79	83	48	17.7	19	05	1.5	Gunupur	0.52	0.116	60700	109260
17	Gunupur	Jaltar river	New	Khata no.77, plot no.267,218 & 622	83	54	8.84	19	05	52.69	Jaltar	0.512	0.097	49777.41	89599.34
18	Gunupur	Vanshadhara	New	Ka no.61, plot no.249	83	47	4.36	19	03	2.48	Penguda	0.347	0.143	49979	89962.2
19	Ramnaguda	Vanshadhara, Ramanaguda	Running	Khata no.28, Plot no.05,area=12.5 AC,	83	47	50.7	19	10	56	Bhamini	0.52	0.1	52000	93600
20	Ramnaguda	Vanshadhara, Ramanaguda	Running	Khata no.19, Plot no151,	83	45	49.3	19	14.6	80	G. Gulumunda	0.52	0.1	52000	93600
21	Padmapur	Banshadhara, padmapur	running	Khata no-53, Pt no-1	83	46	7.4	19	13	40.4	Bichikote	0.300	0.076	228	410.4
22	Chandrapur	Banshadhara	running	K. No.-51, P. No.-22	83	38	48.1	19	36	6.2	Dangasaroda	0.58	0.1	58272.16	104889.9
23	Bissam Cuttack	Haripur Jambugudana	New	Khata no.31, plot no.341	83	31	38.47	19	28	17.64	Jambuguda	0.107	0.1	10724	19303.2
24	Bissam Cuttack	Borikhal nala	New	K.12, plot no.259	83	30	24.94	19	28	52.99	Borikhal	0.32	0.1	3237	5826.6
25	Bissam Cuttack	Bhejipadar nala	New	Khata no.18, plot no.144	83	31	27.42	19	32	54.21	Bhejipadar	0.7	0.1	7608	13694.4
26	Gudari	Khairaguda Nalla	New	K. No.-42, P. No.-187	94	56	46.84	22	20	45.62	Khairaguda	0.54	0.1	54000	97200
27	Gudari	Birisa Nalla	New	K. No.-75, P. No.-237, 238	84	51	33.82	20	21	05.28	Gudari	0.55	0.1	55000	99000
28	Gudari	Banshadhara, Gudari	Running	Khata No 75, Plot No 396,87	83	46	51.6	19	20	27.6	Gudari	0.5	0.1	50000	90000
29	Muniguda	Banshadhara, muniguda	New	Khata No 12 Plot No 1	83	27	40.4	19	47	56.2	Paikaranipindha	0.4 KM	0.2	8000	14400
30	Muniguda	Banshadhara, muniguda	New	Khata No 05 Plot No. 55,60	83	27	40.7	19	47	55.3	Jhigidi	0.4 KM	0.2	8000	14400
31	Muniguda	Banshadhara, muniguda	New	Khata no 17 plot no 1	83	27	50	19	46	31	Pediguda	0.14KM	0.1	1400	2520
32	Gunupur	Vanshadhara river	New	Khata no 68 plot no 339	83	47	16.27	19	03	29.80	Turkaniguda	0.305	.165	50585.7	44042

33	Kashipur	Ekkadeli	New	Khata No.62 Plot No.987	83	10	39.77	19	08	37.02	Ekkadeli	0.22	0.1	2211	4799
34	Kashipur	Boriguma	New	Khata No.25 Plot No.304	83	9	42.81	19	7	41.33	Borigumma	0.56	0.1		10485

APPROVED BY DEIAA COMMITTEE, RAYAGADA

  
Sub-Collector, Rayagada  
-cum-  
Member Secretary, DEIAA  
Rayagada

Sri A.K. Sharda, President  
Dandakaranya NGO,  
-cum-  
EXPERT Member, DEIAA Rayagada

  
Divisional Forest Officer,  
--cum-  
Member, DEIAA, Rayagada

  
Collector -cum- Chairperson,  
DEIAA, Rayagada