

ଜିଲ୍ଲାପାଳ-ତଥା-ଜିଲ୍ଲା ମାଜିଷ୍ଟ୍ରେଟଙ୍କ କାର୍ଯ୍ୟାଳୟ, କେନ୍ଦ୍ରାପଡ଼ା

ସର୍ବସାଧାରଣ ନୋଟିସ

ସଂଖ୍ୟା ୩୮୫୮ ରାଜସ୍ୱ / ତାରିଖ ୯/୧୦/୨୪ //

ଏତଦ୍ୱାରା ସର୍ବସାଧାରଣଙ୍କ ଅବଗତ ନିମନ୍ତେ ଜଣାଇ ଦିଆଯାଉଛି ଯେ, ସଇରାତଉସ୍ ସମ୍ବନ୍ଧୀୟ କେନ୍ଦ୍ରାପଡ଼ା ଜିଲ୍ଲାର ସର୍ଭେ ରିପୋର୍ଟ କେନ୍ଦ୍ରାପଡ଼ା ଜିଲ୍ଲା ଷ୍ଟେସନାରୀ <https://kendrapara.odisha.gov.in> ରେ ଏବଂ ଉକ୍ତ କାର୍ଯ୍ୟାଳୟର ନୋଟିସ ବୋର୍ଡରେ ବହୁଳ ପ୍ରଚାର ଓ ପ୍ରସାର ନିମନ୍ତେ ପ୍ରେରଣ କରାଗଲା । ଯଦି ଏଥିରେ କାହାର କିଛି ଆପତ୍ତି / ଅଭିଯୋଗ / ପ୍ରସ୍ତାବ / ସୁପାରିଶ ଥାଏ, ତେବେ ଏହି ନୋଟିସ ପ୍ରକାଶ ପାଇବାର ୩୦ ଦିନ (ତା. ୦୭.୧୧.୨୪ ରିଖସନ୍ଧ୍ୟା ୫.୩୦) ମଧ୍ୟରେ ଜିଲ୍ଲା କାର୍ଯ୍ୟାଳୟର ରାଜସ୍ୱ ଉପବିଭାଗରେ ଲିଖିତ ଆକାରରେ ଦାଖଲ କରିପାରିବେ । ଧାର୍ଯ୍ୟ ତାରିଖ ଗତେ କୌଣସି ଅଭିଯୋଗ ଗ୍ରହଣ କରାଯିବ ନାହିଁ ।

ସୁଶିଳାକାନ୍ତ ପ୍ରଧାନ
AN-୧୦-୨୪
ଜିଲ୍ଲାପାଳ, କେନ୍ଦ୍ରାପଡ଼ା



DISTRICT SURVEY REPORT (DSR)
OF
KENDRAPARA DISTRICT, ODISHA.
FOR
RIVER SAND
(FOR PLANNING & EXPLOITATION OF MINOR MINERAL RESOURCES)



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

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PREAMBLE

Odisha is one of the Major Mineral rich State in India. Kendrapara is a unique District in Odisha lies on the North-East part of the State with rich and varied mineral resource. It is a paradise for Geoscientists of India and abroad. It has preserved many important rock groups from the earliest of crust formation to the geologically recent times. The landmass constituting the KENDRAPARA District, explorers to many Entrepreneurs on account of its diverse geological setting and rich and varied mineral resources.

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

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

make a policy on E.C for minor minerals lease in cluster.

MoEF & CC in consultation with State Government has prepared Guidelines on Sustainable Sand Mining & Minor minerals other than sand mining in 2016, detailing the provisions on Environmental Clearance for cluster. Creation of District Environmental Impact Assessment Authority (DEIAA) & proper monitoring of Minor Minerals. Mining, using Information Technology to track the mineral out material from source to destination.

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

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

to the procedure and parameters laid down in the policy of January-2020 should be followed.

The District Survey Report will form the basis for application for Environmental Clearance, preparation of reports and appraisal of projects. District Survey Reports are to be reviewed once in every five years as per statute, however this is an interim report, which will be updated at regular intervals.

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

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

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

1. INTRODUCTION

Kendrapara at a Glance:

1.1 History

The history of Kendrapara is not only replete with a rich heritage but also marked by a plethora of events having far reaching consequences. The presiding deity of this land is Shri Baladev Jew and this place owes its name to the mythological anecdote on 'Kandarasura'. Notwithstanding this, the place is surrounded by a cluster of villages and Kendrapara being the village centre, earns the name as central village as is viewed by many learned scholars.

Apart from Lord Baladev jew, Kendrapara was a treasure trove of maritime activities. The then maipur, presently known as Mayuri gaan under the Kanika estate of Kendrapara has been depicted as Mayudera port by the historian Ptolemy. In older times it is evident from his description that diamond was available in Kanika. This apart, is the eastern sea coast of kendrapara the island of Jambu, Kaladvipa or Satabhaya were main trading centres. The episode of 'Taapoi' is linked with the trading activities of Satavaya. The places like Pattamundai, Boitarkuda (Boitalapata-Utikara) Chandol and Garapur are notable in the pages of history. In later times, a False point, Light House, and a port were intalled by the British Government on 26th May 1869. The first post office of Odisha adjacent to Jambu was established by the government in 1961. Kujanga, Aul and Kanika were the three estates in ancient Kendrapara.

The rulers of Kujanaga, Aul and Kanika belonged respectively to Sandha dynasty, Dev dynasty and Bhanja dynasty. Independent minded King of Kanika, Balabhadra Bhanja and indomitable Sandha King Chandradhruja Sandha of Kujanga forged and alliance with Nilakantha Mangaraj of Harispur and fought in unison against the British. The present Barahajew temple of Aul and Jagannath temple of Roghaharh were Constructed by Balabhadra Bhanja of Kanika. Two great seers Namacharya Bayababa and Ateist Kshatrabasi Baba were born in Keradagarh. Ananta Narendra Santha, The KIng of Kujanga built a Jagannath temple at Kujanga.

Kendrapara occupies a unique place in the annals of 19th century Odisha. The way Radhashyam Narendra, the renowned landlord of kendrapara fed the "N'anka" drought affected people for months together without any return would be written in the history of Odisha for all times to come. It is mentioned that Radhashyam Nerendra was complimented in Delhi Durbar and Cuttack in presence of all Kings. The learned poet Abhimanyu Samanta Singhar was the uncle of Radhashyam Nerendra. The eldest sister of Radhashyam Narendra had married Chandradhvaja, the Sandha King of Kujanga. It is evident that Kamala Devi the sister of Narendra's father was locked in marriage alliance with Abhimanyu Samantha Singhar in 1785. Jagannath Birabar, the grandson of Chandradhvaja Sandha had adopted Narayan Birabar Samanta who was popularly known as "Kujanaga Gandhi".

The areas like Lalitgiri, Udayagiri and Ratnagiri were under the leadership of Radhashyam Narendra. Those regions were included in "Aalati Pragana" Radhashyam Narendra had donated mount "Olasuni" to Saint Arakshita Das and executed a will in favour of his name. King Narendra acted as a mentor to Binayak Bhanja the King of Kanika and extended protection to their family.

In 19th century when Odia language was under the grip of Bengalis, in the meanwhile a new lease of life was given to Odia language by music maestro Gokul Srichandan by promoting rendition of Odiya Songs in the inner circles of Bada Kotha. Renowned musicians like Bada Golam Ali, Rosnara Begum, Hafiz Ali Khan, Raichand Baral were assembling in this musical hub. Later on Padmashree Nimai Harichandan and Sangeeta Sudhakar Balakrishana Das joined this musical meet. Music maestro Gokul Chandra Srichandan had recorded Odia song "sajanire" for the 1st time in 1899. Banikantha was the son of Brundaban Harichandan and nephew of Gokul Srichandan. Balakrushna Das of village Balakati in the district of Puri was a disciple of Gokul Chandra Srichandan.

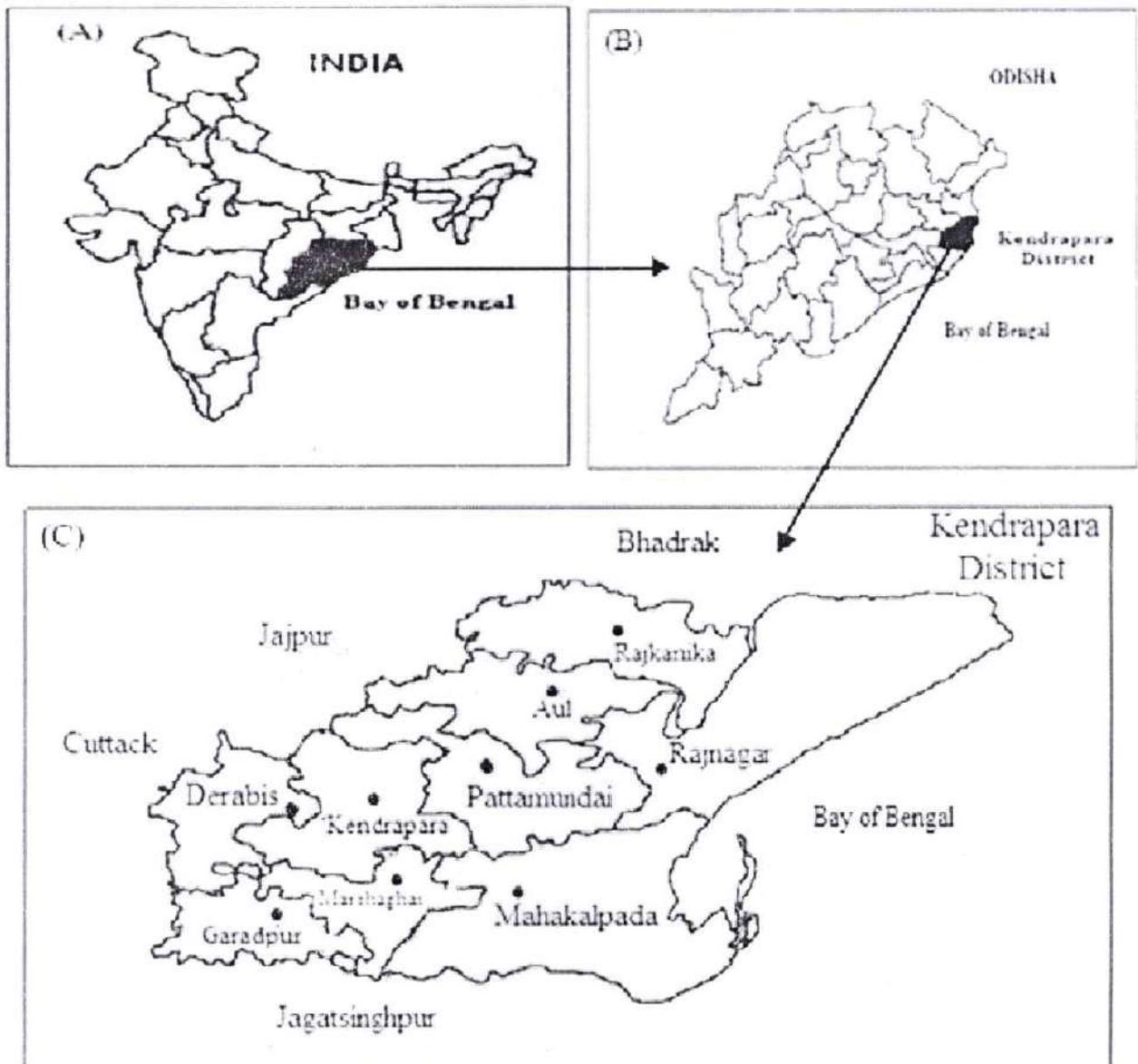
Kendrapara occupies an inimitable place in 20th century history of Odisha. Eminent leaders like Jadumani Mngaraj, Narayan Birabar Samanta, Pitamber Jagdev, Aasadulla, Amar Chaterjee, Sahadev Pradhan, the "Gandhi of Aul" together played crucial role in the freedom struggle of India. Gandhiji launched Padayatra in Kendrapara at the call of those stalwarts and quite a large number of women joined this venture.

Kendrapara is ahead of many districts in the field of education. Initially, elementary schools were opened in Haripur, Remuna and Kendrapara in 1844 but not in Cuttack. These schools were converted into middle English schools in 1863 and again developed into high schools in 1883 by the then SDO Kirti Gobinda Gupta, reputed educationists like Jamaluddin and Pallikabi Nanda Kishore Bal were the alumni of this school. Frazer girls' school was established in Kendrapara in the year 1893 to spread women education. For the 1st time a public library was opened bearing the name Narendra Pathagar which was subsequently renamed as Diamond Jubilee library in the diamond jubilee year of Victoria's death.

1.2 Location and Geographical Area:

Kendrapara is one of the coastal Districts of Odisha. Kendrapara is the District Head Quarter, spreading over an area of 2644 sq.km lies between 20° 20' North and 20°48' North latitudes and 86°15' and 87°05' East longitudes. The District is surrounded by Bhadrak District on its Northern side, Bay of Bengal on its East, Jagatsinghpur District on its South and Jajpur & Cuttack Districts lies on its Western side. It is best known for Bhitara Kanika National Park. This District consists of one Sub- Divisions namely Kendrapara. There are 9 Tahasils for 9 Blocks of this District. Kendrapara is the main town as well as the Centre of Economic Growth in the district.

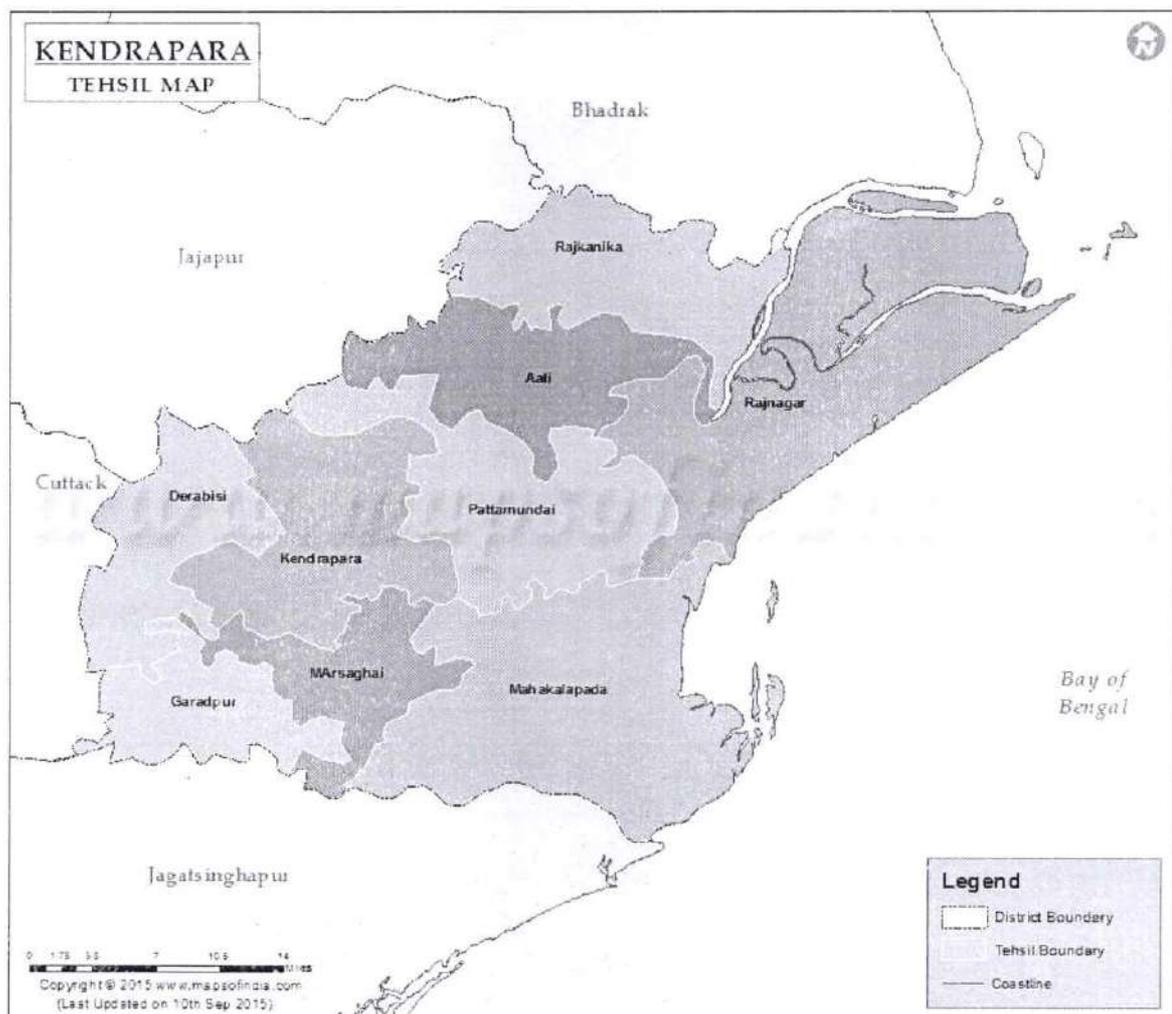
The primary occupation of people in the District is cultivation. This District is mainly known for cultivation of paddy. Industries, Agriculture, Fishing and Tourism are the four major Revenue sources of Kendrapara District. Automobile Garage, Electrical appliances repairing, Rice mill, Package drinking, General fabrication & Flyash brick are some of the Large-Scale Industries functioning in this District. Kendrapara occupies a unique position being endowed with lush green vegetation, different fauna & flora and rich Cultural Heritage. The district has a rich mineral base of river sand, which are mainly used in construction purpose in the district. Except these, no major mineral in large quantity which can be explored for commercial purpose found in the District. The location of the District has been presented in a map below.



1.3 Administrative Units:-

Kendrapara Town is the Administrative Headquarter of Kendrapara District. It is located at a distance of 85 km from Bhubaneswar, the State capital of Odisha. It is the 4TH largest district in area among the costal districts of Odisha. Villages covering 9 Blocks, 9 Tahasils, namely i) Aul N ii) Kanika iii) Kendrapara iv) Marshaghai v) Pattamundai vi) Rajnagar vii) Mahakalapada viii) Derabishi ix) Garadpur.

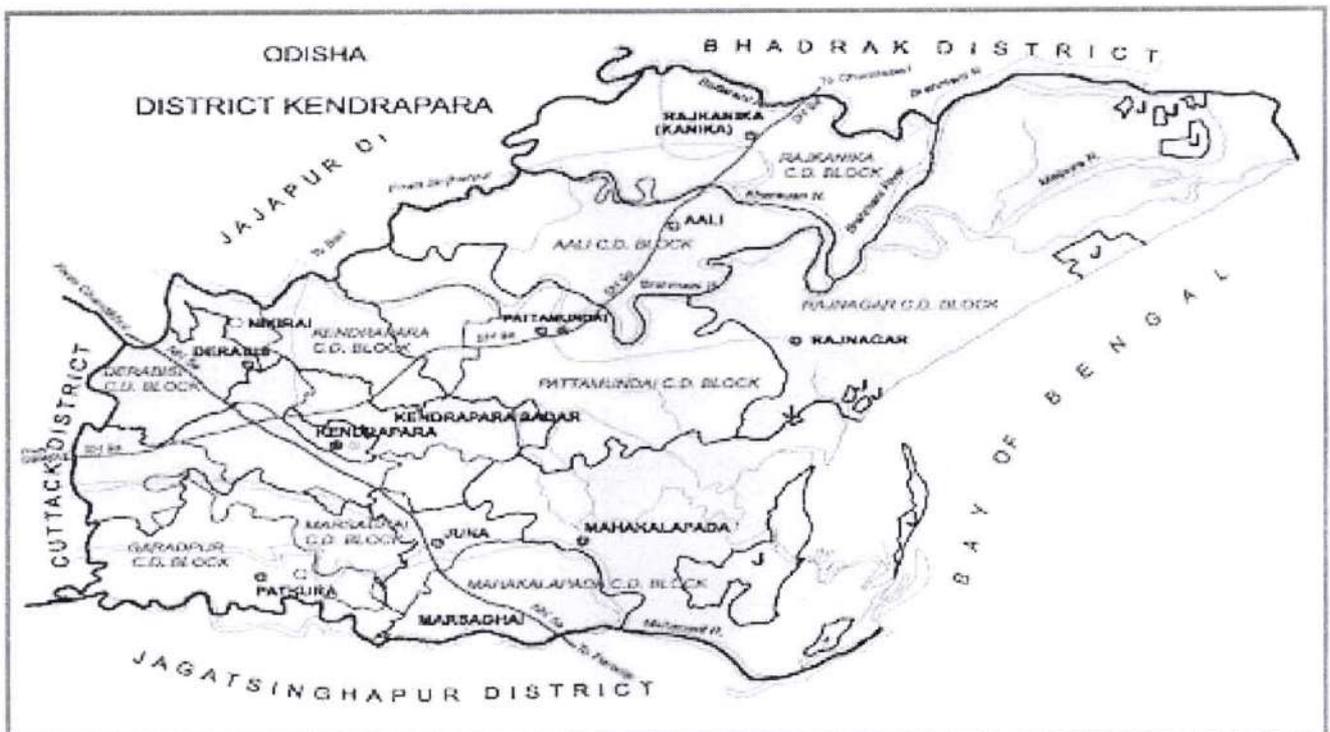
The population of the District is 14,40,361 according to the 2011 Census. The District accounts for 1.70% of the State's territory and about 3.08% of State's population. The density of population of the District is 545 per square km as against 610 per square km of the State. As per 2011 Census, the population of Scheduled Caste is 309780 (21.50%), and Scheduled Tribe is 9484 (0.65%). The literacy percentage of the District covers 85.98 against 84.67 of the State.



1.4 Connectivity facilities:-

Road Network

The District is well served by a network of good roads and has been called the motorists paradise. The chief roads NH-316A pass through the District. Kendrapara Town is about 44 Kms from Chandikhol, 60 Kms from Cuttack, 37 Kms from Paradeep, 85 Kms from Bhubaneswar and 139 Kms from Puri. It is also connected with other cities such as Sambalpur, Puri, Bolangir, Bhadrak, Jhargram, Angul, Ranchi and Kolkata via road.



Rail Network

Kendrapara District is well connected by Rail link to different places. Kendrapara Railway Station is the only railway station in Kendrapara district which connected to Paradeep Port. The distance to Bhubaneswar is about 80 km.



Air Network

At present, Kendrapara has no connection by Airway. The nearest Airport is Biju Patnaik International Airport Bhubaneswar which is situated 90 Kms far from Kendrapara.

GENERAL PROFILE OF THE DISTRICT:**2.0 Demography:**

Census - 2011	
Geographical Area	2466 Sq. Km.
Total population	1,440,361
Male Population	717,814
Female Population	722,547
Male Literacy	579,970
Female Literacy	509,295
SC Male	155,531
SC Female	154,249
ST Male	4,748
ST Female	4,736
OBC	NA
Illiterate Male	137,844
Illiterate Female	213,252

2.1 Climate:

The climate in Kendrapara is warm and temperate. In winter, there is much less rainfall in Kendrapara than in summer. The Köppen-Geiger Climate Classification is Cwa i.e. Temperate-Dry Winter-Hot Summer. May is the warmest month of the year. The temperature in May averages 35°C to 40°C. January has the lowest average temperature of the year which is 15 °C – 25 °C. There is a difference of 1501.3 mm of precipitation between the driest and the wettest month. The average annual temperature of Kendrapara District is 26°C. (Source: -Indian Meteorological Department).

3.0 LAND UTILIZATION PATTERN IN THE DISTRICT**3.1 Forest and non forest land**

The forest of Kendrapara District is full of varieties of medicinal plant. Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals live in the forest. The District has one Wildlife Sanctuary known as Bhitara Kanika Wildlife Sanctuary, which is specially for Crocodile. The park is home to the saltwater crocodile, Indian python, black ibis, wild boar, rhesus monkey, chital, darter, cobra, monitor lizard. The area of the sanctuary is 145 sq km. In the Sanctuary, the principal animals that are found are Elephant, Bear, Nilgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.

District-wise Forest Cover Area in Odisha (Area in Km²)

2017 Assessment								
District	Geographical Area Km ²	Very Dense Forest	Moderate. Dense Forest	Open Forest	Total	Percent of GA	Change	Scrub
Angul	6375	371	1380	1004	2755	43.22	43	84
Bolangir	6575	70	224	837	1131	17.2	151	142
Baleswar	3806	23	127	234	380	9.98	30	48
Bargarh	5837	176	371	484	1031	17.66	88	47
Bouda	3098	263	546	480	1289	41.61	27	57
Bhadrak	2505	0	9	66	75	2.99	2	0
Cuttack	3932	53	226	517	796	20.24	11	68
Deogarh	2940	191	667	614	1472	50.07	-3	14
Dhenkanal	4452	174	418	825	1417	31.83	9	82
Gajapati	4325	84	1490	946	2520	58.27	12	262
Ganjam	8206	164	1075	864	2103	25.63	15	655
Jagatsinghpur	1668	0	5	131	136	8.15	6	0
Jajpur	2899	6	72	225	303	10.45	3	50
Jharsuguda	2114	3	140	179	322	15.23	9	36
Kalahandi	7920	362	729	1327	2418	30.53	36	362
Kandhamal	8021	661	2588	2143	5392	67.22	16	380
Kendrapada	2644	84	88	133	305	11.54	14	2
Keonjhar	8303	289	1404	1519	3212	38.68	4	55
Khorda	2813	21	186	250	457	16.25	0	92
Koraput	8807	94	740	1255	2089	23.72	120	944
Malkangiri	5791	158	709	1475	2342	40.44	20	45
Mayurbhanj	10418	1335	1718	1027	4080	39.16	42	34
Nabarangpur	5291	168	428	507	1103	20.85	8	47
Nayagarh	3890	189	965	556	1710	43.96	28	173
Nuapada	3852	86	482	705	1273	33.05	33	109
Puri	3479	0	54	160	214	6.15	8	11
Rayagada	7073	422	853	1851	3126	44.2	7	349
Sambalpur	6624	499	1675	1106	3280	49.52	13	40
Subarnapur	2337	2	187	161	350	14.98	26	29
Sundargarh	9712	1019	1814	1431	4264	43.9	107	89
Grand Total	155707	6967	21730	23008	51345	32.98	885	4306

(Source: India State of forest report 2017-Odisha)

The major portion of the District is covered by forest (9.98 % of TGA) and has scattered settlement pattern. The forest is full of variety of medicinal plants, kendu leaves, bamboo, Sal, teak and other timber species. The District has considerably flat land, which provides suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major crops grown in the District are rice and pulses. Only 12.50 percent area of agricultural use are net irrigated and major source of irrigations are wells and tube wells.

Source: Fertilizer and Agriculture Statistics, Eastern Region (2006-2007)

Tahasil	Forest Area	Misc Tree	Permanent Pasture	Cultivated waste	Non Agricultural uses	Barren land	Current Fallow	Other Fallow	Net area sown
	0	714	992	904	2882	0	525	438	24047
	4	634	3133	2949	6116	1640	531	553	15185
	1008	1813	295	2855	4515	0	638	717	16624
	13	198	892	498	4143	0	551	103	12954
	118	3364	1263	5350	4732	59	1025	510	15794
	1716	2045	1396	2455	5422	43	736	334	18713
	55	630	1544	1210	3508	0	1173	764	18160
	977	289	1444	2343	2312	435	558	188	28280
	329	374	855	557	1656	0	177	338	19759
	108	813	1317	2989	5070	10	1073	114	16363
	5	438	846	576	2677	0	439	889	17646
	1109	441	1121	564	2066	28	295	564	21476
Total	5442	11753	15098	23250	45099	2215	7721	5512	225001

3.2 Agriculture Land:

The primary objective of Agriculture Department is to increase the production as well as productivity of major crops like Paddy, Cereals, Pulses, Oilseeds, vegetables, Fibres, Spices, Sugarcane & Fodder which is widely cultivated in this District in both Kharif & Rabi season. Another key objective is to bring all round development among farming community of the District. The Chief District Agriculture officer is the head of office so far as agriculture is concerned. As it has already been pointed out that agriculture is the main livelihood of the people in Kendrapara District, it is therefore designated as the food bowl of Odisha. Rice is the principal crop grown in this District, followed by other cereals, pulses, oilseeds, vegetables, spices and sugarcane. The agricultural statistics for the District is shown in tables below:

Table – 3.6a: Crop Coverage Area of Kendrapara District, Odisha (2023-24)

Crop	Khariff		Rabi		Annual	TOTAL	
	Area (ha)	(% of Cropped Area)	Area (ha)	% of Cropped Area	Area (ha)	Gross Cropped Area (ha)	% of Gross Cropped Area
Paddy	126000	83.21	1746	1.34	-	127746	45.29
Cereals	138	0.09	203	0.16	-	341	0.12
Pulses	1006	0.66	99635	76.28	-	100641	35.68
Oilseeds	0	0.00	5483	4.20	-	5483	1.94
Vegetables	20459	13.51	19168	14.68	-	39627	14.05
Fibres	740	0.49	-	-	-	740	0.26
Spices	3040	2.01	3922	3.00	-	6962	2.47
Sugarcane	-	-	453	0.35	-	453	0.16
Fodder	45	0.03	-	-	-	45	0.02
TOTAL	151428	100	130610	100	-	282038	100

3.3 Horticulture Land:

The primary objective of Horticulture Department is to increase of production as well as productivity of major fruits like Mango, Guava, Citrus etc., which is widely covered in the District. Another key objective is the all-round development of the farming community of the District. The horticulture statistics for the District is shown in subsequent tables below:

Information on Horticulture Plantations for Kendrapara District												
Horticultural Crops												
Sl No.	Year	Fruit Plants							Perennial Crop cultivation		Vegetables	Flowers
		Mango	Guava	Coconut	Pineapple	K.Lime	Cashew	Appleber	Papaya	T.C Banana	Hybrid Vegetable	Marigold
1	2021-22	110.10	7.00	145.52		53.05	10.72		8.24		290	30
2	2022-23	85.9		130.36	12.6	2.3	6	1	16.125		300	30
3	2023-24	59.2	5	149.4		9.3			9.3	2	530	30
Total Area		255.20	12.00	425.28	12.6	64.65	16.72	1	33.665	2	1120	90

Source: Assistance Director of Horticulture, Kendrapara. Orissa Agric.

4.0 PHYSIOGRAPHY OF THE DISTRICT:

The physiography of Kendrapara district in Odisha is characterized by a coastal and delta environment, a network of rivers, and a transitional ecosystem:

Location: Kendrapara is located in the central coastal plain of Odisha, between 20° 20' N to 20° 37' N Latitude and 86° 14' E to 87° 01' E Longitude. The Bay of Bengal is to the east, and the district is bordered by Bhadrak, Jajpur, Cuttack, and Jagatsinghpur districts.

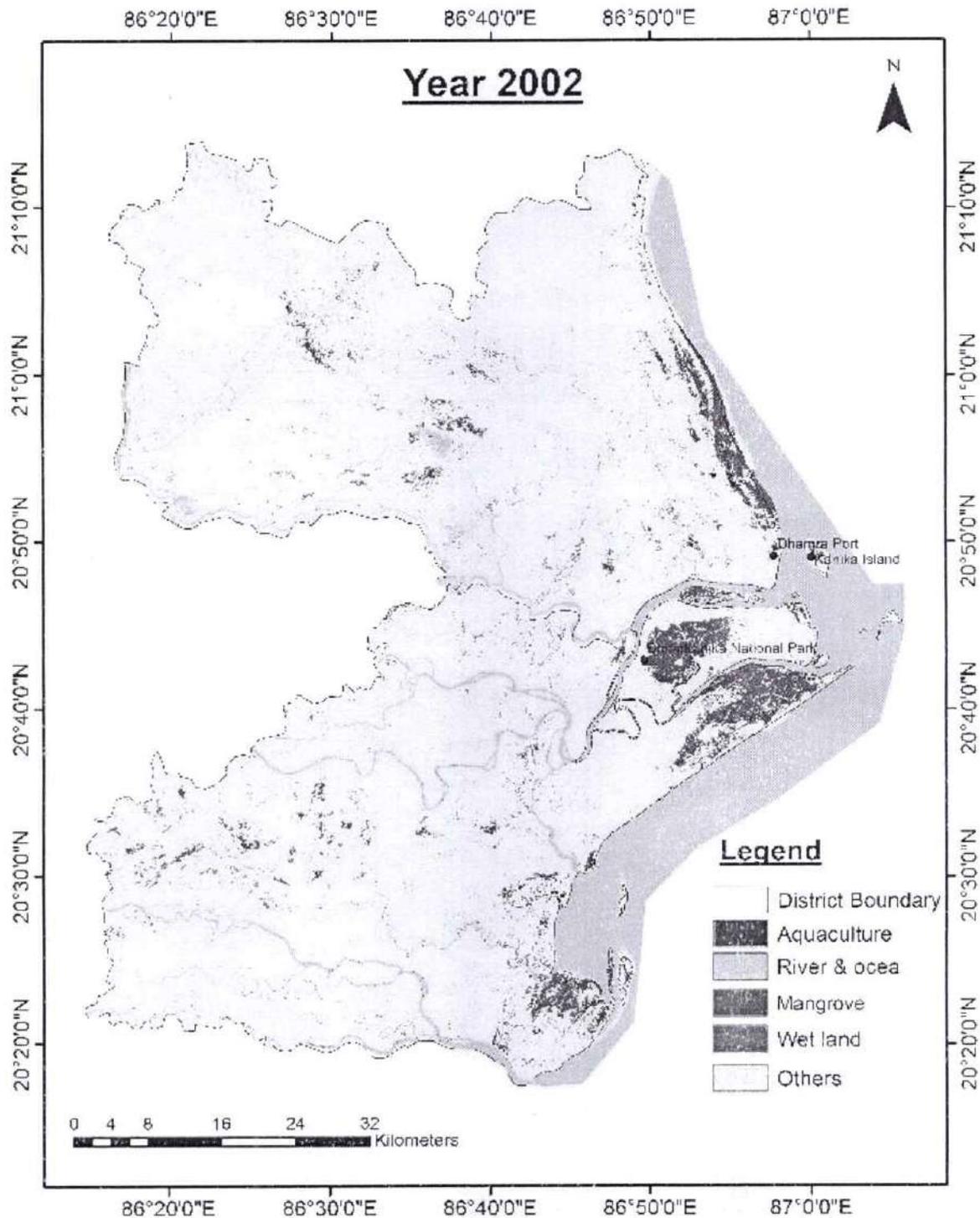
Rivers: The district is crisscrossed by many rivers, including the Chitroptala, Luna, Karandia, Gobari, Brahamani, Birupa, Kani, Hansua, Baitarani, Kharasrota, and Paika. The river delta was formed by the Brahamani and Baitarani rivers, which are branches of the Mahanadi.

Coastline: The district's coastline stretches 48 km from Dhamra Muhan to Batighar.

Forests: The district's forest area covers 2,414 hectares, which are covered with groves and miscellaneous crops.

Wildlife: The district is home to diverse flora and fauna.

Ecological diversity: The district's geographical location, ecological diversity, and environmental importance make it a prosperous district.



5.0 RAINFALL OF THE DISTRICT AND CLIMATE CONDITION

5.1 Month wise rainfall:

The driest month is November, with 31 mm of rain. There is on average 3 mm of precipitation in December. In July, the precipitation reaches its peak, with an average of 313.98 mm.


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Year		2021	2022	2023	Average
Sl. No.	Month	(mm)	(mm)	(mm)	(mm)
1	Jan	10.6	10.6	10.6	10.6
2	Feb	30.2	30.2	30.2	30.2
3	Mar	35.0	35.0	35.0	35.0
4	Apr	33.9	33.9	3.36	23.72
5	May	94.2	94.2	94.2	94.2
6	Jun	249.11	208.3	208.3	221.90
7	Jul	317.1	317.1	247.11	293.77
8	Aug	333.3	406.0	333.3	357.53
9	Sep	237.3	237.3	237.3	237.3
10	Oct	183.7	183.7	183.7	183.7
11	Nov	67.2	67.2	67.2	67.2
12	Dec	5.2	5.2	5.2	5.2
Total		1596.81	1628.7	1455.47	1560.32

The Indian Meteorological Department, Bhubaneswar, vide letter No. BBS/RMC/CS-312, dated 18th January, 2016 has provided the period of Rainy Season viz. Normal dates of Onset and Withdrawal of South West Monsoon over India as State-wise. The duration for the period is 10th June to 15th October.

6.0 GEOLOGY AND MINERAL WEALTH OF THE DISTRICT:

6.1 Regional Geology:

The coastal tract of Orissa is underlain by the Tertiary and Quaternary Formations. Kendrapara is a unique District in Odisha with varied geology, of these the Tertiaries are the least exposed on the surface, whereas the Quaternaries are extensively developed along the coast and further inland. Kendrapara District, located in eastern Odisha, India, features a diverse geology primarily composed of sedimentary rocks, including clay, silt, and sand, deposited by the Brahmani and Baitarani rivers, contributing to fertile alluvial plains. The district lies along the eastern coast, characterized by coastal and deltaic deposits, and is known for laterite soils resulting from tropical weathering, particularly in elevated areas. As part of the Gangetic alluvial plain, Kendrapara's rich alluvial soils support extensive agriculture. The region is relatively stable tectonically, influenced by geological activities from the Eastern Ghats, with minimal mineral resources. Groundwater, primarily sourced from

alluvial deposits, is crucial for irrigation and drinking water. However, the low-lying topography and proximity to rivers and the coast make Kendrapara prone to flooding, particularly during the monsoon season and cyclones. Understanding this geological framework is essential for sustainable development and resource management in the region.

6.2 Geomorphology:

Hydrogeomorphological features of Kendrapara District are mainly attributed to fluviomarine, erosional, denudational and depositional processes. The coastal plain has been developed due to fluviomarine processes. The alluvial plains owe their origin due to various fluvial actions of major rivers. The details of the geomorphic unit as identified are as below:

1. Geological Setting:

Sedimentary Basin: Kendrapara is primarily part of the deltaic plains of the Mahanadi River system, featuring sedimentary deposits.

Alluvial Soil: The region has extensive alluvial plains formed by the deposition of sediments brought by river systems.

2. Landforms:

Deltaic Features: The district exhibits a deltaic morphology due to the proximity to the Bay of Bengal, with numerous channels, islands, and estuaries.

Floodplains: The fertile floodplains are created by seasonal flooding, supporting agriculture.

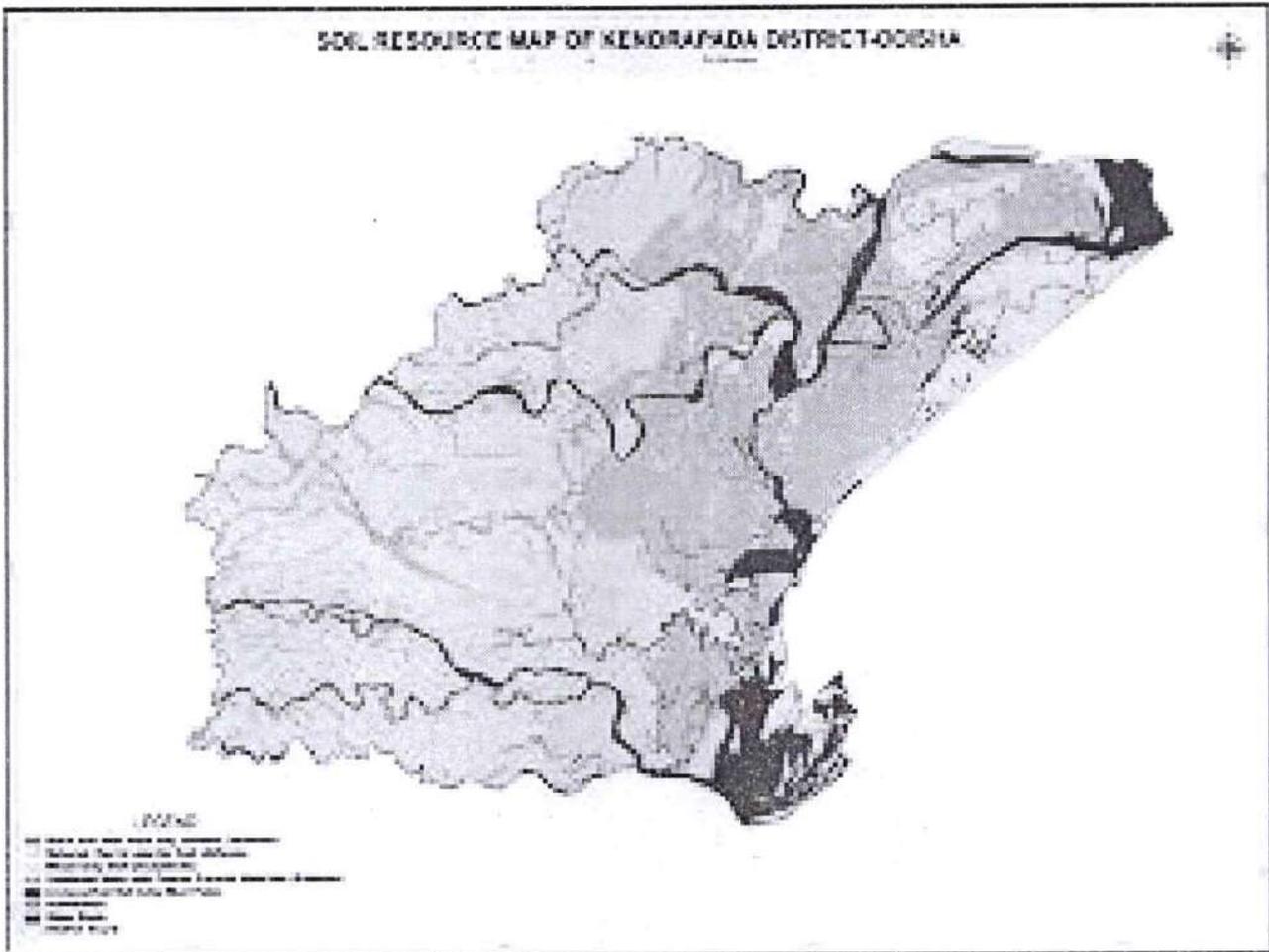
Coastal Landforms: The coastline includes sandy beaches, mudflats, and mangroves, especially around the Bhitarkanika National Park area.

3. Landforms

Mahanadi River: The main river, along with its tributaries, plays a crucial role in shaping the landscape through erosion and sediment deposition.

Estuarine Dynamics: The confluence of rivers with the sea leads to complex estuarine environments, which are rich in biodiversity.

These are mostly converted to agricultural land in due course of time. Due to marine regression ground water quality is saline.



6.3 Stratigraphy:

The study area comprises the following distinct geomorphic units:

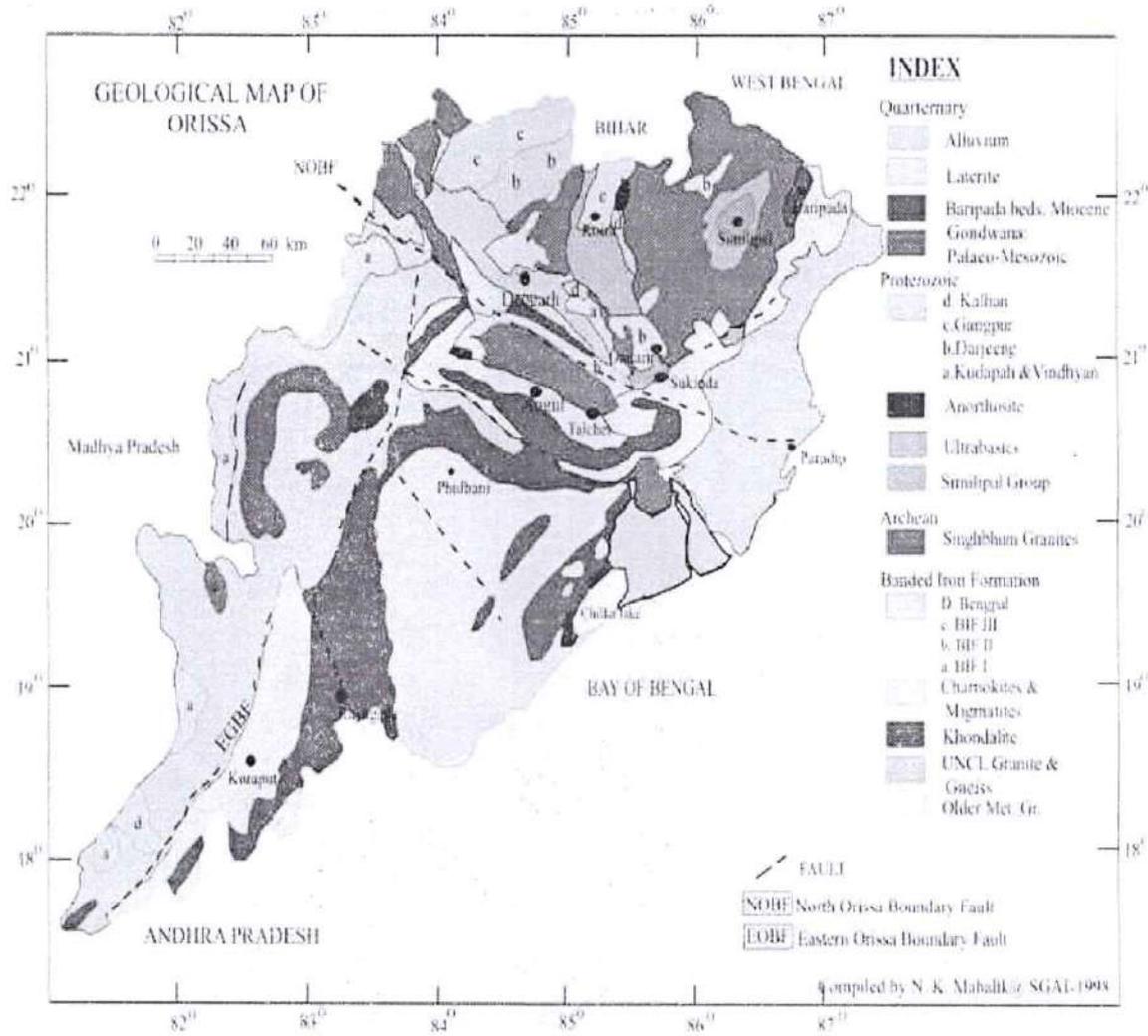
- i) Younger alluvial plain
- ii) Older alluvial plain
- iii) Lateritic upland

<u>Geological Age</u>	<u>Geological Formation / Group</u>
Quaternary	: Recent Alluvium, Clays, silt, Sand, Gravel
Tertiary	: Older Alluvium, Laterite, Baripada Beds.
Mesozoic/ Palaeozoic	: Volcanics / Epidiorite
Precambrian	: Slate/ Phyllite/ Schist / Gneiss
Archean	: Granite/ Granite Gneiss


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6.4 Mineral Resources:

Minerals like soft stones, stone chips are available in the District, which are mainly used in industrial units in the District. Except these, no minerals in large quantity which can be explored for commercial purpose found in the District.



6.5 Soil:

The soil type of the district varies from alluvial, saline and sandy clay. The western part of the district is alluvial which is very fertile in nature whereas the eastern part comprises mainly sandy clay type soil which is saline in nature due to its proximity to the sea.

7. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT:

Kendrapara District has transitional landform features between coastal plain region. Most of the mineralized area coming under Eco-Sensitive Zone (Bhitara Kanika Wildlife Sanctuary). Thus mining activities are confined only to the areas outside of Eco-Sensitive Zone. The mining activity in the District is restricted only to Minor Mineral i.e. of sand and brick earth clay. These are being given to various user agencies as lease agreement governed and regulated by Revenue Department under the legal provision stated under Odisha Minor Mineral Concession Rules, 2016. There is no lease of Major Mineral in the District. These sources have been providing tremendous scope for development of few more Industries based on these Resources.

8.0 LIST OF MINING LEASES WITH LOCATION, AREA, AND PERIOD OF VALIDITY IN THE DISTRICT:**8.1 List of Mines in operation in the District:**

Attached as Annexure-A

8.2 List of Mines not in operation in the District:

Attached as Annexure-A

9.0 DETAIL OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS:

SL. NO.	Name of the Tahasil	Amount of revenue received from minor mineral sources (Amount in Rs.)			
		2020-21	2021-22	2022-23	Total
1	Aul	1054368	1059368	2787018	4900754
2	Derabish	0	1086000	16656453	17742453
3	Garadpur	661619	563885	437947	1663451
4	Kanika	157640	0	566435	724075
5	Kendrapara	0	0	0	0
6	Marshaghai	13393239	3842694	9835049	27070982
7	Mahakalapada	1080835	743635	490000	2314470
8	Pattamundai	4434531	785209	3419303	8639043
9	Rajnagar	0	0	0	0
Total		19727864	8080791	34192205	63055228

10.0 DETAILS OF PRODUCTION SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS:

Details of Production in Cum:

Sl. No.	Name of the Tahasil	2021-22	2022-23	2023-24	Total in Cum.
1	Aul	0	3810	0	3810
2	Kanika	0	3930	0	3930
3	Kendrapara	0	0	0	0
4	Marshaghai	60305	24930	39100	124335
5	Pattamundai	10121	0	0	10121
6	Rajnagar	0	0	0	0
7	Mahakalapada	1225	7000	0	8225
8	Derabish	41770	24701	0	66471
9	Garadpur	10128	26554	0	36682
Grand Total		123549	90925	39100	253574

11.0 DETAILS OF RIVER OR STREAM AND OTHER SAND SOURCES

11.1 DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVERS:

Kendrapara District's drainage system is primarily influenced by the Mahanadi River, which flows through the area and creates fertile floodplains ideal for agriculture. Key tributaries include the Karandia River, Chitroptala River which contribute to local irrigation and hydrology, while the Brahmani River, although primarily in the adjacent Jajpur District, affects the region's water dynamics. Key tributaries include the Luna river, Gobari river, Birupa river, Kani River, Hansua River, Baitarani river, Kharasrota River, Chitroptala River, Paika river which contribute to local irrigation and hydrology. Additionally, numerous ponds and tidal channels enrich the landscape, making the drainage system crucial for agriculture, ecology, and sustainable water resource management in the district. Major crops grown in the District are rice, only 12.50 percent area of agricultural use are net irrigated and major source of irrigations are well and tubewells.

Kendrapara District is being drained by three important rivers & their tributaries such as Brahmani River, Mahanadi River & Baitarani River.

Sl. No.	Name of the river	Area Drained (in Sq. Km.)	% area drained in the district
01	Brahmani River	913	36%
02	Chitrotpala	1350	52%
03	Baitarani	304	12%

11.2 Salient Features of Important Rivers and Streams:

There are three major river systems in the Kendrapara District. They are

1. The Mahanadi System
2. The Brahmani System
3. The Baitarani System

Cultivable alluvial plains area formed from the deposits of the above river systems and contribute to agricultural prosperity of the district. The district is bisected by rivers like the Mahanadi, the Brahmani, the Baitarani & many other streams and their tributaries like Luna, Chitrotpala, Karandia, Govari, Kharashuan, Dhamara, Meinpura, Kani and Birupa.

1. The Mahanadi System:

The MAHANADI originates from Maikal range in Chhatisgarh popularly known as the Amar Katak Plateau and enters into Odisha through Sambalpur and flows through Dhenkanal, Cuttack and Jagatsinghpur and enters Kendrapara district in south at Raipur of Mahakalpada Block. Then it passes through Khursia, Kulla and embraces the river Luna at Chaumuhani. Then makes its passage to Bahukud, Hetamundia and finally meets the Bay of Bengal near the False Point at 20° 18' N. and 86°, 43' E. longitude.

The CHITROTPALA flows from Mahanadi at Bisharpur in Cuttack district and makes its passage to this district at Matanga (Talakusuma) in Garadpur block. The Mahanadi after crossing Cuttack town moves eastward and splits into Chitrotpala, Paika and Mahanadi. Chitrotpala after flowing some distance parallel to Luna joins the Mahanadi at Badapada of Cuttack district. After flowing through Garadpur and Patkura touches the river Luna at Kuanarpala in Marsaghai Block.

The river LUNA flows from the river Chitroptala at Sunaria in Cuttack district and enters into Kendrapara district at Girigola of Derabish block. Then it traverses through Danpur (Derabish Block) Baspur, Kalapada (Marsaghai Block) and joins Chitropala at Kunarapala. Afterwards, it proceeds in the east direction towards Balikuda in Mahakalapada block. At this point, the river again gets bifurcated and passes through both sides of Dasmouji Gheri to rejoin at Teragan Samantasingharpur in Mahakalapada Block. After that, it proceeds towards Gojabandha, Gokhakhathi and joins Mahanadi at Choumuhani in Mahakalapada Block.

River KARANDIA flows from the river LUNA in its right side at Balipada of Kendrapara district and proceeds to Sathilo Basupur, Ayatpur and rejoins Luna at village Karandia, creating an Island known as 'Luna Karandia Island'.

The river GOVARI flows from Mahanadi-Paika Island at Bahadulpur in Cuttack district, traverses through Jajpur district at Panchu Pandav in north-west direction. The river forms almost a border line between the districts of Jajpur and Kendrapara. After entering into the district, it passes through Paripala (Derabish Block) Rajanga, Raghudeipur, Kurjanga, Kendrapara Municipality, Nagpura (Kendrapara Block), Endara, Madhukula, Bagachhelia, Chandipur (Mahakalapada Block) and finally merges with the Bay of Bengal at Batighara mouth near Jambu of Mahakalapada Block. The river traverses a total distance of 227.20 Kms out of which 149 Kms are in the district of Kendrapara.

River PAIKA flows from Mahanadi in Cuttack district, and enters in to Kendrapara district in the northwest at Benipur of Derabish block. Then it proceeds to Indupur (Kendrapara Block) and joins river Brahmani at Ghagara.

2. The Brahmani System :

The BRAMHANI originates as a combined stream of two small streams called Sankhua and Koel, originated from Chhotnagpur plateau, which meets at Vedavyas near Panposh in Sundergarh district. At-Jenapur, the river gets split into two major streams, the Brahmani and its tributary, the Kharasuan. Flowing a considerable distance through the delta, the river Kharasua falls into the mother stream and the enlarged river gets released into Bay of Bengal by two mouths, the Dhamara and Mianpora.

River KHARASROTA popularly known as Kharasuan enters in to the district of Kendrapara from Jajpur district at Boijarudiha in Aul Block in the northwest, flows through Balijori, Giribandha, Ranipokhari, Balakati, Jamudanda and joins the river Brahmani at Dakshina Bedha in Rajnagar block.

River KANI enters into Kendrapara district from Jajpur district. It is near Arlio, Kantipur in Aul Block that the river penetrates into the district, makes its passage through Natara, Thakurpatna, Manpur, Aul and finally joins the river Kharasrota at Baulajori in Aul Block.

River HANSUA, a tributary of Mainpura has originated at Patrapur of Rajnagar block where Brahmani is being split into Dhamara and Mainpura. After flowing parallel to the Bay of Bengal, it meets the sea at Praharajpur, 9 Kms. away from Batighara.

3. The Baitarani System:

The river BAITARANI originates in the up-lands of Keonjhar district located to the north- west of Kendrapara district. The southern branch of this river traverses through the district of flows as a Cuttack and touches the district of Kendrapara at Kanarpur in Rajkanika block. border line between the district of Bhadrak and Kendrapara. On its banks, it touches Manapur, Paniki, Langalabandha, Matia, Ostia, Gualigaon, Bangarakua, Baradia, Mantapara, Upulei, Endulapur, Bajarpur and meets the river Brahmani at Nalitapatia (Rajnagar block). Subsequently it bears the name Dhamra River and proceeds towards east to finally merge in the sea at Dhamara mouth.

The river flows nearly 35 Kms in the district of Kendrapara up to Nalitapatia and then along with the water of river Brahmani, it flows about 16 Kms up to Dhamara mouth. On her way, she throws various creeks in to the district of Kendrapara such as: Chadheikhia Nala, Bagi Nala, Gopalpur Nala, Taila Nala, Kalikapur Nala, Baradia Jora, Betanasi Jora, Anantapur Jora & Nuagaon Jora.

Other minor rivers of the district which are locally known as Nallas, Joras and Gullias are (1) Gahiramatha Nalla, (2) Baunsagada Nalla, (3) Chitrotpala Nalla, (4) Kharanasi Nalla, (5) Hanumanta Nalla, (6) Papuli Nalla, (7) Bhitarkanika Nalla, (8) Sukhuamuhan Nalla, (9) Budhia Nalla, (10) Kani Nalla, (11) Chhedakani Nalla, (12) Singha Nalla, (13) Kendrapatia Nalla, (14) Jagarjora, (15) Manda Jora, (16) Kutha Jora, (17) Batighar Gallia, (18) Ramchandi Gallia, (19) Babar Gallia etc. Most of these minor rivers of the district are charged with tidal ingression during monsoon season and give rise to floods.

An overall survey of the district reveals that there are 16574 number of TANKS & PONDS covering a total geographical area of 2981.59 hectors; out of which 1611 tanks and ponds covering an area of 707.08 hect. are owned by Gram Panchyats, 1128 covering an area of 452.53 hectors are owned by revenue department, 13835 number of tanks and ponds covering an area of 1622.08 hectors are privately owned.

1	2	3	4	5
Sl. No.	Name of the River or Stream	Total Length in the district (in Km.)	Place of Origin	Altitude at Origin
1	Mahanadi River	60	Sihawa hills of Chhattisgarh	442m
2	Brahmani River	88	the confluence of the Koel and Sankh rivers	600m
3	Baitarani River	25	It rises from the Gonasika in the Guptaganga hills of Keonjhar district.	900m

12.0 Availability of sand or gravel or aggregate resources

12.1 Mineral Potential

Mineral Potential				
Name of the River or Stream	Boulder (MT)	Bajri (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
Mahanadi River	Nil	Nil		
Brahmani River	Nil	Nil		
Baitarani River	Nil	Nil		

12.2 Annual Deposition

Annual Deposition				
Name of the River or Stream	Boulder (MT)	Bajri (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
Mahanadi River	Nil	Nil		
Brahmani River	Nil	Nil		
Baitarani River	Nil	Nil		

13.0 PROCESS OF DEPOSITION OF SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS:

Sl. No.	Name of the River	Financial Year	Process of Deposition of Sediments
1	Mahanadi	2020-21	moderate
		2021-22	---do---
		2022-23	---do---
2	Brahmani	2020-21	Slow
		2021-22	---do---
		2022-23	---do---
3	Baitarani	2020-21	Slow
		2021-22	---do---
		2022-23	---do---

CONCLUSION:

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

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

Details of existing sand sources present in Kendrapara District

Sl No	River Name	Quarry Name	Mouza	Tahasil	Khata No	Plot No	Kissa m	Area in Acre	Latitude	Longitude	Mineable Reserve in cum
1		Alapua sand Quarry	Alapua	Pattamundai	911(AAA)	3506	Nadi	12.00 ac	20° 36'37.96"N to 20°36'52.98"N	86° 26'03.78" E to 86° 26'17.48" E	8734
2	Brahmani	Penthapal Amrutamanohi Brahmani Nadi sand	Penthapal Amrutamanohi	Pattamundai	771(AAA)	65	Nadi	8.20 ac	20° 36'56.99"N to 20°37'01.90"N	86° 29'33.54" E to 86° 29'31.64" E	6815
3	Brahmani	Taradipal Brahmani Nadi sand	Taradipal	Pattamundai	1504(AAA)	5006	Nadi	12.00 ac	20° 36'12.54"N to 20°36'19.16"N	86° 26'40.00" E to 86° 27'03.97" E	6967
4	Brahmani	Amrutamanohi Brahmani Nadi sand	Amrutamanohi	Pattamundai	771(AAA)	385	Nadi	12.00 ac	20° 37'00.29"N to 20°37'08.07"N	86° 30'48.28" E to 86° 30'59.59" E	8271
5	karandia	Goudagaon(karandia River)	Goudagaon	Marshaghai	640	1302	Nadi	12.20 ac	20° 26'55.2"N to 20°27'00.0"N	86° 23'43.2" E to 86° 24'04.8" E	20902
6		Tulasipur sand Quarry	Tulasipur	Marshaghai	309	338	Nadi	12.32 ac	20° 24'29.12"N to 20°24'35.31"N	86° 29'10.12" E to 86° 29'21.32" E	46012
7		Akhuadakhini sand Quarry	Akhuadakhini	Marshaghai	239	1	Nadi	12.20 ac	20° 23'35.9"N to 20°23'55.0"N	86° 24'14.6" E to 86° 24'30.0" E	28365
8	Luna	Artamul Luna River sand quarry	Artamul	Derabish	582	646	Nadi	12.108 ac	20° 28'08.88"N to 20°28'14.67"N	86° 16'59.94" E to 86° 17'07.11" E	65896.2
9	Luna	Baspur Luna River sand quarry	Baspur	Derabish	439	1099	Nadi	12.231 ac	20° 27'45.8"N to 20°27'52.08"N	86° 21'10.03" E to 86° 21'21.3" E	57033
10	Luna	Bhagabatpur Luna River sand quarry	Bhagabatpur & Sunalo	Derabish	321 & 221	600 & 359	Nadi	12.231 ac	20° 28'06.107"N to to 20°28'12.304"N	86° 18'13.039" E to 86° 18'33.882" E	59079.6
11	Birupa	Mangalpur Birupa River sand quarry	Mangalpur	Derabish	814	1961 & 1977	Nadi	12.15 ac	20° 36'15.55"N to 20°36'29.51"N	86° 21'13.67" E to 86° 21'29.98" E	22860
12		Naladia Sand Quarry	Naladia	Mahakalapa	3	9	Nadi	11.40ac	20° 19'36.34"N to 20°19'50.87"N	86° 33'26.99" E to 86° 33'48.66" E	8400
13	Kharasrota	Kharasrota river sand Aragal	Aragal	Aul	1131	1(P)	Nadi	11.50ac	20° 42'57.64"N to 20°42'07.52"N	86° 33'17.35" E to 86° 33'34.97" E	4449
14	Kharasrota	Kharasrota Nadi sand Gobindpur to juania	Juania	Aul	963	1587 & 1541	Nadi	11.48ac	20° 41'11.83"N to 20°41'22.85"N	86° 30'38.99" E to 86° 30'48.38" E	3627
15	Brahmani	Brahmani Nadi sand Nuapada	Nuapada	Aul	712	2990(P)	Nadi	12.00 ac	20° 37'02.17"N to 20°37'13.09"N	86° 32'37.96" E to 86° 33'48.60" E	7104
16	Kharasrota	Kharasrota Nadi sand Panapentha to Desahi	Desahi	Aul	557	1(P)	Nadi	12.00 ac	20° 41'16.64"N to 20°41'26.57"N	86° 27'57.27" E to 86° 28'10.57" E	8627
17	Brahmani	Brahmani Nadi sand Gangadharpur	Gangadharpur	Aul	240	342(P)	Nadi	11.50 ac	20° 37'25.35"N to 20°37'30.46"N	86° 33'17.97" E to 86° 33'39.55" E	4863

18	Baitarani	Baitarani River sand sairat, Kanapur	Kanapur	Kanika	187(AAA)	739 & 826	Nadi	11.25 ac	20° 47' 19.44" N to 20° 47' 37.88" N	86° 38' 37.16" E to 86° 38' 43.91" E	8472
19	Kharasrota	Kharasrota River sand sairat, charapada	charapada	Kanika	1417(P)	1191	Nadi	12.00 ac	20° 43' 00.36" N to 20° 43' 12.61" N	86° 33' 19.63" E to 86° 33' 36.65" E	7218
20	Paika	Paika River sand sairat, Pundilo (op)	Pundilo	Garadpur	474	1602	Nadi	11.64 ac	20° 21' 27.08" N to 20° 21' 39.60" N	86° 19' 11.32" E to 86° 19' 26.44" E	51352
21	Luna	Ramachandrapur Sand Quarry(Luna river)	Ramachandrapur	Garadpur	195	526	Nadi	12.50 ac	20° 24' 25.24" N to 20° 24' 31.46" N	86° 23' 19.06" E to 86° 23' 54.99" E	36059
22	Chitrotpala	Haridaspur Sand Quarry(Chitrotpala river)	Haridaspur	Garadpur	458	1/1888 & 1/1887	Nadi	12.50 ac	20° 23' 29.38" N to 20° 23' 43.84" N	86° 25' 53.30" E to 86° 26' 10.04" E	40390
23		Arakhakud Sand Quarry	Arakhakud	Garadpur	343	1308	Nadi	12.50 ac	20° 23' 00" N to 20° 25' 00" N	86° 16' 30" E to 86° 19' 30" E	41820
24	Chitrotpala	Talakusuma Sand Quarry(Chitrotpala river)	Talakusuma	Garadpur	910	252	Nadi	12.50 ac	20° 23' 25.57" N to 20° 23' 34.82" N	86° 19' 15.19" E to 86° 19' 29.80" E	19061
25	Chitrotpala	Chitrotpala river sand sairat source, Panadia	Panadia	Garadpur	376	1208 & 646	Nadi	9.20 ac	20° 23' 43.95" N to 20° 23' 59.87" N	86° 22' 18.98" E to 86° 22' 32.07" E	28802
26	Chitrotpala	Chitrotpala river sand sairat source, Korua	Korua	Garadpur	885	3128	Nadi	11.70 ac	20° 23' 56.20" N to 20° 24' 05.80" N	86° 20' 23.66" E to 86° 20' 38.09" E	79296
27	Luna	Luna river sand sairat source, Sathilo	Sathilo	Garadpur	241	50,568 & 8	Nadi	11.60 ac	20° 28' 08.55" N to 20° 28' 12.69" N	86° 18' 32.93" E to 86° 18' 53.60" E	34461
28	Luna	PAKSHYOT SAND, (LUNA RIVER)	PAKHATA	MARSHAGH AI	431	429	Nadi	12.20 ac	20° 28' 10.20" N to 20° 28' 10.20" N	86° 19' 52.29" E to 86° 20' 12.87" E	
29	Kharasrota	KHARASROTA NADI SAND, DAITARIPUR	PADANIPAL	AUL	688	970(P)	Nadi	8	20° 42' 18.66" to 20° 42' 30.14"	86° 34' 47.99" to 86° 34' 54.51"	

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Newly identified potential sand sources

SL NO.	Tahasil	Quarry Name	Village	Khata No.	Plot No.	Area in Acre	River	Kissam
1	Marshaghai	Karilopatna Sand Quarry	Karilopatana	1109	1	12.20Acre	Karandia	Nadi
2	Garadpur	Misar Narasinghapur Sand Quarry	Misar	380	2, 3	10.00 Acre	Chiotropala	Nadi
3	Garadpur	Samsara Sand Quarry	Samsara	393	1	12.00 Acre	Chiotropala	Nadi
4	Garadpur	Narada Sand Quarry	Narada	394	1550	10.00 Acre	Paika	Nadi
5	Garadpur	Palasudha Sand Quarry	Palasudha	550	1756	12.00Acre	Paika	Nadi
6	Garadpur	Mahanga Sand Quarry	Mahanga	157	30	8.00 Acre	Chiotropala	Nadi

Prabhu
27.09.24
 Mining Officer, Kendrapara



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DISTRICT SURVEY REPORT (DSR)
OF
KENDRAPARA DISTRICT, ODISHA.
FOR
BRICK EARTH/ORDINARY SOIL
(FOR PLANNING & EXPLOITATION OF MINOR MINERAL RESOURCES)



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

COLLECTORATE KENDRAPARA.

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PREFACE

Odisha is one of the Major Mineral rich State in India. Kendrapara is a unique District in Odisha lies on the North-East part of the State with rich and varied mineral resource. It is a paradise for Geoscientists of India and abroad. It has preserved many important rock groups from the earliest of crust formation to the geologically recent times. The landmass constituting the KENDRAPARA District, explorers to many Entrepreneurs on account of its diverse geological setting and rich and varied mineral resources.

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

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

MoEF & CC in consultation with State Government has prepared Guidelines on Sustainable

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

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

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

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

In lieu of above guideline and orders of Hon'ble Supreme Court and in compliance to the orders of Hon'ble NGT, EZ, Kolkata, in connection with O.A No. 63/2020, the Member

Secretary, SEIAA, Bhubaneswar issued a Letter on 27th December, 2022 to Collector & District Magistrate, Rayagada with a direction " the DSR is to be signed afresh by the Collector and District Magistrate, along with members of the designated sub-committee consisting of Sub-Divisional Magistrate, and District Level Officers from Irrigation Department, State Pollution Control Board, Forest Department, Geology and /or Mining Department. Keeping in view of the orders of Hon'ble Supreme Court, Hon'ble NGT and directions of SEIAA, Bhubaneswar a fresh DSR has been prepared observing all formalities in the year,2024.

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

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

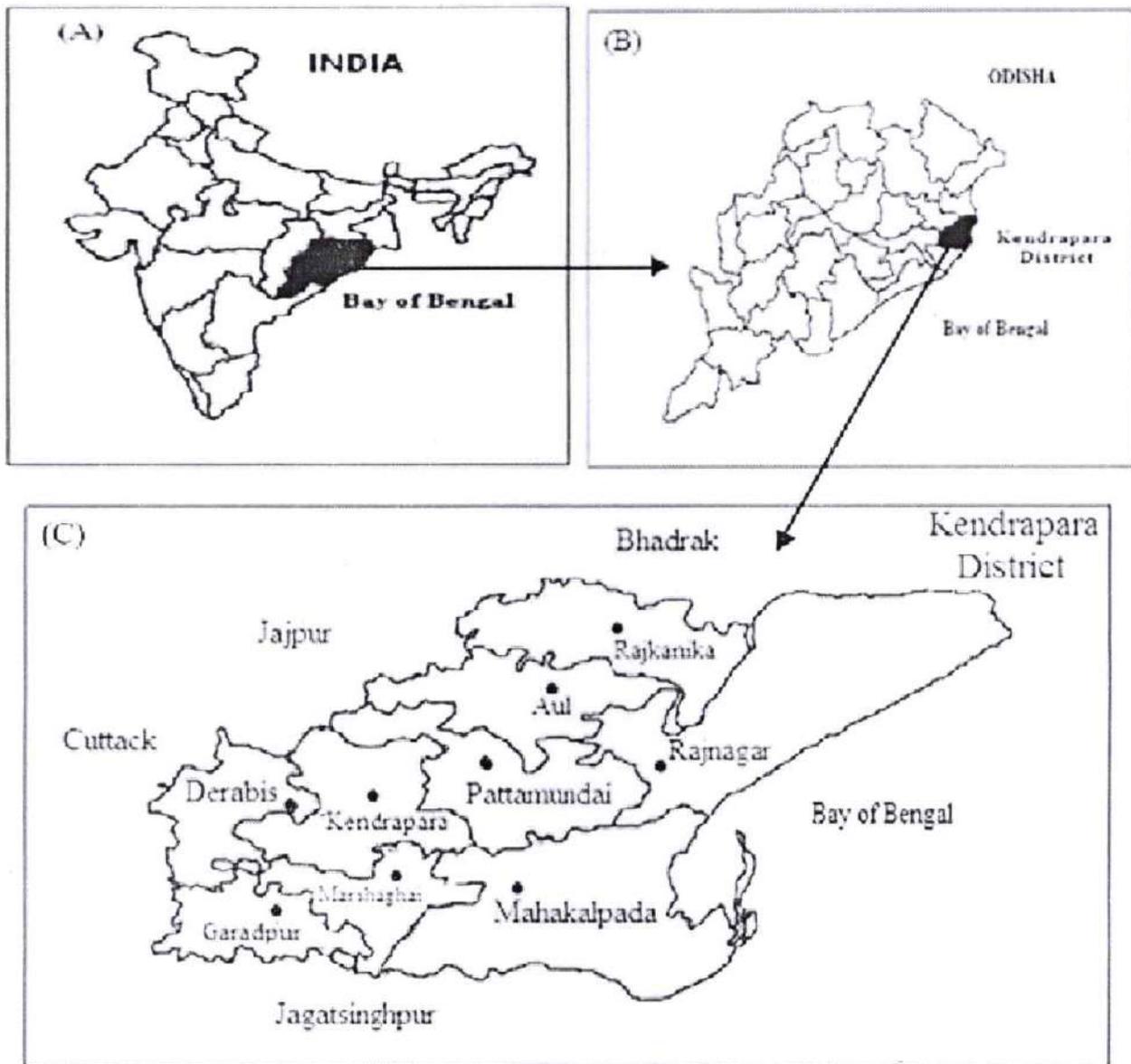

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1. **INTRODUCTION**

1.1 **Location and Geographical Area:**

Kendrapara is one of the coastal Districts of Odisha. Kendrapara is the District Head Quarter, spreading over an area of 2644 sq.km lies between 20° 20' North and 20° 48' North latitudes and 86°15' and 87°05' East longitudes. The District is surrounded by Bhadrak District on its Northern side, Bay of Bengal on its East, Jagatsinghpur District on its South and Jajpur & Cuttack Districts lies on its Western side. It is best known for Bhitara Kanika National Park. This District consists of one Sub- Divisions namely Kendrapara. There are 9 Tahasils for 9 Blocks of this District. Kendrapara is the main town as well as the Centre of Economic Growth in the district.

The primary occupation of people in the District is cultivation. This District is mainly known for cultivation of paddy. Industries, Agriculture, Fishing and Tourism are the four major Revenue sources of Kendrapara District. Automobile Garage, Electrical appliances repairing, Rice mill, Package drinking, general fabrication & Flyash brick are some of the Large-Scale Industries functioning in this District. Kendrapara occupies a unique position being endowed with lush green vegetation, different fauna & flora and rich Cultural Heritage. The district has a rich mineral base of river sand, which are mainly used in construction purpose in the district. Except these, no major mineral in large quantity which can be explored for commercial purpose found in the District. The location of the District has been presented in a map below.

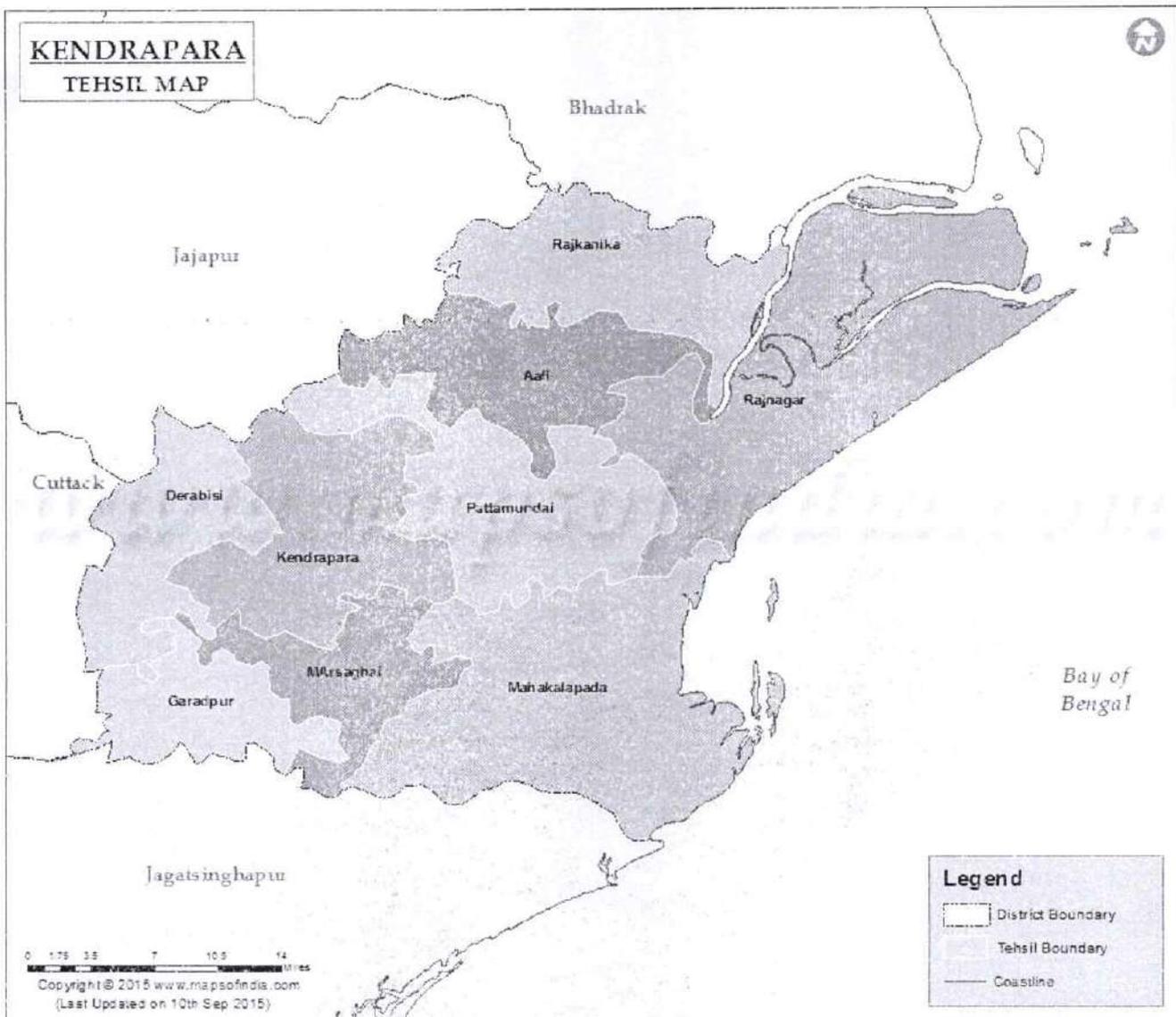


1.2 Administrative Units:-

Kendrapara Town is the Administrative Headquarter of Kendrapara District. It is located at a distance of 85 km from Bhubaneswar, the State capital of Odisha. It is the 4th largest district in area among the costal districts of Odisha. Villages covering 9 Blocks, 9 Tahasils. namely i) Aul N ii) Kanika iii) Kendrapara iv) Marshaghai v) Pattamundai vi) Rajnagar vii) Mahakalapada viii) Derabish ix) Garadpur.

The population of the District is 14,40,361 according to the 2011 Census. The District accounts for 1.70% of the State's territory and about 3.08% of State's population. The density of population of the District is 545 per square km as against 610 per square km of the State. As per 2011 Census, the population of Scheduled Caste is 309780 (21.50%), and Scheduled Tribe is 9484 (0.65%). The literacy percentage of the District covers 85.98 against 84.67 of the State.


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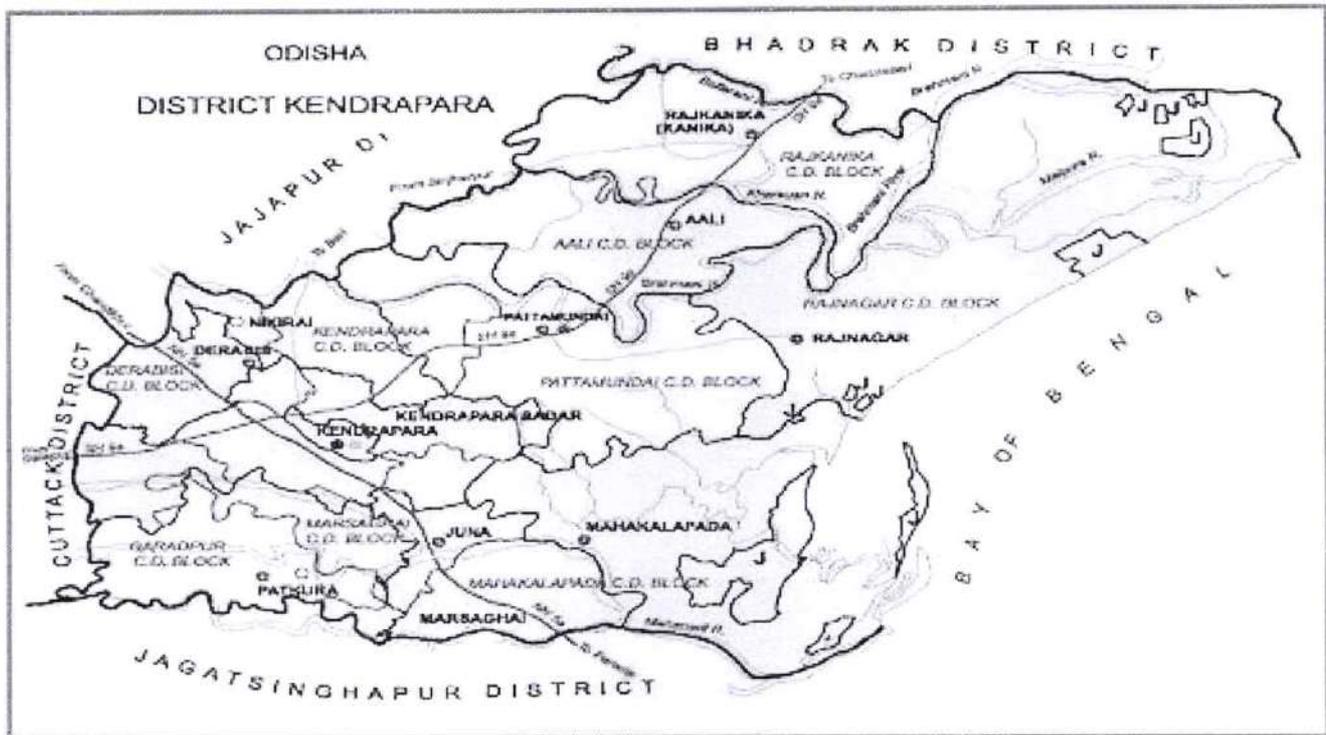


1.3 Connectivity facilities:-

Road Network

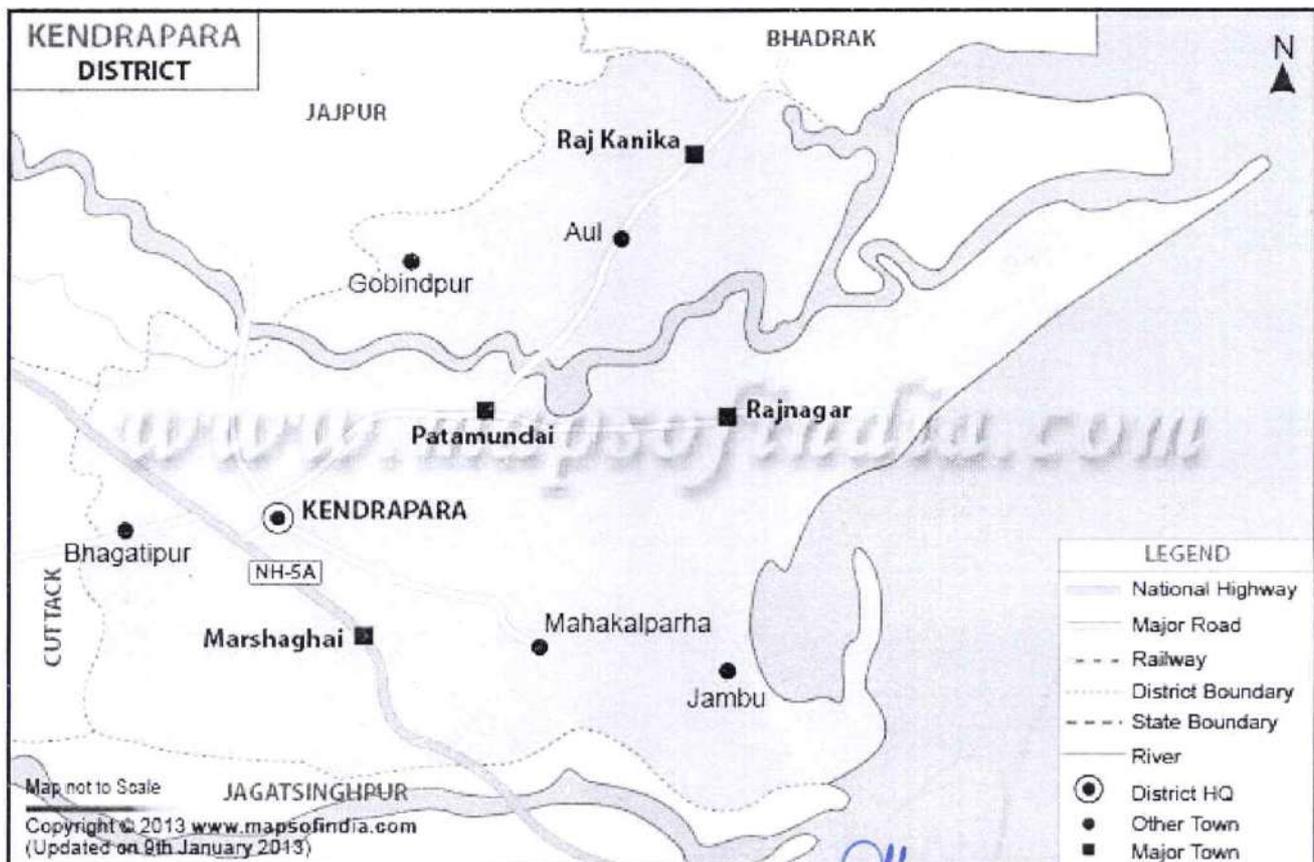
The District is well served by a network of good roads and has been called the motorists paradise. The chief roads NH-316A pass through the District. Kendrapara Town is about 44 Kms from Chandikhol, 60 Kms from Cuttack, 37 Kms from Paradeep, 85 Kms from Bhubaneswar and 139 Kms from Puri. It is also connected with other cities such as Sambalpur, Puri, Bolangir, Bhadrak, Jhargram, Angul, Ranchi and Kolkata via road.


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Rail Network

Kendrapara District is well connected by Rail link to different places. Kendrapara Railway Station is the only railway station in Kendrapara district which connected to Paradeep Port. The distance to Bhubaneswar is about 80 km.



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2. OVERVIEW OF MINING ACTIVITIES IN THE DISTRICT.

Kendrapara District has transitional landform features between coastal plain region. Most of the mineralized area coming under Eco-Sensitive Zone (Bhitarkanika Wildlife Sanctuary). Thus mining activities are confined only to the areas outside of Eco-Sensitive Zone. The mining activity in the District is restricted only to Minor Mineral i.e. of sand and brick earth clay. These are being given to various user agencies as lease agreement governed and regulated by Revenue Department under the legal provision stated under Odisha Minor Mineral Concession Rules, 2016. There is no lease of Major Mineral in the District. These sources have been providing tremendous scope for development of few more Industries based on these Resources.

3. GENERAL PROFILE

a. Demography:

Census - 2011	
Geographical Area	2466 Sq. Km.
Total population	1,440,361
Male Population	717,814
Female Population	722,547
Male Literacy	579,970
Female Literacy	509,295
SC Male	155,531
SC Female	154,249
ST Male	4,748
ST Female	4,736
OBC	NA
Illiterate Male	137,844
Illiterate Female	213,252

4. GEOLOGY OF THE DISTRICT:

Kendrapara District in Odisha is situated in the deltaic and coastal plains of the Mahanadi River, characterized by extensive Quaternary alluvial deposits of sand, silt, clay, and gravel. The region features a gently sloping coastal plain influenced by tidal action and river systems, providing fertile soil ideal for agriculture. Hydro-geologically, it benefits from substantial groundwater resources recharged by precipitation and rivers. However, the district faces challenges such as flooding, erosion, and the impacts of human activities on its environment. Overall, its geology supports productive agriculture but requires careful management to address environmental concerns.


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4.1 Physiography & Geomorphology:

Physiography:

The District of Kendrapara is having a unique physiographic set up. It is bounded by the Bay of Bengal in East and on the North Western side it is marked by surrounding districts. The land elevation varies from as low as near mean sea level in the southern part to as high as about 15 m above mean sea level in the North Western part. In between a major part covering more than 75% of the geographical area is having elevation within the range of 2 – 10 meters above mean sea level. In the extreme eastern part of the District, within the alluvial tracts of the River Mahanadi. The average elevation is within 2 – 3 meters above mean sea level.

Geomorphology:

Hydro geomorphological features of Kendrapara District are mainly attributed to fluvio-marine, erosional, denotational and depositional processes. The coastal plain has been developed due to fluvio-marine processes. The alluvial plains owe their origin due to various fluvial actions of major rivers. The details of the geomorphic unit as identified are as below:

1. Geological Setting:

Sedimentary Basin: Kendrapara is primarily part of the deltaic plains of the Mahanadi River system, featuring sedimentary deposits.

Alluvial Soil: The region has extensive alluvial plains formed by the deposition of sediments brought by river systems.

2. Landforms:

Deltaic Features: The district exhibits a deltaic morphology due to the proximity to the Bay of Bengal, with numerous channels, islands, and estuaries.

Floodplains: The fertile floodplains are created by seasonal flooding, supporting agriculture.

Coastal Landforms: The coastline includes sandy beaches, mudflats, and mangroves, especially around the Bhitarkanika National Park area.

3. Landforms

Mahanadi River: The main river, along with its tributaries, plays a crucial role in shaping the landscape through erosion and sediment deposition.

Estuarine Dynamics: The confluence of rivers with the sea leads to complex estuarine environments, which are rich in biodiversity.



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4.2 Stratigraphy:

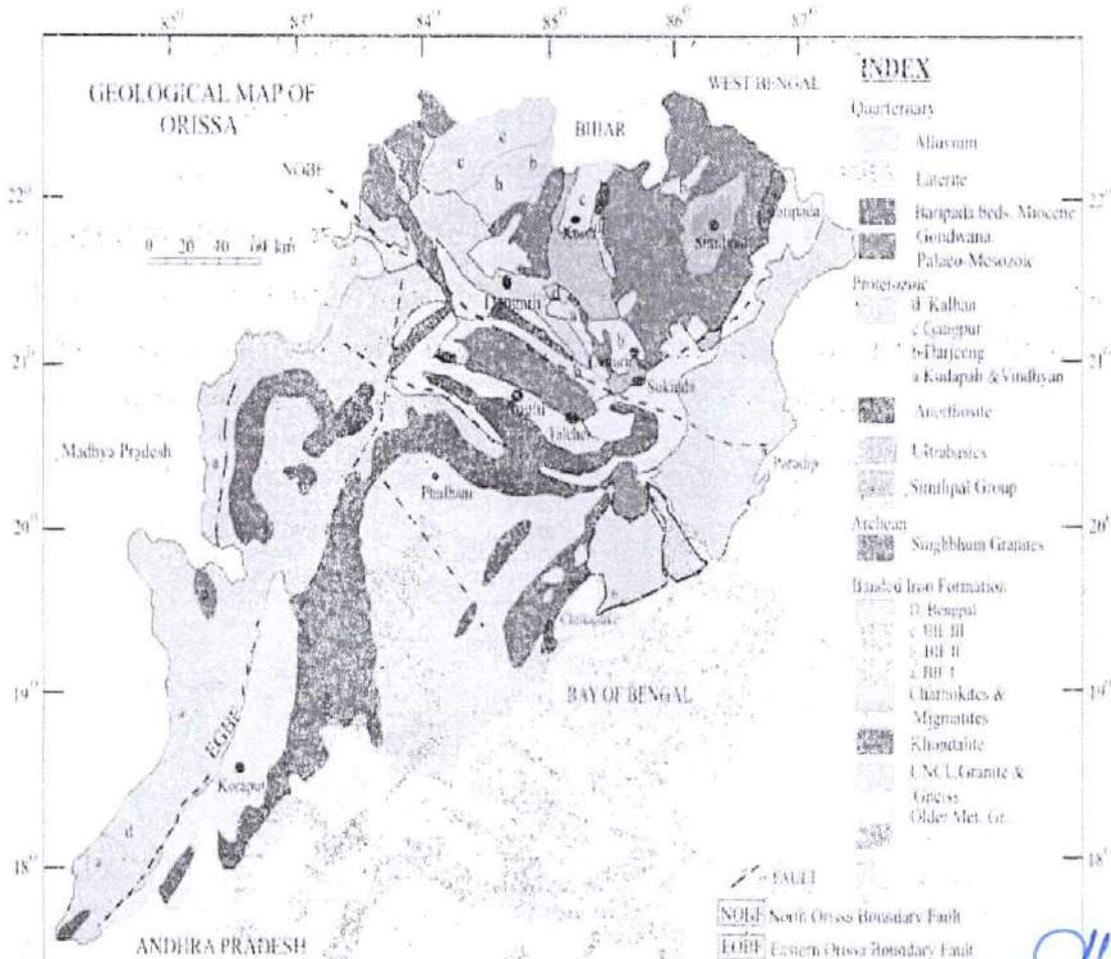
The study area comprises the following distinct geomorphic units:

- i) Younger alluvial plain
- ii) Older alluvial plain
- iii) Lateritic upland

<u>Geological Age</u>	<u>Geological Formation / Group</u>
Quaternary Gravel	: Recent Alluvium, Clays, silt, Sand,
Tertiary	: Older Alluvium, Laterite, Easternghat Beds.
Mesozoic/ Palaeozoic	: Volcanics / Epidiorite
Precambrian	: Slate/ Phyllite / Schist / Gneiss
Archean	: Granite/ Granite Gneiss

4.3 Mineral Resources:

Minerals like soft stones, limestone, stone chips are available in the District, which are mainly used in industrial units in the District. Except these, no minerals in large quantity which can be explored for commercial purpose found in the District.



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5. DRAINAGE OF IRRIGATION PATTERN

Kendrapara District's irrigation relies heavily on its intricate river network, primarily the Mahanadi River and its tributaries, which provide surface water for agricultural fields through an extensive system of canals and irrigation channels. The district's drainage features include estuarine and deltaic elements influenced by tidal actions, and while irrigation is supported by seasonal rains, challenges such as flooding, salinity intrusion, and effective water management are crucial for maintaining agricultural productivity and ensuring stable water supply.

5.1 River System

There are three major river systems in the Kendrapara District. They are

1. The Mahanadi System
2. The Brahmani System
3. The Baitarani System

Cultivable alluvial plains area formed from the deposits of the above river systems and contribute to agricultural prosperity of the district. The district is bisected by rivers like the Mahanadi, the Brahmani, the Baitarani & many other streams and their tributaries like Luna, Chitrotpala, Karandia, Govari, Kharashuan, Dhamara, Meinpura, Kani and Birupa.

1. The Mahanadi System:

The MAHANADI originates from Maikal range in Chhatisgarh popularly known as the Amar Katak Plateau and enters into Odisha through Sambalpur and flows through Dhenkanal, Cuttack and Jagatsinghpur and enters Kendrapara district in south at Raipur of Mahakalpada Block. Then it passes through Khursia, Kulla and embraces the river Luna at Chaumuhani. Then makes its passage to Bahukud, Hetamundia and finally meets the Bay of Bengal near the False Point at 20° 18' N. and 86°, 43' E. longitude.

The CHITROTPALA flows from Mahanadi at Bisharpur in Cuttack district and makes its passage to this district at Matanga (Talakusuma) in Garadpur block. The Mahanadi after crossing Cuttack town moves eastward and splits into Chitrotpala, Paika and Mahanadi. Chitrotpala after flowing some distance parallel to Luna joins the Mahanadi at Badapada of Cuttack district. After flowing through Garadpur and Patkura touches the river Luna at Kuanarpala in Marsaghai Block.

The river LUNA flows from the river Chitroptala at Sunaria in Cuttack district and enters into Kendrapara district at Girigola of Derabish block. Then it traverses through Danpur (Derabsih Block) Baspur, Kalapada (Marsaghai Block) and joins Chitropala at Kunarapala. Afterwards, it



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proceeds in the east direction towards Balikuda in Mahakalapada block. At this point, the river again gets bifurcated and passes through both sides of Dasmouji Gheri to rejoin at Teragan Samantasingharpur in Mahakalpada Block. After that, it proceeds towards Gojabandha, Gokhakhati and joins Mahanadi at Choumuhani in Mahakalpada Block.

River KARANDIA flows from the river LUNA in its right side at Balipada of Kendrapara district and proceeds to Sathilo Basupur, Ayatpur and rejoins Luna at village Karandia, creating an Island known as 'Luna Karandia Island'.

The river GOVARI flows from Mahanadi-Paika Island at Bahadulpur in Cuttack district, traverses through Jajpur district at Panchu Pandav in north-west direction. The river forms almost a border line between the districts of Jajpur and Kendrapara. After entering into the district, it passes through Paripala (Derabish Block) Rajanga, Raghudeipur, Kurjanga, Kendrapara Municipality, Nagpura (Kendrapara Block), Endara, Madhukula, Bagachhelia, Chandipur (Mahakalapada Block) and finally merges with the Bay of Bengal at Batighara mouth near Jambu of Mahakalapada Block. The river traverses a total distance of 227.20 Kms out of which 149 Kms are in the district of Kendrapara.

River PAIKA flows from Mahanadi in Cuttack district, and enters in to Kendrapara district in the northwest at Benipur of Derabish block. Then it proceeds to Indupur (Kendrapara Block) and joins river Brahmani at Ghagara.

2. The Brahmani System:

The BRAMHANI originates as a combined stream of two small streams called Sankhua and Koel, originated from Chhotnagpur plateau, which meets at Vedavyas near Panposh in Sundergarh district. At-Jenapur, the river gets split into two major streams, the Brahmani and its distributary, the Kharasuan. Flowing a considerable distance through the delta, the river Kharasua falls into the mother stream and the enlarged river gets released into Bay of Bengal by two mouths, the Dhamara and Mianpora.

River KHARASROTA popularly known as Kharasuan enters in to the district of Kendrapara from Jajpur district at Boijarudiha in Aul Block in the northwest, flows through Balijori, Giribandha, Ranipokhari, Balakati, Jamudanda and joins the river Brahmani at Dakshina Bedha in Rajnagar block.

River KANI enters into Kendrapara district from Jajpur district. It is near Arlio, Kantipur in Aul Block that the river penetrates into the district, makes its passage through Natara, Thakurpatna, Manpur, Aul and finally joins the river Kharasrota at Baulajori in Aul Block.



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River HANSUA, a tributary of Mainpura has originated at Patrapur of Rajnagar block where Brahmani is being split into Dhamara and Mainpura. After flowing parallel to the Bay of Bengal, it meets the sea at Praharajpur, 9 Kms. away from Batighara.

3. The Baitarani System:

The river BAITARANI originates in the up-lands of Keonjhar district located to the north-west of Kendrapara district. The southern branch of this river traverses through the district of flows as a Cuttack and touches the district of Kendrapara at Kanarpur in Rajkanika block. border line between the district of Bhadrak and Kendrapara. On its banks, it touches Manapur, Paniki, Langalabandha, Matia, Ostia, Gualigaon, Bangarakua, Baradia, Mantapara, Upulei, Endulapur, Bajarpur and meets the river Brahmani at Nalitapatia (Rajnagar block). Subsequently it bears the name Dhamra River and proceeds towards east to finally merge in the sea at Dhamara mouth.

The river flows nearly 35 Kms in the district of Kendrapara up to Nalitapatia and then along with the water of river Brahmani, it flows about 16 Kms up to Dhamara mouth. On her way, she throws various creeks in to the district of Kendrapara such as: Chadheikhia Nala, Bagi Nala, Gopalpur Nala, Taila Nala, Kalikapur Nala, Baradia Jora, Betanasi Jora, Anantapur Jora & Nuagaon Jora.

6.0 LAND UTILIZATION PATTERN IN THE DISTRICT

The forest of Kendrapara District is full of variety of medicinal plants, Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals. The District has one Wildlife Sanctuaries known as the Bhitarakaniaka Wildlife Sanctuary, which hosts even Crocodiles. He Park is home to the saltwater crocodile, Indian python, black ibis, wild boar, rhesus monkey, chital, darter, cobra, monitor lizard. The area of the sanctuary is 145 sq km. In the Sanctuary, the principal animals that are found are Elephant, Bear, Nilgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.

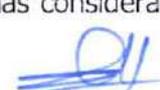

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District-wise Forest Cover Area in Odisha (Area in Km2)

2017 Assessment								
District	Geographical Area Km ²	Very Dense Forest	Moderate. Dense Forest	Open Forest	Total	Percent of GA	Change	Scrub
Angul	6375	371	1380	1004	2755	43.22	43	84
Bolangir	6575	70	224	837	1131	17.2	151	142
Baleswar	3806	23	127	234	380	9.98	30	48
Bargarh	5837	176	371	484	1031	17.66	88	47
Bouda	3098	263	546	480	1289	41.61	27	57
Bhadrak	2505	0	9	66	75	2.99	2	0
Cuttack	3932	53	226	517	796	20.24	11	68
Deogarh	2940	191	667	614	1472	50.07	-3	14
Dhenkanal	4452	174	418	825	1417	31.83	9	82
Gajapati	4325	84	1490	946	2520	58.27	12	262
Ganjam	8206	164	1075	864	2103	25.63	15	655
Jagatsinghpur	1668	0	5	131	136	8.15	6	0
Jajpur	2899	6	72	225	303	10.45	3	50
Jharsugada	2114	3	140	179	322	15.23	9	36
Kalahandi	7920	362	729	1327	2418	30.53	36	362
Kandhamal	8021	661	2588	2143	5392	67.22	16	380
Kendrapada	2644	84	88	133	305	11.54	14	2
Keonjhar	8303	289	1404	1519	3212	38.68	4	55
Khorda	2813	21	186	250	457	16.25	0	92
Koraput	8807	94	740	1255	2089	23.72	120	944
Malkangiri	5791	158	709	1475	2342	40.44	20	45
Mayurbhanj	10418	1335	1718	1027	4080	39.16	42	34
Nabarangpur	5291	168	428	507	1103	20.85	8	47
Nayagarh	3890	189	965	556	1710	43.96	28	173
Nuapada	3852	86	482	705	1273	33.05	33	109
Puri	3479	0	54	160	214	6.15	8	11
Rayagada	7073	422	853	1851	3126	44.2	7	349
Sambalpur	6624	499	1675	1106	3280	49.52	13	40
Subarnapur	2337	2	187	161	350	14.98	26	29
Sundargarh	9712	1019	1814	1431	4264	43.9	107	89
Grand Total	155707	6967	21730	23008	51345	32.98	885	4306

(Source: India state of forest report 2017-Odisha)

The major portion of the District is covered by forest (39.75 % of TGA) and has scattered settlement pattern. The forest is full of variety of medicinal plants, Kendu leaves, Bamboo, Sal, Teak and other timber species. The District has considerable flat land, which provides


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suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major crops grown in the District are rice and pulses. Only 12.50 percent area of agricultural use are net irrigated and major source of irrigations are well and tube wells.

6.1 Agriculture Land:

The primary objective of Agriculture Department is to increase the production as well as productivity of major crops like Paddy, Cereals, Pulses, Oilseeds, vegetables, Fibres, Spices, Sugarcane & Fodder which is widely cultivated in this District in both Kharif & Rabi season. Another key objective is to bring all round development among farming community of the District. The Chief District Agriculture officer is the head of office so far as agriculture is concerned. As it has already been pointed out that agriculture is the main livelihood of the people in Kendrapara District, it is therefore designated as the food bowl of Odisha. Rice is the principal crop grown in this District, followed by other cereals, pulses, oilseeds, vegetables, spices and sugarcane. The agricultural statistics for the District is shown in tables below:

Table – 3.6a: Crop Coverage Area of Kendrapara District, Odisha

Crop	Khariff		Rabi		Annual	TOTAL	
	Area (ha)	(% of Cropped Area)	Area (ha)	% of Cropped Area	Area (ha)	Gross Cropped Area (ha)	% of Gross Cropped Area
Paddy	126000	83.21	1746	1.34	-	127746	45.29
Cereals	138	0.09	203	0.16	-	341	0.12
Pulses	1006	0.66	99635	76.28	-	100641	35.68
Oilseeds	0	0.00	5483	4.20	-	5483	1.94
Vegetables	20459	13.51	19168	14.68	-	39627	14.05
Fibres	740	0.49	-	-	-	740	0.26
Spices	3040	2.01	3922	3.00	-	6962	2.47
Sugarcane	-	-	453	0.35	-	453	0.16
Fodder	45	0.03	-	-	-	45	0.02
TOTAL	151428	100	130610	100	-	282038	100

6.2 Horticulture Land:

The primary objective of Horticulture Department is increase of production as well as productivity of major fruits like Mango, Guava, Citrus etc., which is widely covered in this District. Another key objective is the all-round development of the farming community of the District. The Deputy Director of Horticulture is the head of office. The horticulture statistics for the District is shown in subsequent tables below:


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Information on Horticulture Plantations for Kendrapara District												
Horticultural Crops												
Sl No.	Year	Fruit Plants							Perenial Crop cultivation		Vegetables	Flowers
		Mango	Guava	Coconut	Pineapple	K.Lime	Cashew	Appleber	Papaya	T.C Banana	Hybrid Vegetable	Marigold
1	2021-22	110.10	7.00	145.52		53.05	10.72		8.24		290	30
2	2022-23	85.9		130.36	12.6	2.3	6	1	16.125		300	30
3	2023-24	59.2	5	149.4		9.3			9.3	2	530	30
Total Area		255.20	12.00	425.28	12.6	64.65	16.72	1	33.665	2	1120	90

7.0 SURFACE WATER AND GROUND WATER SCENARIO OF THE DISTRICT

7.1 Aquifer System:

The aquifer system in the district may be broadly divided into (i) Shallow aquifer and (ii) Deeper aquifers.

(i) Shallow Aquifers:

The thickness of shallow aquifers varies widely due to salinity problem in the district barring a narrow tract occurring along the extreme western part of the district where there is no salinity problem. In the saline hazard areas the thickness of the shallow fresh water bearing zones varies from negligible to a maximum of 95 m. The occurrence of clay horizon at the top surface (from ground level) reduces the thickness of fresh water bearing zones to almost zero level. Normally the thickness of fresh shallow aquifers varies from 15 to 20m or more within the saline hazard tract lying west of Indipur-Kendrapara-Karliopatana section and east of this section the thickness of shallow aquifers generally attains almost negligible thickness except in isolated pockets (in abandoned river/stream channels and sand dunes) where shallow/top fresh water bearing zones extend down to a maximum depth of 10 to 15m with the average thickness of 5 to 6m. The top fresh water bearing zones extends down to 90 or 95m depth in the south-western part of the district Semi-consolidated formations:- Porous laterites occurring as discontinuous capping over older formations. These possess both primary and secondary porosities.

(iii) Deeper Aquifers:

The occurrence of fresh water bearing deeper aquifers is identified from available borehole data down to a maximum depth of 612m. In the major part of the district the depth of the boreholes are restricted to 300m. Only for a small part in the southwest the information are available down to 600m depth (Barsalar-Garjanga area). The available information indicates

that in general the deeper fresh water bearing zones are sandwiched between saline water bearing zones. The fresh water bearing zones are composed of sand, silt, clay, gravel and among these materials sand and gravel horizon and mixture of sand and gravel zones prolific fresh water bearing aquifers. The sand grains vary in size from fine to very coarse while gravels are normally fine to medium in size. The distribution of fresh water bearing zones have been divided into different sectors as follows:

Sector-1: Indipur-Chatra-Barimul-Jajang-Patamundai-Namtara-Pegapara:

This sector occupies the north western and also major area of northern part of the district and fresh water bearing zones occurs from 106m (Chatra) to 136m (Patamundai, eastern part) depth with the average depth around 120m below ground level and extends down to 300m depth, except at Indipur (265m). In the extreme western part of this sector (west of Chatra) ground water is fresh all through.

Sector-2:

This sector occupies the north eastern part of the district and the fresh water bearing zones occurs on an average below 190 m depth and extends down to 300m depth or more.

Sector-3: Patamundai-Gopalpur (Rajnagar) –Basantapur:

This sector occupies the middle portion of the eastern and east central part of the district and fresh water bearing zones occurs below 90 to 100m depth except at Basantapur near coast where fresh zone occurs below 114m depth and fresh zone on an average extends beyond 300m depth. The occurrence of prominent aquifer zones in the eastern part (Gopalpur) extends down to 280m depth while in the west (Patamundai) it is restricted to 230m depth.

Sector-4: Kendrapara-Karliopatana-Marshaghai-Silipur:

This sector occupies the central portion of the western part of the district and the fresh water bearing zones occur below 155m (Kendrapara) to 205m (Silipur) depth and on an average it occurs beyond 180m below ground level and extends down to a maximum depth of 360m (Kendrapara) with the average depth around 300m below ground level. Normally the occurrence of prominent zones is restricted within 250m depth.

Sector-5: Ramachandrapur-Garjanga-Adampur:

This sector occupies the west central portion of the southern part of the district and the fresh water bearing zones occur below 60m depth at Ramachandrapur in the south and below 80m depth at Adampur in north and in between at Garjanga fresh zones occurs below 66m depth.

Sector-6: Masakani-Dodhipur-Dasorajpur:

This sector occupies the part of east central and eastern portion of the district and it is

reported that in this sector saline water bearing zones extends down to 300m depth.

Sector-7: Bijayanagar-Rajghar-Gobndpur-Patia-Babur:

This sector occupies the northern portion of the southeastern part of the district. Scanty data of PHED tube wells indicate that fresh water bearing zones with chloride concentration less than 1000mg/l occurs in between 200m depth and 250m depth range.

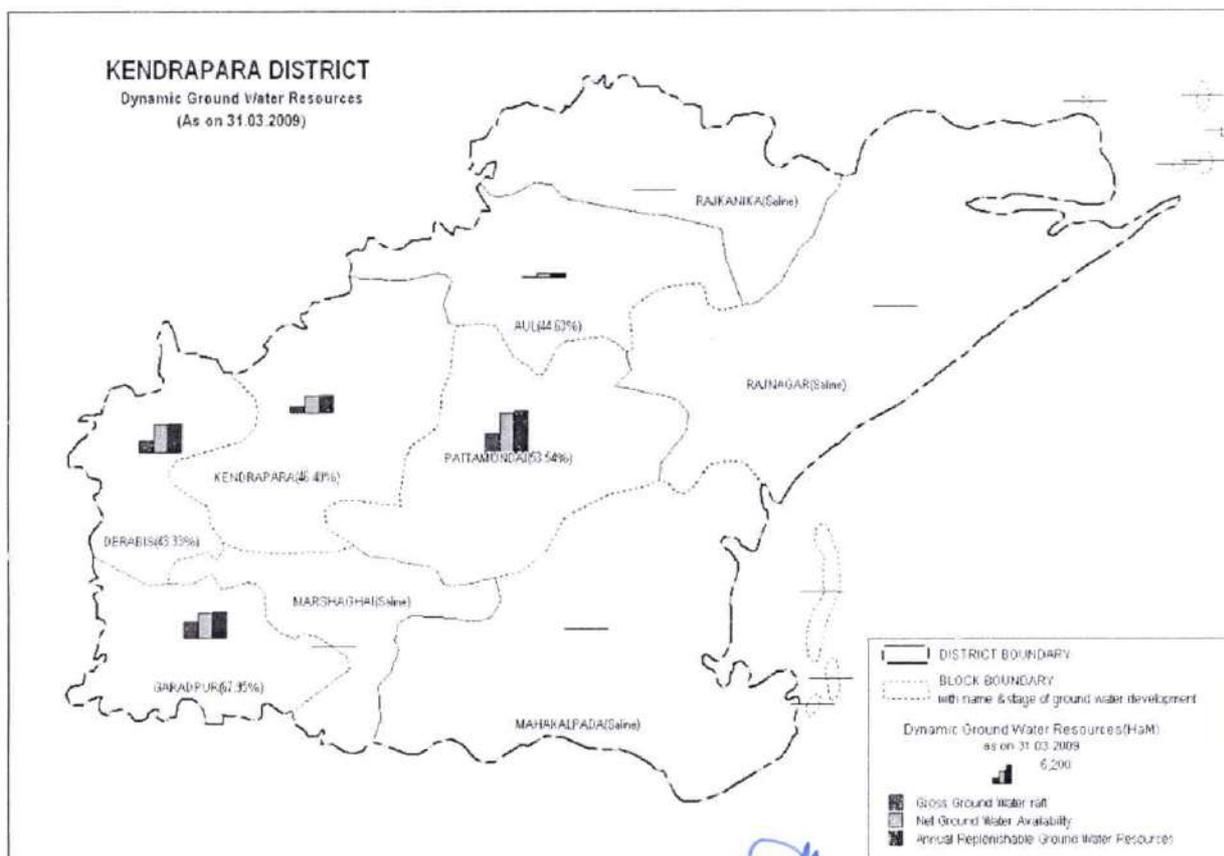
Sector-8: Barsalar-Karliopatana-Balada:

This sector occupies the southwestern corner of the district. In this sector a small pocket occurs in extreme southwest corner (north of Khandatari) of the district do not suffer from any salinity problem and the ground water is fresh all through. In BasalarKarliopatana at deeper depth saline and fresh water bearing zones occur alternatively.

7.2 Depth of water level:

The depth to water level has been measured from the National Hydrograph Stations situated in different blocks. The pre-monsoon (2011) water level data varies from 1.65mbgl to 5.43mbgl. The shallow water level was measured from Marshaghai and the deepest was at Patamundai. The depth to water level map (pre-monsoon 2011) is displayed.

The post-monsoon depth to water level in (2011) varies from 0.11mbgl to 4.90 mbgl. The deepest water level was at Kendrapara and shallowest was at Chatua. Plate-III represents depth to water level in post-monsoon 2011.



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7.3 Ground Water Quality

The chemical quality of ground water of the district has been assessed on the basis of ground water samples collected during ground water monitoring, hydrogeological surveys and ground water exploration. The range of different chemical constituents in shallow and deeper aquifers is as follows

RANGE OF CHEMICAL CONSTITUENTS IN DIFERRENT AQUIFERS

Sl No	Constituents	Shallow Aquifer Range	Deeper Aquifer Range
1	p ^H	8.10 – 8.54	7.46-8.85
2	Specific Conductance (µs/cm at 25 ⁰ C)	329-1219	672-1023
3	Sodium Absorption Ratio	0.41-4.64	0.45-2.44
4	Calcium (mg/litre)	18-85	11-78
5	Magnesium (mg/litre)	5.6-103	0.6-35.3
6	Sodium (mg/litre)	12-276	14-93
7	Chloride (mg/litre)	21-113	60.4-149
8	Fluoride (mg/litre)	0.00-6.94	0.35-0.36
9	Nitrate (mg/litre)	0.2-110	2.3
10	Carbonate (mg/litre)	Nil-38	15-42
11	Iron (mg/litre)	0.08-13	-

The above table infers that the shallow ground water in the district is alkaline in nature and is suitable for drinking purpose except in some local pockets. The higher fluoride concentration has been found at Nikirai and Rajgharh. The high iron concentration mg/lit has been noted from Gogua, Rajgharh and Chatua. The high nitrate concentration of 110 mg/lit has been found at Kendrapara, which may be due to increasing urbanization. It has been found out that the groundwater falls in low alkaline and medium to high salinity classes i.e. C2S1 and C3S1 class of U.S. salinity classification. The C2S1 type of water is suited for most types of crops while C3S1 type may be used for salt tolerant crops.

The deeper ground water is also alkaline in nature and no pollutants like nitrate and fluoride have been found beyond permissible limit, so suitable for domestic

purpose. So far as U.S. salinity laboratory classification is concerned, the deeper ground water of the district falls in C3S1 (low alkaline and high salinity class), which is suitable for salt tolerant crops.

7.4 Ground Water Development

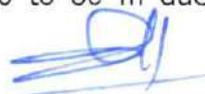
The groundwater development possibilities of the entire district have been described on the basis of hydrogeological condition of the area. The Ground water development in the district is mainly through dug wells and tube wells, which include filter point, shallow, medium deep and deep tube wells. The ground water is mainly used for drinking and irrigation purposes. The stage of ground water development in the district is low. So far as 52.97% of its resources has been exploited. Hence a strategy for detailed ground water development is required. Based on hydrogeological conditions of the district feasibility of ground water structures and their yield prospects has been indicated.

Dugwells: he dug wells are feasible in the western part of the district covering Derabish, Patkura and parts of Kendrapara blocks. Centrifugal pumps of 1 to 1.5 H.P. may be installed in the dug wells. The distance between any two energized dug wells should be kept at least 150m to avoid interference.

Filter Point Wells: These structures are feasible in the western part covering Derabish, Patkura, and parts of Kendrapara blocks. These wells are very successful on the recent flood plain deposits occurring along the banks of river and stream and also on the bank of moribund channels of rivers or streams and within the dried up stream courses. 2 H.P. ejector (jet) or centrifugal pumps may be fitted depending on the designing of the wells. Centrifugal pumps may be used in the low lying areas where water levels are very shallow and draw down is less. But where pumping water level goes beyond 7 or 8m below ground level, the installation of ejector pumps is advisable. The distance between any two energized dug wells should be kept at least 150m to avoid interference.

Shallow tube well: The shallow tube wells are feasible in the western part of Patkura and Derabiish blocks. Submersible pumps of 3 H.P. may be installed. The distance between any two structures should preferably at least 300m.

Medium Deep Tube Wells: The medium deep tube wells are feasible in the western part of Garadpur and Derabiish blocks. Normally the deeper depth (>100m) are feasible in the extreme south western part of Derabish and Garadpur blocks, while in other parts the depths may be restricted to 70 to 80 m due to salinity problem. The



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distance between any two structures should preferably at least 500m.

Deep Tube Wells: The deep tube wells having the depth range 200 to 300m are feasible in entire district except in few isolated patches to tap deep fresh water bearing zones. These tube wells can run for 10 hours in a day. The distance between any two structures should preferably at least 500m.

7.5 Ground Water Related Issue and Problems

Ground Water Problems: The ground water problems include water logged area, polluted area.

Water Logged Area: The water logging phenomenon occurs in the western part of the district seasonally covering approximately 350 sq km area, though the major part of the district enjoys surface irrigation facility through Delta stage-1 project for a long time.

Polluted area: The chemical analysis results of water samples from phreatic zones indicate that pollutants like nitrate, chloride, fluoride etc. occurs beyond permissible limit in some isolate local pockets.

7.6 Mass Awareness Campaign (MAP) & Water Management Training Programme (WMTP) by CGWB

The programs were organized on 10th, 11th and 12th January 2005 at DRDA conference hall, Kendrapara. More than 150 persons including farmers, Block Development Offices, District Level Officers/officials have participated in the programme. Deliberations on ground water development protection and conservation were held among participants and CGWB scientists. Different posters were displayed for conservation of ground water, ground water pollution and its ill effects and slogans protecting this valuable source. The programs have received high appreciation and were widely covered by press as well as electronic media.

7.7 Area Notified by CGWB/SGWA

The stage of Groundwater development is well within Safe Category and there is no overexploitation and major threat of Groundwater pollution and depletion. Hence no area has been notified by CGWA.

7.8 RECOMMENDATIONS

1. The development of ground water on large scale requires block as well as Gram panchayat wise large scale detailed hydrogeological maps.



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2. Intensive hydrogeological surveys and exploratory drilling aided by remote sensing and geophysical investigation may be taken up jointly by the state and central govt. agencies.
3. As the entire district suffers from salinity problem it is essential to precisely identify the fresh water aquifers through borehole logging to avoid failure of tube wells in saline hazard tract. Cement sealing should also invariably be done precisely to seal off the saline aquifers.
4. Proper care should be taken to avoid over exploitation, which may disturb the hydro- chemical balance of fresh and saline water leading to contamination of saline water ingress.
5. Clustering of tube wells should be avoided particularly near seacoast.
6. The scope of conjunctive use of surface and ground water may also be studied in the command area of delta stage-1 irrigation project particularly in the western part of the district to minimize seasonal water logging problem.
7. Since vast tract of the district is saline infested and beyond the reach of canal network, suitable creek irrigation projects can be taken up to facilitate irrigation for the Ravi crop.
8. The people participation is essential for large-scale development of ground water. Financial institutions and bankers should extent necessary co-operation to farmers. GRIDCO and rural electrification corporation should also take steps for energization of wells to ensure optimum utilization of ground water resources.

8.0 RAINFALL OF THE DISTRICT AND CLIMATE CONDITION

8.1 Month wise rainfall:

Year		2021	2022	2023	Average
Sl. No.	Month	(mm)	(mm)	(mm)	(mm)
1	Jan	10.6	10.6	10.6	10.6
2	Feb	30.2	30.2	30.2	30.2
3	Mar	35.0	35.0	35.0	35.0
4	Apr	33.9	33.9	3.36	23.72
5	May	94.2	94.2	94.2	94.2
6	Jun	249.11	208.3	208.3	221.90
7	Jul	317.1	317.1	247.11	293.77
8	Aug	333.3	406.0	333.3	357.53
9	Sep	237.3	237.3	237.3	237.3
10	Oct	183.7	183.7	183.7	183.7
11	Nov	67.2	67.2	67.2	67.2
12	Dec	5.2	5.2	5.2	5.2
Total		1596.81	1628.7	1455.47	1560.32


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The Indian Meteorological Department, Bhubaneswar, vide letter No. BBS/RMC/CS-312, dated 18th January, 2016 has provided the period of Rainy Season viz. Normal dates of Onset and Withdrawal of South West Monsoon over India as state-wise. The duration for the period is 10th June to 15th October.

8.2 Climate

The southwest monsoon is the principal source of rainfall in the district. The district is characterized by a tropical monsoon climate having three distinct seasons in a year viz. winter, summer and rainy seasons. The Bay of Bengal, which forms the eastern boundary of the district, plays a vital role in controlling the climate of the district. The normal rainfall of the district is 1501.3 mm. The annual average rainfall in last seven years is 1428.61 mm. About 75% of the total rainfall occurs during the period from June to September. In the period between April and May, 3 to 4 cyclonic rains generally occur in the district that causes a drop in the temperature. The relative humidity varies from 74 to 86 percent during the year. The potential evapotranspiration values vary from 5.67 cm to 31.5 cm.

Temperature Graph- Kendrapara

May is the warmest month of the year. The temperature in May averages 36.2 °C. December has the lowest average temperature of the year. It is 10.1 °C.

Source: Indian Meteorological Department.

9 DETAILS OF MINING LEASE OF BRICK EARTH IN THE DISTRICT

Attached as Annexure – A

10. DETAIL OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS:

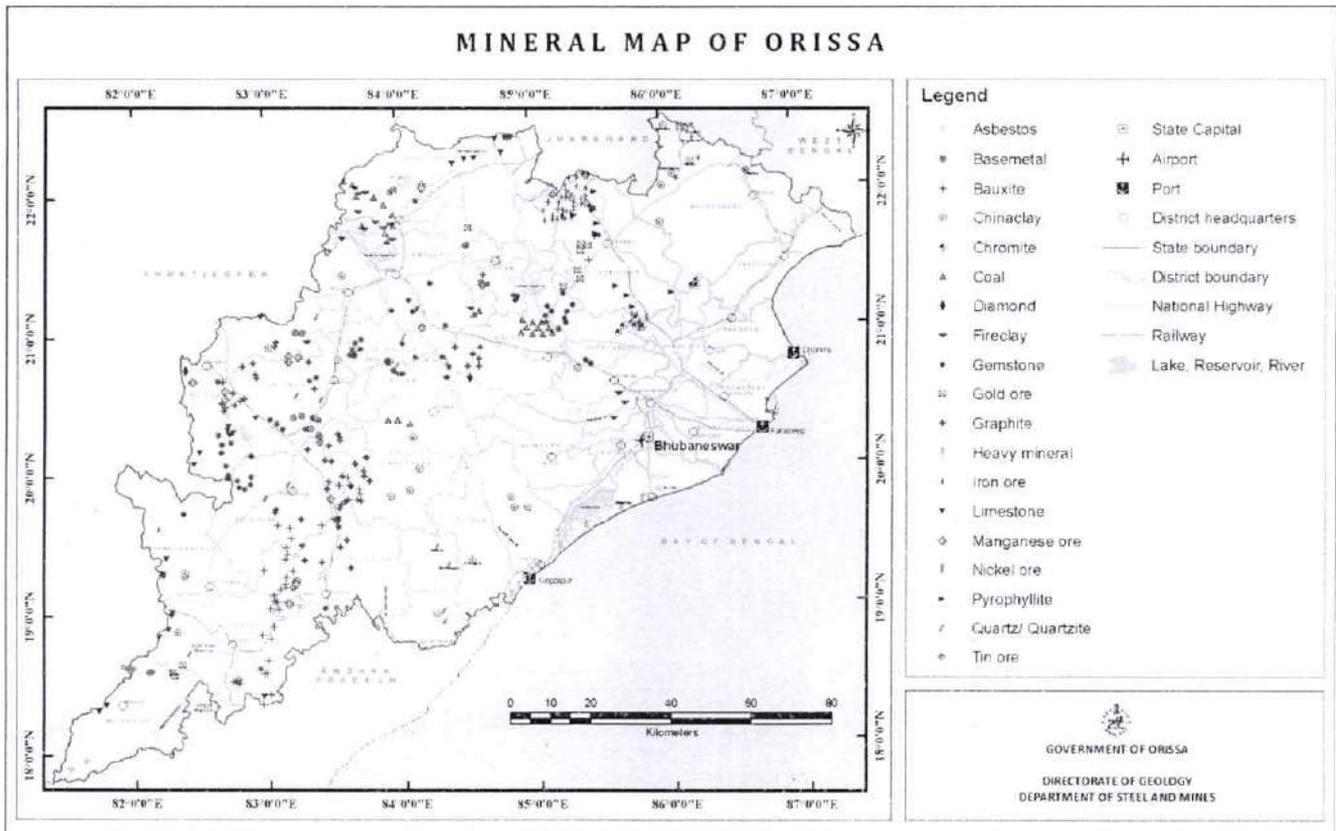
Sl. No.	Name of the Tahasil	2020-21	2021-22	2022-23	Total Amount (Lakh)
1	Aul	Nil	Nil	Nil	Nil
2	Kanika	Nil	Nil	Nil	Nil
3	Kendrapara	Nil	Nil	Nil	Nil
4	Marshaghai	Nil	Nil	Nil	Nil
5	Pattamundei	Nil	Nil	Nil	Nil
6	Rajnagar	Nil	Nil	Nil	Nil
7	Mahakalapada	Nil	Nil	Nil	Nil
8	Derabish	Nil	Nil	Nil	Nil
9	Garadpur	Nil	Nil	Nil	Nil
Grand Total		Nil	Nil	Nil	Nil


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11. DETAIL OF PRODUCTION OF MINOR MINERALS IN LAST THREE YEARS:

Sl. No.	Name of the Tahasil	2020-21	2021-22	2022-23	Total Quantity (Cubic meter)
1	Aul	Nil	Nil	Nil	Nil
2	Kanika	Nil	Nil	Nil	Nil
3	Kendrapara	Nil	Nil	Nil	Nil
4	Marshaghai	Nil	Nil	Nil	Nil
5	Pattamundeï	Nil	Nil	Nil	Nil
6	Rajnagar	Nil	Nil	Nil	Nil
7	Mahakalapada	Nil	Nil	Nil	Nil
8	Derabish	Nil	Nil	Nil	Nil
9	Garadpur	Nil	Nil	Nil	Nil
Grand Total		Nil	Nil	Nil	Nil

12. MINERAL MAP OF THE DISTRICT:




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13. LIST OF SPECIFIED MINOR MINERALS IN THE DISTRICT ALONG WITH ITS VALIDITY

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

14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

Total mineral reserve of road metal/Building stone is 10048 cum which may increase after detail investigation as per details below.

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

Sl. No.	Name of the mineral	Name of the lessee	Address and contact No. of the lessee	Letter of Intent Grant Order No. and date	Area of mining lease to be allotted	Validity of LoI	Use (Captive / Non-Captive)	Location of the Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7		
NIL								

LIST OF THE PROPOSED BRICK EARTH QUARRY IN THE DISTRICT:

Sl. No.	Tahasil Name	Name of the mineral	Area of mining lease to be allotted	Khata No.	Plot No.	Location of the Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7
Attached as Annexure -I						


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15. QUALITY/GRADE OF MINERAL AVAILABLE IN THE DISTRICT

Brick Earth found in District: :-

Earth of the Districts very much suitable for making of Brick which is used various construction purposes.

16. USE OF MINERAL

Earth of the District is used mainly for making of bricks, also the earth is used in filling in various construction activities.

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

As such there are huge infrastructural activities such as road, building, railways are coming up by Govt. of India & PSUs under "Make In India" programme.

It is proposed to start the earth production for captive use in Brick Industry from larger block/area to at least double the production of the District which will enhance the revenue of the District and also support the livelihood of the local people.

18. MAP OF EXISTING MINING LEASES IN THE DISTRICT:

Enclosed as Plate-I

19. DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER OF MINING LEASE VIZ. NUMBER OF MINING LEASES, LOCATION (LATITUDE AND LONGITUDE)

Nil.

20. DETAILS OF ECO-SENSITIVE AREA, IF ANY, IN THE DISTRICT:

Eco sensitive zone of Bhitarkanika wild life sanctuary is located within the District.

21. IMPACTS OF MINING ON ENVIRONMENT:

The most important environmental impact of mining projects are:-

Acid mine drainage and contaminant leaching:

Acid mine drainage is considered one of mining most serious threats to water resources. A mine with acid mine drainage has the potential for long-term devastating impacts on rivers, streams and aquatic life. If mine waste is acid generating, the impacts to fish, animals and plants can be severe. Many streams impacted by acid mine drainage have a pH value of 4 or lower – similar to battery acid. Plants, animals, and fish are unlikely to survive in streams such as this.



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Transportation sources:

Transpiration sources of air pollutants include heavy vehicles used in excavation operations, cars that transport personnel at the mining site, and trucks that transport mining materials.

The level of polluting emissions from these sources depends on the fuel and conditions of the equipment. Even though individual emissions can be relatively small, collectively these emissions can be of real concern. In addition, mobile sources are a major source of particulate matter, carbon monoxide, and volatile organic compounds that contribute significantly to the formation of ground-level ozone.

Stationary sources:

The main gaseous emissions are from combustion of fuels in power generation installations, and drying, roasting, and smelting operations. Many producers of precious metals smelt metal on-site, prior to shipping to off-site refineries. Typically, gold and silver are produced in melting/fluxing furnaces that may produce elevated levels of airborne mercury, arsenic, sulfur dioxide, and other metals.

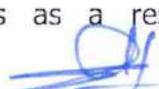
Fugitive emissions:

Common sources of fugitive emissions include: storage and handling of materials; mine processing; fugitive dust, blasting, construction activities, and roadways associated with mining activities; leach pads, and tailing piles and ponds; and waste rock piles. Sources and characteristics of fugitive emissions dust in mining operations vary in each case, as do their impacts. Impacts are difficult to predict and calculate but should be considered since they could be a significant source of hazardous air pollutants.

Noise and vibration:

Noise pollution associated with mining may include noise from vehicle engines, loading and unloading of rock into steel dumpers, chutes, power generation, and other sources. Cumulative impacts of shoveling, ripping, drilling, blasting, transport, crushing, grinding, and stock-piling can significantly affect wildlife and nearby residents.

Vibrations are associated with many types of equipment used in mining operations, but blasting is considered the major source. Vibration has affected the stability of infrastructures, buildings, and homes of people living near large-scale open-pit mining operations. According to a study commissioned by the European Union in 2000: "Shocks and vibrations as a result of blasting in connection with


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mining can lead to noise, dust and collapse of structures in surrounding inhabited areas. The animal life, on which the local population may depend, might also be disturbed."

22. REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING ON THE ENVIRONMENT:

1. Following are the remedial measures to mitigate the in Water sprinkling on haulroad, loading and unloading points.
2. Plantation along the safety zone and dump area.
3. Providing dust masks to workers.
4. Regular monitoring of ambient air quality.
5. Provision of air conditioned cabin of Excavators and Dumpers.
6. Regular and proper maintenance of working equipments.
7. Periodic medical examination of the workers and organize medical camp in the area.
8. Use Mili-Second Delay Detonator in blasting operation.
9. Provisions of ear plug to the workers.
10. Regular training program to the mines workers and operators.

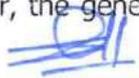
23. RECLAMATION OF MINED OUT AREA

Necessity of Reclamation & Rehabilitation:

- Exponential growth in mineral production since 1980.
- Mining activities causes physical, chemical, biological and socio-economic changes in the area.
- Surface mining activities disturb the original land profile.
- In India, mineral production comes mostly from opencast mines & hence Land degradation problems is of serious concern.
- An intricate, in-depth and site-specified techniques involving integrated approach is necessary.

Reclamation has three vital roles:

- i. **Reclamation** – Reclamation means return the mined-out land with useful life. It implies restoring the land to a form and productivity that is useful and in conformity with a prior land use. Reclamation always may not be a single- phase operation.
- ii. **Rehabilitation** – Rehabilitation is to bring back the degraded land to a normal stage by a special treatment. It is a process of taking some mitigation measures for disturbed environmental condition created through mining activities.
- iii. **Restoration** – Restoration is the process of returning the mined out land being fit to an acceptable environmental condition. However, the general acceptable meaning of the term is


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bringing the disturbed land to its original form. Restoration is often used to indicate that biological properties of soil are put back to what they were. This is a rare phenomenon.

- iv. When active mining ceases, mine facilities and the site are reclaimed and closed. The goal of mine site reclamation and closure should always be to return the site to a condition that most resembles the pre-mining condition. Mines that are notorious for their immense impact on the environment often made impacts only during the closure phase, when active mining operations ceased. These impacts can persist for decades and even centuries.

Mine reclamation and closure plans must describe in sufficient detail how the mining company will restore the site to a condition that most resembles pre-mining environmental quality; how it will prevent – in perpetuity – the release of toxic contaminants from various mine facilities (such as abandoned open pits and tailings impoundments); and how funds will be set aside to insure that the costs of reclamation and closure will be paid for.

Proposed future land use after reclamation:

Forestry, b. Recreation, c. Water Reservoir, d. Crop Land, e. residential/Commercial, f. Fish & wildlife Habitat, g. Undeveloped Land, h. Grazing/Pasture Land.

Statutory requirement:

As per the Mineral Conservation Development Rule, 2017, the following rules must be bear in mind by the mine owner/agent/manager, which is a part of reclamation activities –

Rule 22, Mine Closure Plan

Rule 23, Submission of Progressive Mine Closure Plan Rule 24, Submission of Final Mine Closure Plan

Rule 26, Responsibility of holder of mining lease Rule 27, Financial Assurance Rule 35 and Sustainable Mining.

24. RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN:

Mining activity because of the very nature of the operation, complexity of the systems, procedures and methods always involves some amount of hazards. Hazard identification and risk analysis is carried for identification of undesirable events that can leads to a hazard, the analysis of hazard mechanism by which this undesirable event could occur and usually the estimation of extent, magnitude and likelihood of harmful effects. The activities which can cause high risk related to face stability and the person blasting the shots. It was observed that on a working face of the mine, there were large cracks and unsupported rocks were present, which can lead to a serious hazard and injure workers engaged in loading operation and

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machineries because of rock falls or slides. This type of condition turn out because improper dressing of the bench and improper supervision. To avoid the hazards due to fall of rocks the face must be examined, made suitable for working and the remedial measures must be taken to make it safe if there is any doubt that a collapse could take place. Working of the face should be in the direction taking into account the geology of the area such that face and quarry side remain stable. Another major risk identified in mines is due to the firing of explosive by an unqualified person. In the mines there is problem of fly rocks and the village is located close to the mine and so it is rated high as it can affect may people. Explosives by nature have the potential for the most serious and catastrophic accident. Planning of round of shots, holes correctly drilled, direction logged, weight of explosive suitable for good fragmentation are the few of the steps necessary to ensure its safe use and if the shots are not properly designed can result in misfires, early ignition and flying rocks. No person is allowed to use explosives without being properly trained in its handling. In the mine a large numbers of heavy vehicles were in operation and the roads were not proper for haulage purpose. The haulage roads were not even and were not wide enough for the crossing purpose and hence the chances of hazards are very high. The main hazards arising from the use large earth moving vehicles are incompetent drivers, brake failure, lack of all-around visibility from the driver position, vehicle movements particularly reversing, roll over, and maintenance. Those most at risk are the driver and pedestrians likely to be struck by the vehicle, and drivers of smaller vehicles, which cannot be seen from the cabs of large vehicles. Edge protection is always necessary to prevent inadvertent movement over the edge of roadway or a bench. Seatbelt will protect driver in case of roll. Good maintenance and regular testing are necessary to reduce the possibility of brake failure. Access to the vehicles should always be restricted to those people necessary for the work in hand. The use of personal protective equipment and proper arrangements is essential to check if the person is wearing protective equipment or not. The personal protective equipment includes helmet, non-skid safety boots, safety glasses, earmuffs etc. The required personal protective equipment should be provided and used in a manner that protects the individual from injury. Few minor injuries which can be prevented are slip, trip, or fall hazards; hazards due to rock falls and collapse of unstable rocks, atmosphere containing toxic or combustible gases; protects from chemical or hazardous material etc. A disaster management plan should be prepared for taking care of for any disaster. Other risk which are included in this category are noise, as it occurs and it can lead to permanent disability. There are problems related to road traffic in and out issuers; inappropriate exposure of moving machines; mechanical failure and because of large number of moving trucks and dumpers there is large quantity of dust present in roadways which affects the operators and can lead to accidents causing injury. They are in acceptable range because of precautions measures taken but no


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step is taken it can cause hazard hence steps should be taken to reduce the hazards such as for dust suppression system should be installed. Other problems like occurrence of lots of mosquitoes in the area due to unhygienic conditions which affect the human health causing malaria, dengue etc. and causing a person to be hospitalized.

Disaster in the mines like fires, explosions, entrapments, and inundations can occur any time, so emergency preparedness is a must. The Disaster Management Plan and risk assessment in the mines will include all sorts of above mentioned emergency and the extent that this plan will be implemented will depend on the nature and scope of the emergency. The basic purpose of Disaster Management Plan and risk assessment to ensure that mine rescue and recovery activities are conducted safely for rescuer and survivors. According to MMR act 1961 a standard operating procedure should be drawn for involvement different category of staff and officers. The SOP should be updated periodically to reduce the chaos and response to the emergency should be quick and smooth. The responsible person should be familiar with his responsibility during the mock drills. One or two standby should be there to replace the person in Emergency situation. Rescue operations should not include the survivors for any assistance.

First Information of Disaster / Emergency should go to the attendance clerk on duty. Duties of attendance Clerk (Emergency Siren) the attendance clerk or other designated person should on getting information of major accident, sound a hooter or a siren immediately declaring a state of emergency at the mine and then to contact the manager and on his advice to call key personnel using the information listed in the Emergency Organization Chart. It is important that all telephone calls are recorded in a telephone log book. Duties of Other Officials should be displayed and handed over to all concerned. Copy the same should be kept at Manager's Office for ready reference. Establishment of Control Room at Unit Level, Area Level and Company Level is essential. Control Room should keep the contact information about –

- Company Manager
- Company owner/ Administrative officer.
- District Administration
- Govt. Hospitals in Nearby Localities,
- Private Nursing Homes of Localities

Attendance roaster and duty charge register should be properly maintained so the record of missing people can be obtained.


**COLLECTOR
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25. DETAILS OF THE OCCUPATIONAL HELTH ISSUE IN THE DISTRICT:

As per the guidelines of the Mine Rules 1995, occupational health safety has been stipulated by the ILO/WHO. The proponent's will take necessary precautions to fulfill the stipulations. Normal sanitary facilities have to be provided within the lease area. The management will carry out periodic health checkup of workers. Occupational hazards involved in mines are related to dust pollution, noise pollution, blasting and injuries from moving machineries & equipment and fall from high places. DGMS has given necessary guidelines for safety against these occupational hazards. The management has to strictly follow these guidelines. All necessary first aid and medical facilities are to be provided to the workers. The mine shall be well equipped with personal protective equipment (PPE). Further, all the necessary ported equipments such as helmet, safety goggles, earplugs, earmuffs etc. are to be provided to mine workers as per Mines Rules. All operators and mechanics are to be trained to handle firefighting equipments. There is no case of Silicosis found in the district within the time frame mentioned above.

26. PLANTATION GREEN BELT DEVELOPMENT IN RESPECT OF LEASE ALREADY GRANTED IN THE DISTRICT:

During mining operation green belt development through plantation is most important for environment safe guard, which should be supervision by mining department. Different type of species should be planted near lease periphery to keep environment clean at post mining period through reclamation. Where specific usefulness of land could be decided, afforestation is normally planned through the site could have been considered for better possibilities of land use.



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27. CONCLUSION:

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

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


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KENDRAPARA**

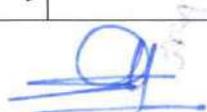
**ANNEXURE - I
DETAILS OF MINOR MINERAL SAIRAT SOURCES (BRICK EARTH) IN RESPECT OF KENDRAPARA DISTRICT**

Sl. No.	Name of the tahsil	Name of the lessee	Name of the lessee	Address & of the lessee	Mining grant order no.	Area of mining lease	Period for lease		Period of mining lease 1 st & 2 nd renewal		Date of commencement of mining operation	Status of lease (working / non-working)	Captive / non-captive	Location of lease & longitude	Method of mining (open cast/ under ground)	Geologic reserve in CUM	Mineral reserve in CUM	Royalty in last three years					Production of mineral last three years		
							from	to	from	to								2021	2022	2023	2021	2022	2023		
1	Marsaghal	Bhagabandur	Not interested	NA	NA	1.170 AC Khata no. 542/1 62,54 2/244	NA	NA	NA	NA	NA	Non-Working	Captive	Lat- 20° 23'31.1 6"N to 20°22'3 5.93"N Long- 86° 29'10.0 8" E to 86°29' 16.10" E	Open cast	9469	2830	NA	NA	NA	NA	NA	NA	NA	
2	Marsaghal	Gangadanga	Not interested	NA	NA	1.370 AC Khat no. 777/5 28,77 7/667 ,777/ ,777/ 667,7 77/66 6,777 /754 Plot no. 2110/ 2704,	NA	NA	NA	NA	NA	Non-Working	Captive	Lat- 20° 23'31.3 7"N to 20°23'3 6.73"N Long- 86° 28'10.5 3" E to 86°28' 13.62" E	Open cast	11088	4278	NA	NA	NA	NA	NA	NA	NA	

**COLLECTOR
KENDRAPARA**



**KENDRAPARA
COLLECTOR**



FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Mahanga Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Chitrapala River
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
- a) Inhabited village :- Mahanga within 0.5 km
 - b) Bridge :- under construction bridge adjacent to plot No 30
 - c) Historical monument's structure :- 200m safety distance will be left.
 - d) Dams :- Not within 1km
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-36(A) - 8 km
 - k) Educational Institution :- Mahanga not within 1km
 - l) Hospital :- Kendrapara (Not within 1km)
 - m) Existing area :- 9.21 Ha (22.75 Ac)
 - n) Proposed area :- 2.428 Ha (6.00Ac)
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°23'32.15"N, 86°15'54.42"E)
 - u) Remarks, if any :- Not any

As per the joint inspection, it may be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Mahanga	157	30	Nadi	No	9.21 Ha	2.428 Ha

[Signature]
27/8/24
J.F. I.C.C.

[Signature]
27.8.24
ACF, Rajnagar

[Signature]
27/8/24
R.O. Kendrapara

[Signature]
27/08/24
Dy. Envr. Engrg
RO SPCB, Pevadweep

[Signature]
27.08.24
Geologist
J.D.G. Dhenkanal

[Signature]
07/10/2024
**COLLECTOR
KENDRAPARA**

[Signature]
27/8/24
M.O (I/C)



ମୌଜା : ମାହାଙ୍ଗା

ଥାନା : ପାଟକୁରାବନ୍ଧା

ତହସିଲ : ବାହୁଡ଼ପୁର

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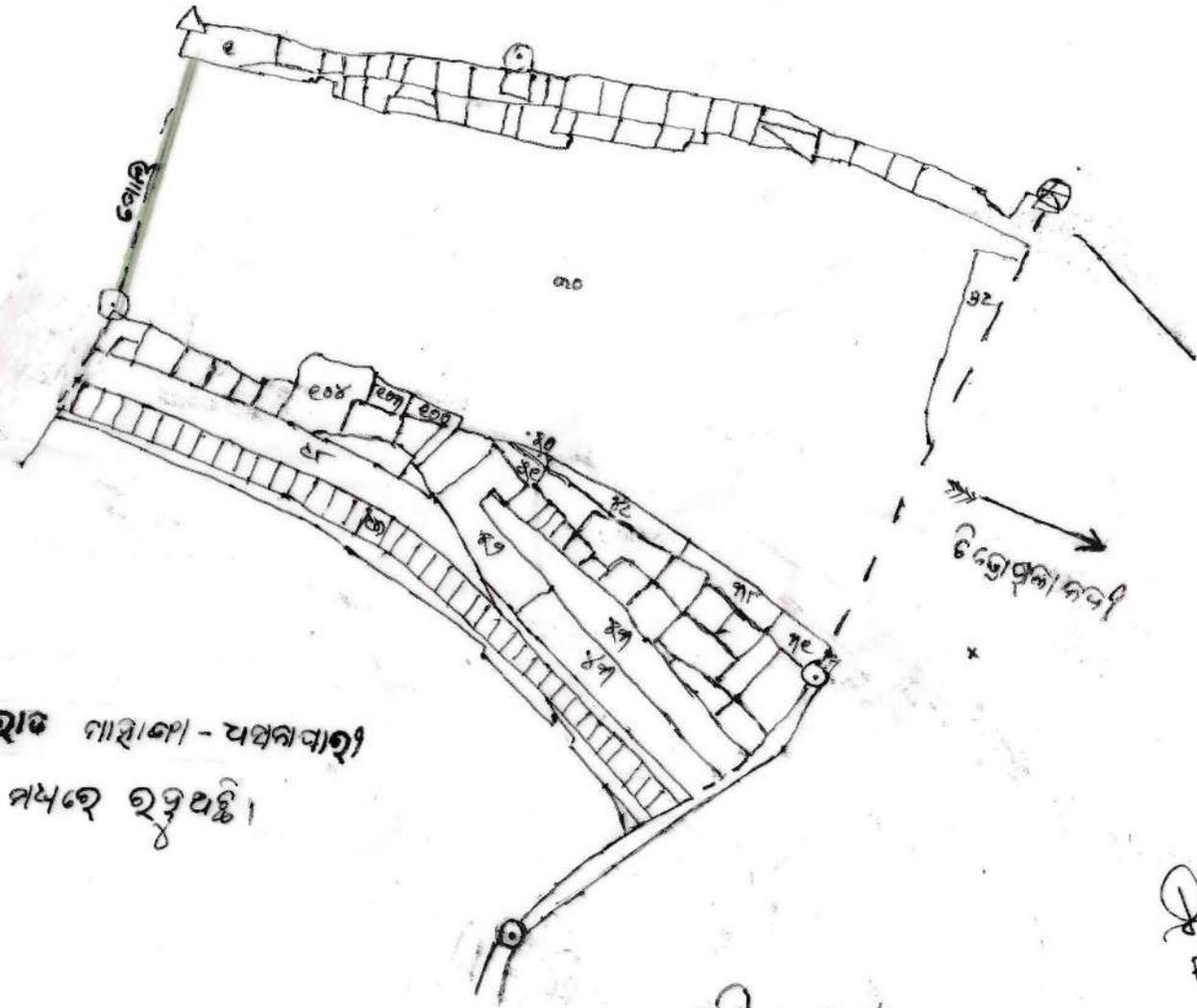
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ଧର୍ମାପାତ୍ର ନ. ୪୯

MAHANGA

ନିର୍ମାଣ ଶୀତଳ ନ. ୨୦



ମୌଜା ମାହାଙ୍ଗାରେ ପ୍ରସ୍ତାବିତ ଜାକି **ବୈତ୍ତାତ** ମାହାଙ୍ଗା - ଧର୍ମାପାତ୍ର
ନିର୍ମାଣାଧୀନ ପୋଲିଂସ୍ ୫୦୦ ମିଟର ମଧ୍ୟରେ ରହିବୁଥିବୁ।

ଧର୍ମାପାତ୍ର ନ. ୪୫

Paint
RT, Talakusuma.

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Jagannathpur Saw quarry
- 2) Minor Mineral :- Saw
- 3) Name of the River if River sand :- Chitratpala
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Jagannathpur (0.5 km)
 - b) Bridge :- Not exists within 1 km
 - c) Historical monument's structure :- "
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316 (A) - 7 km
 - k) Educational Institution :- Jagannathpur within 500m
 - l) Hospital :- Not exists within 1 km
 - m) Existing area :- 31.250 AC
 - n) Proposed area :- 0
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- No
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°24'29.78"N, 86°22'58.92"E)
 - u) Remarks, if any :-

As per joint inspection and recommendation from the committee, the educational institution is closely situated to the source, hence it may not be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Jagannathpur	755	01	Nadi	No	31.250	0

Khingh
27/8/24
J.F Bantula

Prasade
27.8.24
ACF, Rajnagar

Harsh
27/8/24
RO, Kendrapara

Shy
27/8/24
Dy. Env. Engr
RO CPCB, Paradeep

S-Mohanty
27/8/24
Geologist
JDC, Dhenkanal

Oh
07/10/2024

R
27/08/24
M.O(1/c)

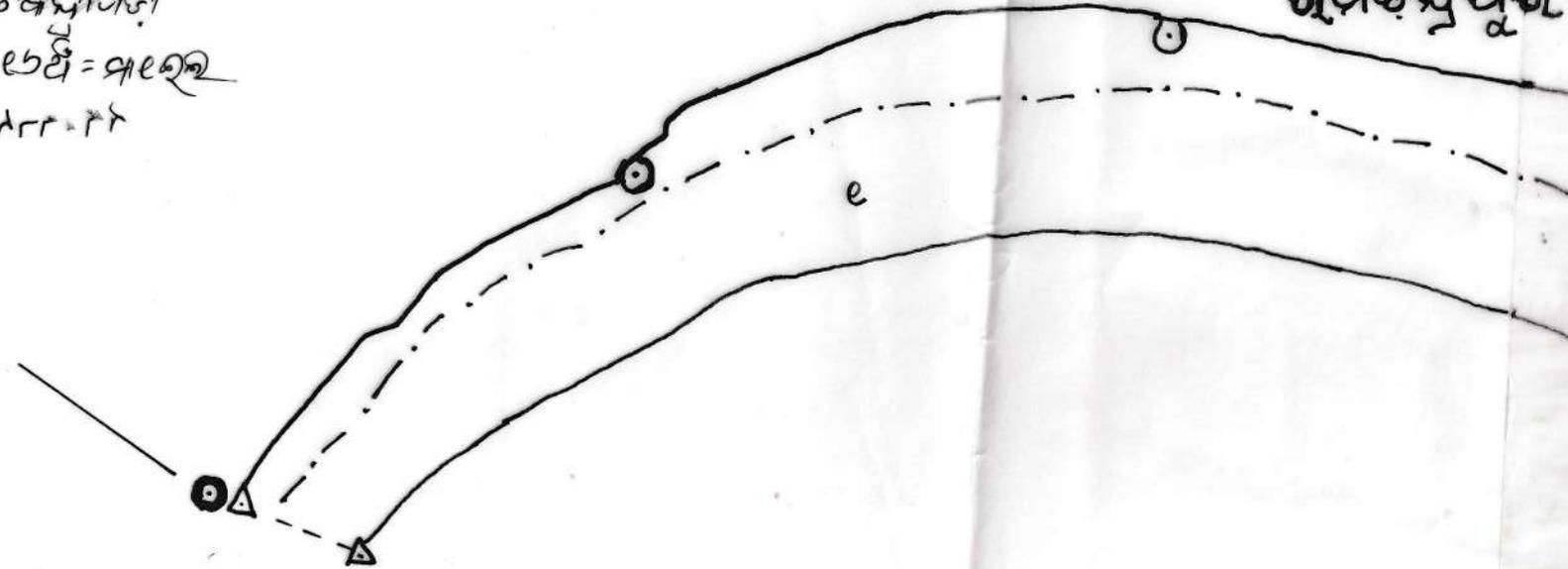
**COLLECTOR
KENDRAPARA**



ମୋଜା - ଜଗନ୍ନାଥପୁର
 ଥାନା - ପାଟକୁରା ନି. ୧୨୫
 ଉପସିଦ୍ଧ - ଗରୁଦ ପୁର
JAGANNATHPUR
 Thana patakura No. 125

ଜିଲ୍ଲା - କେନ୍ଦ୍ରାପଡ଼ା
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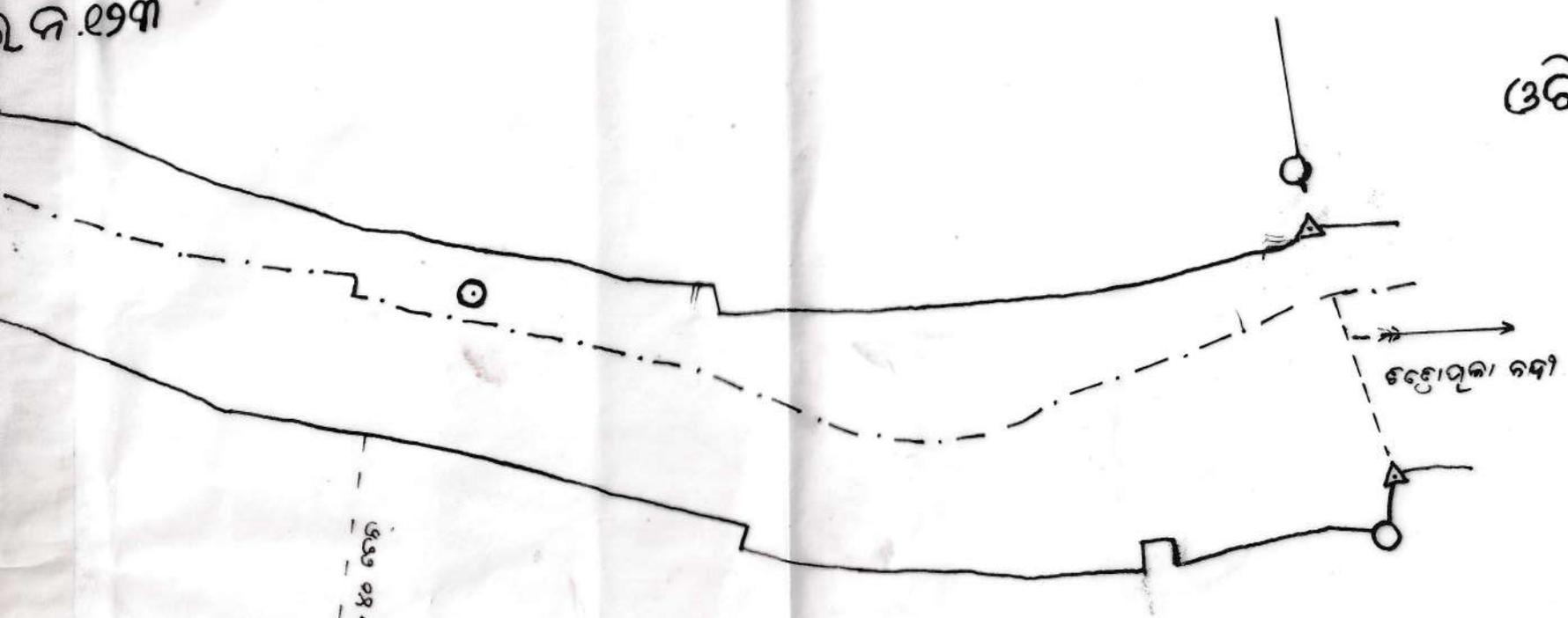
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 ମା.ମୁ.ନ - ୧ ଏମ. ୨୫୦ କାମମ. ଛତ୍ରପୁଲାନଦୀ
 ଉକ୍ତ ମୃତ୍ତ୍ୱ ଉପରେ ଜମାଧାରୀ ଥିବାରୁ ବାକି ମୁକ୍ତ ନାହିଁ

ନ.୧୨୩

ଓରିସା ବିଦ୍ୟା ନ.୧୩୮



କ୍ଷେତ୍ରଭାଗ ବନ୍ଦୀ
 ନିମ୍ନ-ଅଂଶ ଓ ଉପର ଶ୍ରେଣୀରୁ କରାଯାଇଥିବା କମ୍ପ୍ୟୁଟେସନାଲ୍ କାଲକ୍ୟୁଲେସନ୍ ଥିବାରୁ ଏ

23.9.24
 (R. Bedar)

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Kusunpura Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Paika River
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Kusunpura within 1km
 - b) Bridge :- Not exists within 1km
 - c) Historical monument's structure :- "
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 7 km
 - k) Educational Institution :- Not exists within 1km
 - l) Hospital :- "
 - m) Existing area :- -
 - n) Proposed area :- -
 - o) Approach Govt. Road to the source :- No
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- No
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes ($20^{\circ} 21' 44.49'' N, 86^{\circ} 17' 32.16'' E$)
 - u) Remarks, if any :-

and recommendation from the committee, the approach road is not accessed to the plot and the connected road is not within the jurisdiction of Kendrapada District. Hence it may not be entered in Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Kusunpura	370	1417	Nadi	No	-	-

Khingh
27/8/24
JF I/c

Prasada
27.8.24
ACF, Rajnagar
Prasada
27/8/24
P.O. Kendrapada

Shy
27/08/24
Dy. Env. Engg
ROSPCB, Boudheep

S. Mohanty
27/08/24
Geologist
JDh. Dhenkanal

Shy
27/11/24
COLLECTOR
KENDRAPARA

Pr
27/8/24
M.O. (I/C)

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Palasudha Sand Quarry
- 2) Minor Mineral :- Paika River (Sand)
- 3) Name of the River if River sand :- Paika River
- 4) Sufficiency of Source :- Sand
- 5) The distance of the source from the following points
 - a) Inhabited village :- Palasudha village within 1 km
 - b) Bridge :- Not within 0.5 km
 - c) Historical monument's structure :- Not within 1 km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 6.8 km
 - k) Educational Institution :- Not within 1 km
 - l) Hospital :- "
 - m) Existing area :- 43.35 Ac
 - n) Proposed area :- 12.00 Ac
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes ($20^{\circ}21'22.18''N, 86^{\circ}18'10.90''E$)
 - u) Remarks, if any :- As per the joint inspection and recommendation from the committee, the proposed source may be entered in DSA.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Palasudha	550	1756	Nadi	No	43.35 Ac	12.00 Ac

Khingh
27/8/24
JE IRT.

Prande
27.8.24
ACF, Rajnagar

Pradeep
29/8/24

Shy
27/8/24
Dy. Env. Engr,
RO/SPCB, Paralkef.

J. Mohanty
27/8/24
Geologist
JDi Dhenkanal

[Signature]
**COLLECTOR
KENDRAPARA**

R
27/8/24
M.O (114)

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Palasudha Sand Quarry
- 2) Minor Mineral :- Paika River (Sand)
- 3) Name of the River if River sand :- Paika River
- 4) Sufficiency of Source :- Sand
- 5) The distance of the source from the following points
 - a) Inhabited village :- Palasudha village within 1 km
 - b) Bridge :- Not within 0.5 km
 - c) Historical monument's structure :- Not within 1 km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 6.8 km
 - k) Educational Institution :- Not within 1 km
 - l) Hospital :- "
 - m) Existing area :- 43.35 Ac
 - n) Proposed area :- 12.00 Ac
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes ($20^{\circ}21'22.18''N, 86^{\circ}18'10.90''E$)
 - u) Remarks, if any :- As per the joint inspection and recommendation from the committee, the proposed source may be entered in DSA.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Palasudha	550	1756	Nadi	No	43.35 Ac	12.00 Ac

K. Singh
27/8/24
JE IRR.

P. Panda
27.8.24
ACF, Rajnagar

H. Prasad
29/8/24

A. Singh
27/8/24
Jy. Env. Engg.
RO/PCB, Paradeep

J. Mohanty
27/08/24
Geologist
JD & Dhenkanal

[Signature]
COLLECTOR
KENDRAPARA

R. S.
27/8/24
M.O. (114)

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- | | | |
|--|----|--|
| 1) Name of the Source | :- | Narada Sand Quarry |
| 2) Minor Mineral | :- | Sand |
| 3) Name of the River if River sand | :- | Paika River |
| 4) Sufficiency of Source | :- | Yes |
| 5) The distance of the source from the following points | | |
| a) Inhabited village | :- | Narada within 1km |
| b) Bridge | :- | Not exists within 1km |
| c) Historical monument's structure | :- | |
| d) Dams | :- | |
| e) Weirs | :- | |
| f) Ground water extraction points | :- | |
| g) Water supply head work | :- | |
| h) Extraction points for irrigation | :- | |
| i) Any other cross drainage structure | :- | |
| j) National Highway | :- | NH-316(A) - 8km |
| k) Educational Institution | :- | Not exists within 1km |
| l) Hospital | :- | |
| m) Existing area | :- | 71.25Ac |
| n) Proposed area | :- | 10.00Ac |
| o) Approach Govt. Road to the source | :- | Yes |
| p) Any objection from the locality | :- | No |
| q) Recommendation for lease out for the next five years from 2024-25 | :- | Yes |
| r) Whether hal-sabik kissam of the referring RoR has been verified | :- | Yes |
| s) Elephant movement if any | :- | No |
| t) Whether GPS reading taken | :- | Yes (20° 21' 47.85" N, 86° 16' 48.41" E) |
| u) Remarks, if any | :- | As per joint inspection and recommendation from the committee that, the proposed source may be entered in DSR. |

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Narada	394	1550	Nadi	No	71.25 Ac	10.00Ac

[Signature]
27/8/24
JE Irrigation

[Signature]
27.8.24
ACF, Rajnagar

[Signature]
27/8/24
R.O. Kendrapara

[Signature]
27/08/24
Dy. Env. Engg
ROSPCB, Paradeep

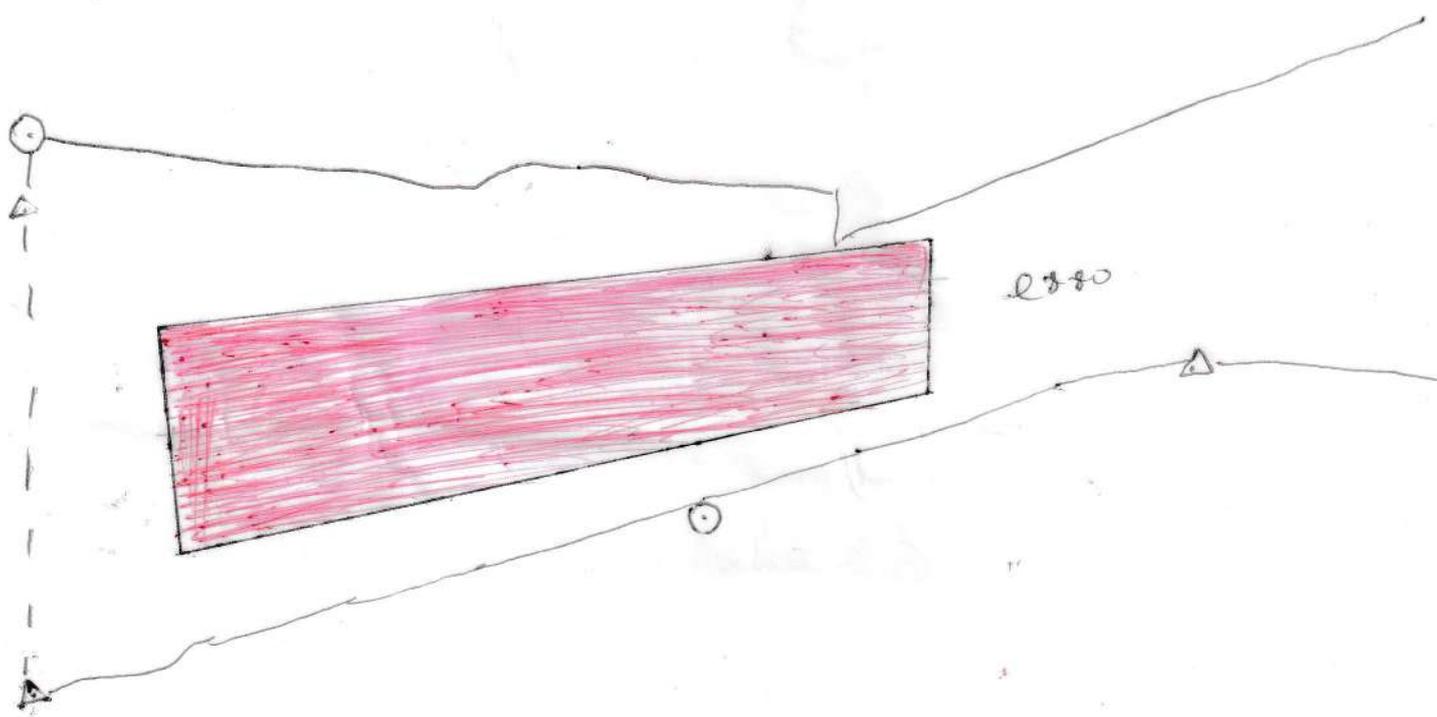
[Signature]
27/08/24
Geologist
Jd's Dhenkanal

[Signature]
**COLLECTOR
KENDRAPARA**

[Signature]
27/8/24
M.O(1/c)

NARADA

ବିମଳା - ୩୨୦୩
 ଶ୍ରୀମତୀ - ୩୧୫୫
 ଦିନକାର - ୩୧୫୫
 ଶ୍ରୀମତୀ - ୩୧୫୫
 ଶ୍ରୀ - ୧୧୫୫-୩୩



ଶ୍ରୀମତୀ ବିମଳା ଦାମ୍ଭର ୩୨୦୩ ନଂର ବିମଳା ବିମଳାଙ୍କ ଦାମ୍ଭର ୩୨୦୩
 ଓ ୩୧୫୫ ନଂର ଶ୍ରୀମତୀ ଦାମ୍ଭର (ଦାମ୍ଭର) ନଂର
 ଶ୍ରୀମତୀ ଦାମ୍ଭର ୩୧୫୫ ନଂର ଦାମ୍ଭର ଦାମ୍ଭର


 REVENUE INSPECTOR
 TYENDAKUDA

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Misar Narasimhpur Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Paika River
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Misar Narasimhpur within 1 km
 - b) Bridge :- Not exists within 1 km
 - c) Historical monument's structure :- "
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 8 km
 - k) Educational Institution :- Not exists within 1 km
 - l) Hospital :- "
 - m) Existing area :- 32.43 Ac
 - n) Proposed area :- 10.00 Ac
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°24'22.19"N, 86°16'59.50"E)
 - u) Remarks, if any :- As per the joint inspection &

Recommendation from the committee that, the proposed source may be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Misar Narasimhpur	38	283	Nadi	No	32.43 Ac	10.00 Ac

[Signature]
27/8/24
J.E IRL

[Signature]
27.8.24
ACF, Rajnagar

[Signature]
27/8/24
R.O. K. Paikar

[Signature]
27/08/24
Dy. Env. Engr
RO SPCB, Paradeep

[Signature]
27/08/24
Geologist
JDh, Dhenkanal

[Signature]
COLLECTOR
KENDRAPARA

[Signature]
27/8/24
M.O(1/C)

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- *Samsara Saw Quarry*
- 2) Minor Mineral :- *Sand*
- 3) Name of the River if River sand :- *Chitrotapala*
- 4) Sufficiency of Source :- *Yes*
- 5) The distance of the source from the following points
- a) Inhabited village :- *Samsara*
 - b) Bridge :- *Not exists within 1km*
 - c) Historical monument's structure :- *"*
 - d) Dams :- *"*
 - e) Weirs :- *"*
 - f) Ground water extraction points :- *"*
 - g) Water supply head work :- *"*
 - h) Extraction points for irrigation :- *"*
 - i) Any other cross drainage structure :- *"*
 - j) National Highway :- *NH-316(A) - 5 km*
 - k) Educational Institution :- *Not exists within 1km*
 - l) Hospital :- *"*
 - m) Existing area :- *76.750 Ac*
 - n) Proposed area :- *12.00 AC*
 - o) Approach Govt. Road to the source :- *Yes*
 - p) Any objection from the locality :- *No*
 - q) Recommendation for lease out for the next five years from 2024-25 :- *Yes*
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- *Yes*
 - s) Elephant movement if any :- *No*
 - t) Whether GPS reading taken :- *Yes (20° 24' 08.52" N, 86° 24' 33.33" E)*
 - u) Remarks, if any :- *As per the joint inspection and recommendation from committee, that the proposed source may be entered in DSR.*

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
<i>Samsara</i>	<i>393</i>	<i>01</i>	<i>Nadi</i>	<i>No</i>	<i>76.750 AC</i>	<i>12.00 AC</i>

V. Singh
27/8/24
J.E. IRR.

#Haudd
27.8.24
ACF, Rajnagar

Harvey
27/8/24.
Rd. K. P. P. P.

Shy
27/08/24
Dy. Env. Engr
RO SPCB, Paradeep

S. Mohanty
27/08/24
Geologist
JGG Dhenkanal

Oll
07/11/2024

**COLLECTOR
KENDRAPARA**

Rz
27/8/24
M.O. (1/4)

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Dakhina Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Brahmani River
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Dakhina within 1km
 - b) Bridge :- 0.7 km from the source.
 - c) Historical monument's structure :- Not exists within 1km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 4 km
 - k) Educational Institution :- Not exists within 1km
 - l) Hospital :- "
 - m) Existing area :- 20.03 Ac
 - n) Proposed area :- -
 - o) Approach Govt. Road to the source :- No
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- No
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°36'28.39"N, 86°28'42.85"E)
 - u) Remarks, if any :- As per the joint inspection report and recommendation from the committee, the govt. approach road not accered to the plot. Hence it may not be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Dakhina	274	1	Nadi	No	20.03 Ac	-

B.D. 23.08.2024
T.E, Kenda Divn. section

Prasade 23.8.24
ACF, Rajnagar

23/8/24
R. Chakraborty

23/08/24
Dy. Env. Eng
RO SPCB, Paradeep

J. Mohanty 23/08/24
Geologist
JDG, Dhenkanal

07/10/2024
COLLECTOR
KENDRAPARA

23/8/24
M.O(11)



ମୌଜା ଦସିନ

DAKHINA

ଧାନା ପଇାମୁଣ୍ଡାଲ
 ହାଲୁ ହେବିଲ କେନ୍ଦ୍ରାପଜା
 ହାଲୁ ତିଲୁ କେନ୍ଦ୍ରାପଜା
 ଘେଲି ଭୂପୂର୍ଣ୍ଣ = ମାଲେଲ
 ସନ ୧୯୮୭

ବାମୁଣ୍ଡାମଧ୍ୟ



ପଇାମୁଣ୍ଡାଲ
 ମୁଣ୍ଡାମ କେନ୍ଦ୍ରା

- ପୁଟନ-୧ ପ୍ରସ୍ତୁତିତ ବାଲି source
- ପୁଟନ-mer କେନ୍ଦ୍ରାଲ ବାଲି ମାସ୍ତା

ପ୍ରସ୍ତୁତିତ ବାଲି source ଥିବା ପୁଟନୁ ବିକ୍ରି ଥିବା ବଜାର ବାଲି ମାସ୍ତାକୁ କେନ୍ଦ୍ରା ସମ୍ପର୍କୀ ମାସ୍ତା ସଂସ୍ଥାପନ କାରି ।

୬-୨-୨୫
 Revenue Inspector
 Choudakutat Circle

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Karilopatana Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Karandia River
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
- a) Inhabited village :- Karilopatana village within 1 km
 - b) Bridge :- 0.6 km from the proposed source.
 - c) Historical monument's structure :- Not exists within 1 km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 5.6 km
 - k) Educational Institution :- Not exists within 1 km
 - l) Hospital :- "
 - m) Existing area :- 46.02 Ac
 - n) Proposed area :- 12.20 Ac
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°27'34.25"N, 86°21'57.73"E)
 - u) Remarks, if any :- As per the joint inspection, recommendation from the committee that the proposed source may be entered in DS.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Karilopatna	1109	01	Nadi	No	46.02 Ac	12.20 Ac

B.D.S.
23.08.2024
D.F., Kula Insn. Section

Pravda
23.8.24
A.C.F., Rajnagar

Shri
23/8/24
K. K. P. B. Insn.

Shri
23/08/24
Dy. Env. Engr
RO/PCB, Pandharpur

J. Mohapatra
23/08/24
Geologist
J.D.H. Dhenkanal

07/11/2024
**COLLECTOR
KENDRAPARA**

R.
23/8/24
M.O(I/C)

ରାଜସ୍ୱ ନିରୀକ୍ଷକଙ୍କ କାର୍ଯ୍ୟାଳୟ ,କରିଲୋପାଟଣା

ପତ୍ର ସଂଖ୍ୟା-୮୮ ୦୩11/09/24ରିଖ

ପ୍ରାପ୍ତେଷୁ

ଶ୍ରୀଯୁକ୍ତ ଚନ୍ଦ୍ରସିଲଦାର,ମାର୍ଶାଘାଟ

ବିଷୟ:-ମୌଜା-ଜଳପୋକରେ ନୂତନ ବାଲି ସୈରାତ ଉତ୍ତର ତଦନ୍ତ ସମ୍ବନ୍ଧେ ।

ସୂଚନାକ:-Mines office letter No.-257.Dtd.04.09.2024

ମହାଶୟ,

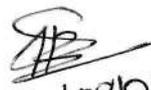
ଆପଣଙ୍କ ଆଦେଶ ମତେ ଉପରୋକ୍ତ ବିଷୟକୁ ଭିତ୍ତି କରି କେନ୍ଦ୍ରାପଡା ଖଣି ଅଧିକାରୀ କ୍ଷେତ୍ର-ବିଭାଗ କମିଟିର ମିଳିତ ସର୍ବେକ୍ଷଣ ରେ ଯୋଗ ଦେଇ ମୌଜା-ଜଳପୋକ ଗ୍ରନ୍ଥ ଯାଇ ସ୍ଥାନୀୟ ତଦନ୍ତ କରି ତଦନ୍ତ ବିବରଣୀ ନିମ୍ନରେ ପ୍ରଦାନ କରାଗଲା ।

୧. ମୌଜା-ଜଳପୋକ ରେ ଭୌଗୋଳିକବିତ କ୍ଷେତ୍ର ଦ୍ୱାରା ଚିହ୍ନିତ ହୋଇଥିବା ପ୍ରସ୍ତାବିତ ପୁଟ-୧୫୦୮ ,ଖାତା ନଂ-୩୩୪ ମୌଜା-ଜଳପୋକ ର ପ୍ରଜା ପ୍ରକାସ ନାୟକ, ସୁର ନାୟକ, ତୁଳ ନାୟକ ପି: ନିତ୍ୟା ନନ୍ଦ ନାୟକ, ଧୋବଣୀ ନାୟକ ସ୍ତ୍ରୀ: ନିତ୍ୟା ନନ୍ଦ ନାୟକ, ସୁନାକର ନାୟକ ପି: ବଳରାମ ନାୟକ, ଅଶୋକ କୁମାର ପଟ୍ଟ ନାୟକ ପି: ଭାସ୍କର ନାୟକ, ନେତ ନାୟକ ସ୍ତ୍ରୀ: ଭାସ୍କର ନାୟକ, ଉମା ନାୟକ ସ୍ତ୍ରୀ: କେଶବ ନାୟକ ଜା: ଖଣ୍ଡାୟତ ବା: ନିଜଗାଁ ସ୍ଥିତିବାନ ସଦ୍ଦରେ ଖତିୟାନ ପ୍ରଚାର ହୋଇଅଛି ।

୨. ପ୍ରସ୍ତାବିତ ପୁଟଟି ସ୍ଥିତିବାନ ପୁଟ ଅଟେ ।

ଏଣୁ ଅତ୍ର ରିପୋର୍ଟ ଦ୍ୱାରା ପରବର୍ତ୍ତୀ କାର୍ଯ୍ୟାନୁଷ୍ଠାନ ନିମନ୍ତେ ଜଣାଇଲି ।

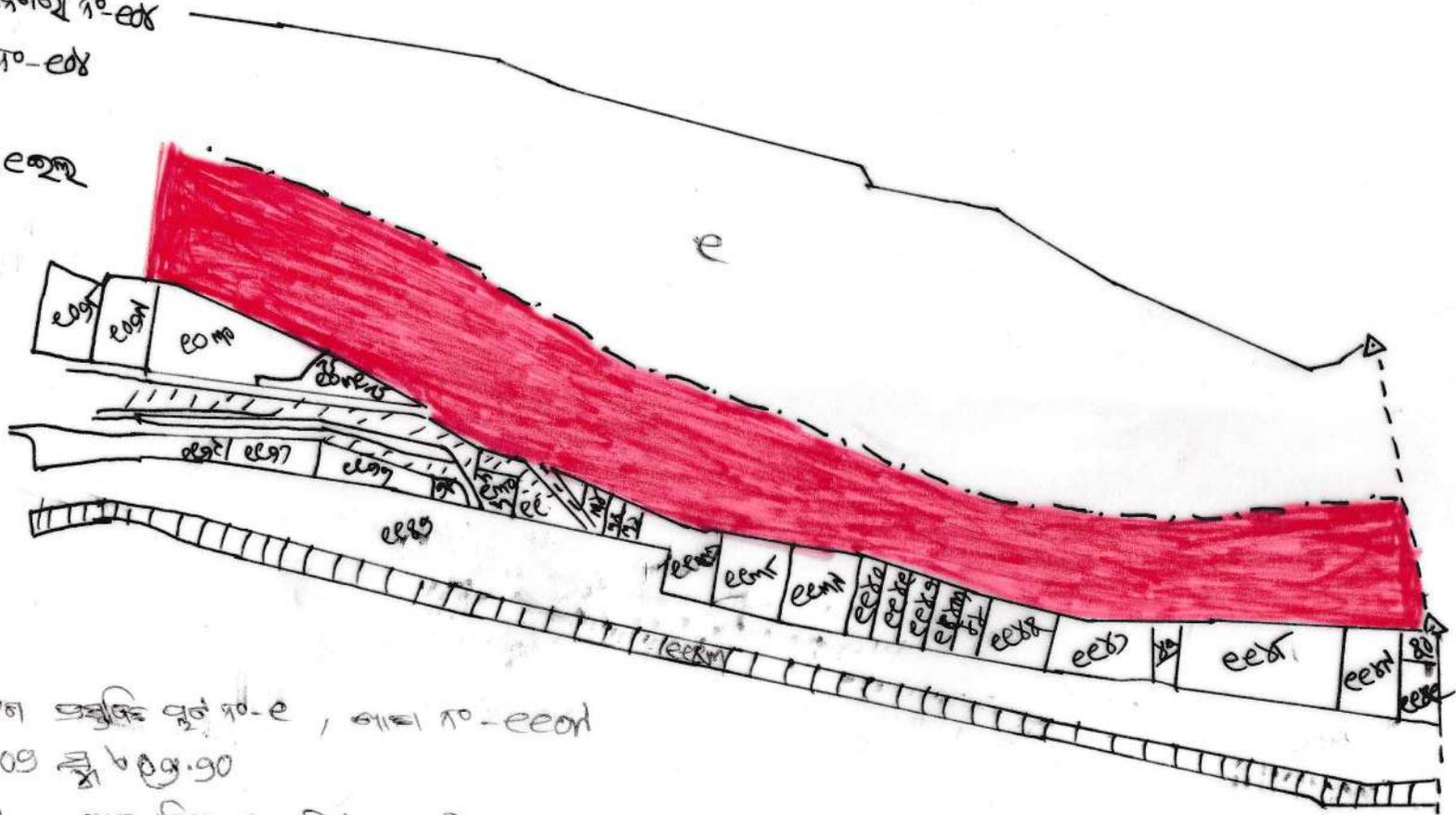
ଚନ୍ଦ୍ରସିଲ
ମୌଜା - ଜଳପୋକ
ଖାତା ନଂ - ୩୩୪
ପୁଟ ନଂ - ୧୫୦୮ (ସ୍ଥିତିବାନ)

ଆପଣଙ୍କ ବିଶ୍ୱସ୍ତା

11/09/2024
Revenue Inspector
Kerilopatana Circle

N

ମୌଜା - କରଲୋପାଟଣା ଛତ - e
 ସୀମା - ପାଟକୁରା କୁମାରଗଡ଼ୀ ନଂ-୧୦୪
 ପ୍ରସ୍ତୁତି - ମାର୍ଚ୍ଚ ୨୦୧୪ ନଂ-୧୦୪
 ଜିଲ୍ଲା - ଗଞ୍ଜାମ
 ଚକ୍ର - ୩୧୧୧ - ୩୧୧୨
 କ୍ର - ୨୦୦୭ - ୦୮

KARLOPTNA
~~Patna~~



■ ମାଟି ତିନିଫ ମାତ୍ର ପ୍ରସ୍ତୁତି ପୂର୍ବ ନଂ-୧ , ବାକୀ ନଂ-୧୧୦୮
 ରଜନୀ ୪୭.୦୭ ବ୍ଲକ୍ ୫୦୭.୨୦

N.B:- ପ୍ରସ୍ତୁତି ପୂର୍ବ ଉ ମାତ୍ରମାନଙ୍କ ୫୦୦ ମିଟର ପରିସର ମଧ୍ୟରେ କରଲୋପାଟଣା ନିୟମାବଳୀରୁ ଓ ତ୍ରାମ ପଦ୍ଧତିରୁ
 ମଧ୍ୟମ ମଧ୍ୟସ୍ଥିତ ।


 11/09/2024
 JIC RI, K. Patna
 ନାକର ନିରୀକ୍ଷକ
 କରଲୋପାଟଣା ବ୍ଲକ୍

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Astepure sand quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Lena River
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Astepure within 1km
 - b) Bridge :- 0.6 km from the proposed source.
 - c) Historical monument's structure :- Not exists within 1km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 5.2 km
 - k) Educational Institution :- Not exists within 1km
 - l) Hospital :- "
 - m) Existing area :- 46.35 AC + 70.58 AC
 - n) Proposed area :- -
 - o) Approach Govt. Road to the source :- No
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- No
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°27'41.78"N, 86°22'59.00"E)
 - u) Remarks, if any :-

As per the joint inspection of recommendation from the committee, that the Govt. approach road is not accessible to the proposed plots. Hence it may not be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Astepure	1076	4206 2258	Nadi	No	46.35 AC + 70.58 AC	-

B.D. 23.08.24
J.F., Kula Dist. Section

Prasadi 23.8.24
ACF, Rajnagar

Handwritten signature
22/8/24
R-O K.P. G.S.R.

Handwritten signature
23/08/24
Dy. Env. Engr
RO SPCB, Paradeep

Handwritten signature
23/08/24
Geologist
J.D.G. Dhenwad

Handwritten signature
07/11/2024
COLLECTOR
KENDRAPARA

Handwritten signature
23/08/24
M.O (1/C)

ରାଜସ୍ୱ ନିରୀକ୍ଷକଙ୍କ କାର୍ଯ୍ୟାଳୟ ,କରିଲୋପାଟଣା

ପତ୍ର ସଂଖ୍ୟା- ୨୮ ତା ୧୧.୦୯.୨୦୨୪ରିଖ

ପ୍ରାପ୍ତେଷୁ

ଶ୍ରୀଯୁକ୍ତ ତହସିଲଦାର,ମାର୍ଗାଢ଼ାଇ

ବିଷୟ:-ମୌଜା-ଆଇଡିପୁର ରେ ନୂତନ ବାଲି ସୈରାତ ଉତ୍ତର ତଦନ୍ତ ସମ୍ବନ୍ଧେ ।

ସୂଚନାଙ୍କ:-Mines office letter No.-257.Dtd.04.09.2024

ମହାଶୟ,

ଆପଣଙ୍କ ଆଦେଶ ମତେ ଉପରୋକ୍ତ ବିଷୟକୁ ଭିତ୍ତି କରି କେନ୍ଦ୍ରାପଡ଼ା ଖଣି ଅଧିକାରୀ କ ଉପ-ବିଭାଗ କମିଟିର ମିଳିତ ସର୍ବେକ୍ଷେଣ ରେ ଯୋଗ ଦେଇ ମୌଜା-ଆଇଡିପୁର ଗ୍ରନ୍ଥ ଯାଇ ସ୍ଥାନୀୟ ତଦନ୍ତ ଓ ରେକର୍ଡ ତଦଖ୍ କରି ତଦନ୍ତ ବିବରଣୀ ନିମ୍ନରେ ପ୍ରଦାନ କରାଗଲା ।

୧. ଭୌଗୋଳିକବିତ କ ଦ୍ୱାରା ପ୍ରସ୍ତାବିତ ପୁଟ ୨୨୫୮ ଓ ୪୨୦୭ ପୁଟସ୍ତୟ ର ଆନୁମାନିକ ୪୦୦ମିଟର ଦୂରତା ମଧ୍ୟରେ ମୌଜା ଡିହବଳରାମପୁର-ତଳଗାଁ କୁ ସଂଯୋଗ କରୁଥିବା ଏକ ବୃହତ ପୋଲୋ ଅବସ୍ଥିତ

୨. ଚିହ୍ନିତ ହୋଇଥିବା ପୁଟ ସ୍ତୟ ପୂର୍ବ ରୁ WPC Case No-5203/2013 ରେ ଛଗିତ ହୋଇରହିଅଛି

୩. ପ୍ରସ୍ତାବିତ ପୁଟ ର ୧ କି.ମି ପରିସର ମଧ୍ୟରେ ଏକ ଗୋଟି ସରକାରୀ ମହାବିଦ୍ୟାଳୟ (ଯଥା-ଗାନ୍ଧୀଜୀ ଉଚ୍ଚ ମାଧ୍ୟମିକ ବିଦ୍ୟାଳୟ) ଏବଂ ଜନବସତି ମଧ୍ୟ ଖୁବ ନିକଟରେ ରହିଅଛି।

୪.ପ୍ରସ୍ତାବିତ ପୁଟସ୍ତୟ ର ଏକାକିତା ନକ୍ସା ପ୍ରସ୍ତୁତ ନିମନ୍ତେ ସରକାରୀ ଅମିନ ର ଆବଶ୍ୟକତା ରହିଅଛି ।

ଏଣୁ ଅତ୍ର ରିପୋର୍ଟ ଦ୍ୱାରା ପରବର୍ତ୍ତୀ କାର୍ଯ୍ୟାନୁଷ୍ଠାନ ନିମନ୍ତେ ଜଣାଇଲି ।

ତହସିଲ

ମୌଜା-ଆଇଡିପୁର

ଆପଣଙ୍କ ବିଶ୍ୱସ୍ତା

ଖାତା ନଂ-1076 (ମାବାଦ ମନୋରାଜ୍ୟ ମନାବାଦୀ)

ପୁଟ ନଂ- ୨୨୫୮ , ୪୨୦୭

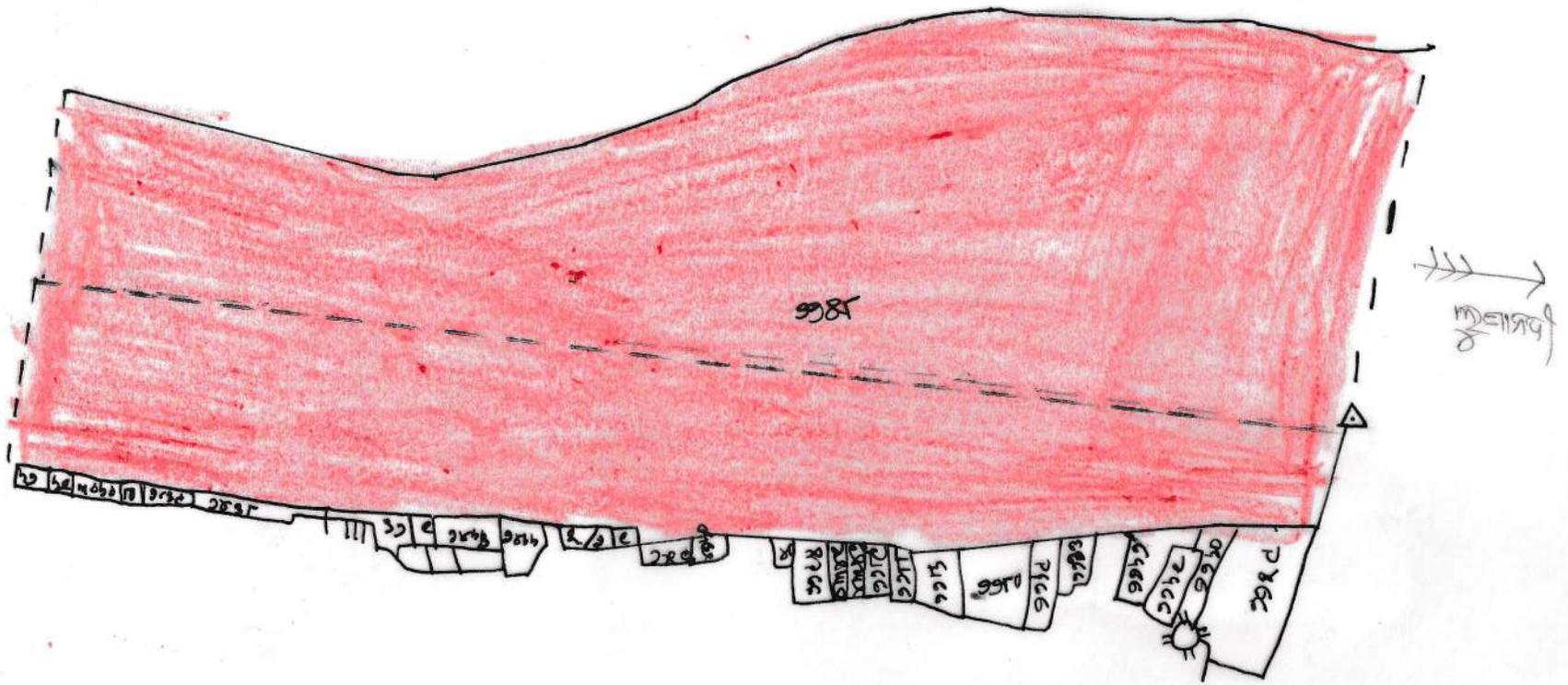
କିସମ - ନଦୀ


11/09/24
ରାଜସ୍ୱ ନିରୀକ୍ଷକ
କରିଲୋପାଟଣା ସବ୍ଡିଭି

N.B:- ଶୁକ୍ର ମାସ ୭ତମ ରିପୋର୍ଟ ସ୍ତୟ ସଂଯୋଗ କରାଗଲା ।

2
5

ଗୌଡ଼ା-ଆଗରୁଣ୍ଡ ସିଟ୍-୭
 ଥାନା-ମାର୍ଗାଆର
 ଦେସିକ-ମାର୍ଗାଆର
 ଡିଗ୍ରୀ-କେନ୍ଦ୍ରାପଡ଼ା
 ବ୍ଲକ୍-କୂଳଦି-ମାଲେକ
 ସନ-୧୯୮୩-୮୮



AITIPUR

ଦେସିକ

ଗୌଡ଼ା-ଆଗରୁଣ୍ଡ
 ଥାନା-୧୦୭
 (ଆଜାନ ଅଭୋଗ୍ୟ ଅନାଜନୀ)
 କର୍ମ-୭୭୫୮
 କ୍ଷେତ୍ର-ନଦୀ
 ରୂପା ୪୦.୩୫ ବୁ ୮୧୭.୪୫

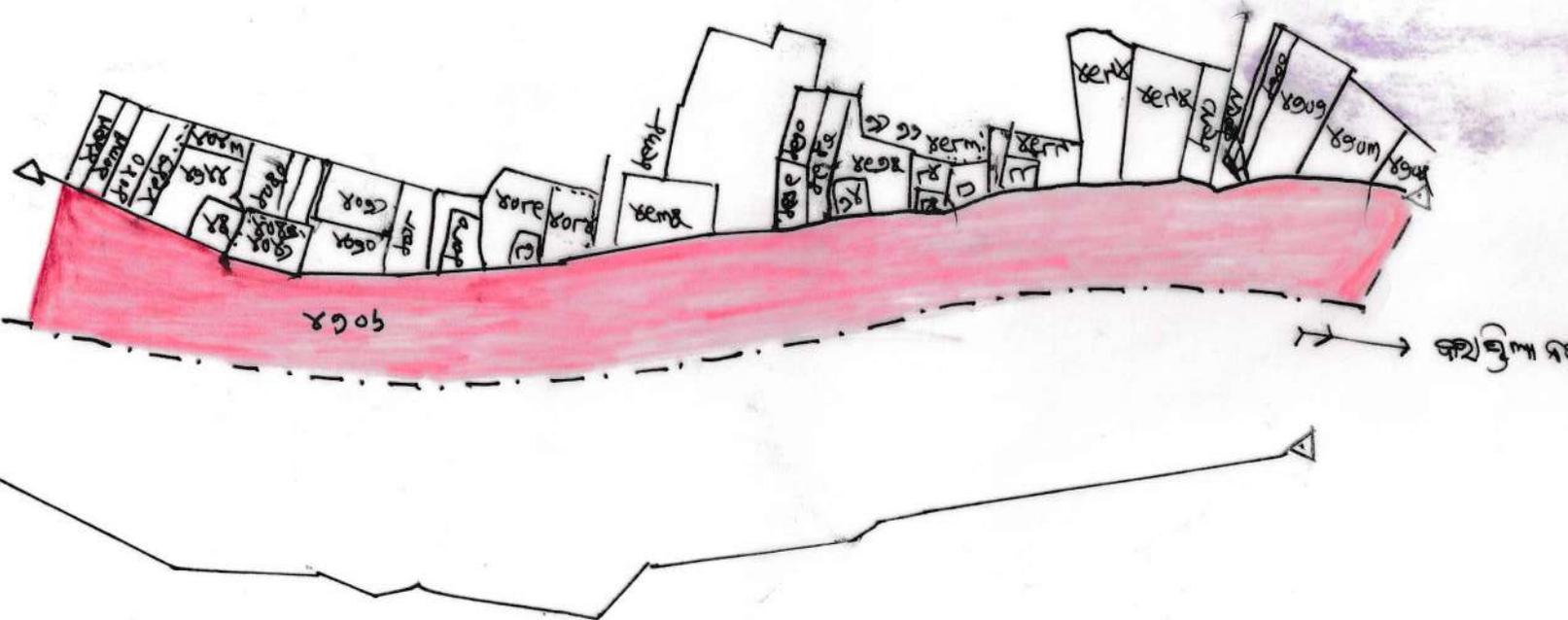
। ପ୍ରସ୍ତାବିତ ନୂତନ ୭୭୫୮ କ୍ଷେତ୍ର ନଦୀ କୂଳ ବ୍ୟକ୍ତିଗତ କୃଷିକାର ନୂତନ ସୁଲୋଚନା କରାଯାଇଛି । ଏହି ନୂତନକୁ ସହଜାତୀ ଥାଏ
 ସୁଲୋଚନା ହୋଇନାହିଁ ।

11/09/24
 H.C. R.I. Karilapatna
 Revenue Inspector
 Karilapatna Circle

N
 ଦୈନିକା - ଆଇ.ଏ.ସି.ଏ. ନୂମ୍ବର - ୨
 ଥାନା - ପାଟିକପା କ୍ରମାଙ୍କନ ୩୧୦୫
 ପୁସ୍ତକ - ମାର୍ଗାଲୋକ ୩୧୦୫
 ବିଲ୍ଡିଂ - କେନ୍ଦ୍ରା ଗଢ଼ା
 ଷ୍ଟାଲ୍ - ଛାଏସି - ମାଲୋକ
 ୫ ସନ - ୧୯୮୩-୮୮

ତପସ୍ବିକ
 ଦୈନିକା - ଆଇ.ଏ.ସି.ଏ.
 ଷାଲାନ - ୧୦୩୬
 (ଆକାମ ଅଲୋଗ୍ୟ ଅନାକାମୀ)
 ନୂମ୍ବର - ୪୨୦୮
 କ୍ଷିପ୍ର - ନଦୀ
 ଦୂରତା ୩୦.୫୮ ବୁ ୧୧୭.୪୦

AITIPUR



■ ପ୍ରକାଶିତ ନୂମ୍ବର - ୪୨୦୮ କ୍ଷିପ୍ର ନଦୀ ଏବଂ କମଳିଗଡ଼ ସ୍ଥିରୀତ ନୂମ୍ବର ଅଞ୍ଚଳରେ ଅଛି । ତୁଳୁ ନୂମ୍ବରକୁ ପ୍ରକାଶ୍ୟ ଥାଏ ।
 ଅଞ୍ଚଳରେ ଅଛି ।


 11/09/24
 D.C. RI, Karilopatra.
 Revenue Inspector
 Karilopatra Circle.

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Jalapaka Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Karandia
- 4) Sufficiency of Source :- No
- 5) The distance of the source from the following points
 - a) Inhabited village :- Jalapaka within 1 km
 - b) Bridge :- 0.5 km from proposed plot.
 - c) Historical monument's structure :- Not exists within 1 km.
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-316(A) - 5.02 km
 - k) Educational Institution :- Not exists within 1 km
 - l) Hospital :- "
 - m) Existing area :- 0.07 A
 - n) Proposed area :- -
 - o) Approach Govt. Road to the source :- No
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- No
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- No
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- No
 - u) Remarks, if any :- The proposed plot does not exist within the river course & after verification the plot is a prt tenant. Hence it may not be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Jalapaka	334	1508	Sazed-11	No	0.07Ac	-

B.D. 23.08.2024
 J.E., Kule Irr. Section
 AC, Rajnagar

23/8/24
 R.K. P...

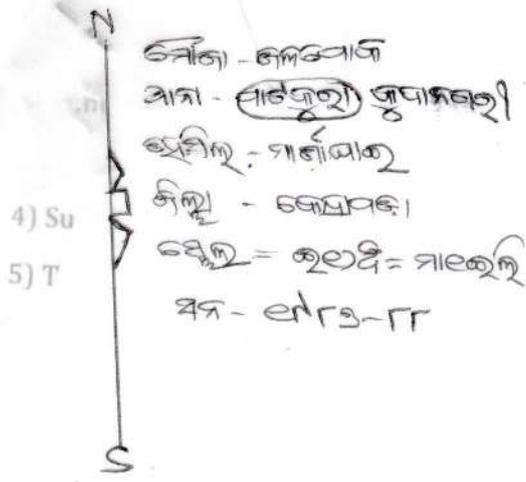
23/08/24
 Dy. Env. Engg
 RO SPCB, Paradeep

J. Mohanty
 23/08/24
 Geologist
 JDA Dhenkanal

**COLLECTOR
 KENDRAPARA**

23/8/24
 M.O (114)

JALAPOKA



ସଂକ୍ଷିପ୍ତ

ବିକା - ଜଳପୋକ
 ଶାସନ ନଂ - ୩୩୪
 ପ୍ଲଟ ନଂ - ୧୪୦୮
 ରୂଢ଼ିତା ୦.୦୫ କିସମ - ଶାନ୍ତନୁ ପୁରୀ

■ କାହିଁ ଚିହ୍ନିତ ମାତ୍ର ବି ପ୍ରସ୍ତାବିତ ପ୍ଲଟ ନଂ - ୧୪୦୮. ଚଳୁ
 ପ୍ଲଟ ବି ବ୍ୟକ୍ତିଗତ ସ୍ଥିତିରାମ ପ୍ଲଟ ମତେ,


 11/09/2024
 J/C RI, Karilapatna,
 Revenue Inspector
 Kerilapatana Circle

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Kasoti Sand Quarry
- 2) Minor Mineral :- Sand
- 3) Name of the River if River sand :- Luena
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Kasoti within 1km
 - b) Bridge :- Not within 1km
 - c) Historical monument's structure :- "
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-53 - 2.4 km
 - k) Educational Institution :- Not exists within 1km
 - l) Hospital :- "
 - m) Existing area :- 41.67 Ha
 - n) Proposed area :- 4.957 Ha
 - o) Approach Govt. Road to the source :- No
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- NO
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- NO
 - t) Whether GPS reading taken :- Yes (20°24'56.99"N, 86°28'14.88"E)
 - u) Remarks, if any :- As per the joint inspection & recommendation from the committee, it may not be entered in...

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Kasoti	390	1718 1379	Nadi	No	41.67H	4.957H

B.D. 23.08.2024
P.E, Kula Imm. Section

Prasid 23.8.24
ACF, Rajnagar

23/8/24
P.O. K.P. Sim

23/08/24
Dy. Env. Engg
ROSPCB, Paradeep

S. Mohanty
23/08/24
Geologist
JDh, Dhenkanal

07/10/2024
COLLECTOR
KENDRAPARA

23/8/24
M.O (11)

ରାଜସ୍ୱ ନିରୀକ୍ଷକଙ୍କ କାର୍ଯ୍ୟାଳୟ, ମାର୍ଶାଘାଟ ମଣ୍ଡଳ

ପତ୍ର ସଂଖ୍ୟା-୧୪

ତା-୧୨/୦୯/୨୦୨୪

ମାନନୀୟ,

ଶ୍ରୀଯୁକ୍ତ ଚନ୍ଦ୍ରଶିଳପୀ, ମାର୍ଶାଘାଟ

ବିଷୟ : ମୌଜା କକ୍ଷୋଟି ରେ ନୂତନ ସୈରାତ ଉତ୍ତ ଚଦତ୍ର ସମ୍ବନ୍ଧେ ।

ସୂଚନାକ : ଖଣି ଅଧିକାରୀଙ୍କ କାର୍ଯ୍ୟାଳୟ, କେନ୍ଦ୍ରପଡ଼ା ପତ୍ର ନଂ-257/ତା-04.09.2024ରିଖ

ମହାଶୟ,

ଆପଣଙ୍କ ଆଦେଶମତେ ଉପରୋକ୍ତ ବିଷୟକୁ ଭିତ୍ତି କରି କେନ୍ଦ୍ରପଡ଼ା ଖଣି ଅଧିକାରୀଙ୍କ ଉପ-
ବିଭାଗ ର ମିଳିତ ସର୍ବେକ୍ଷଣରେ ତା-23.08.2024ରିଖ ଦିନ ଯୋଗ ଦେଇ ମୌଜା କକ୍ଷୋଟି ଗ୍ରସ୍ତରେ ଯାଇ
ସ୍ଥାନୀୟ ଚଦତ୍ର କାରଗଲା । ଉକ୍ତ ଚଦତ୍ର ର ବିବରଣୀ ନିମ୍ନ ମତେ ଜଣାଇଲି :-

1. ଭୌଗଳିକବିଭାଗ କ ଦ୍ୱାରା ପ୍ରସ୍ତାବିତ ହୋଇଥିବା : ମୌଜା-କକ୍ଷୋଟି ଖାତା ନଂ-୩୯୦ (ଅବାଦ ଅଯୋଗ୍ୟ
ଅନାବାଦି)ର ପ୍ଲଟ ନଂ- ୧୭୧୮, ରକବା ଏ ୮୯.୧୯, କିସମ-ନଦୀ ଏବଂ ପ୍ଲଟ ନଂ-୧୩୭୯, ରକବା
ଏ୧୧୯, କିସମ- ନଦୀ ନକ୍ସା ଅନୁଯାୟୀ ଉକ୍ତ ପ୍ଲଟ ଦ୍ୱୟ ସହ କୌଣସି ସରକାରୀ ରାସ୍ତା ସଂଯୋଗ
ହୋଇନାହିଁ ।
2. ଚଦତ୍ର ସମୟରେ ଜଣାଯାଏ ଯେ ପ୍ରସ୍ତାବିତ ପ୍ଲଟ ଦ୍ୱୟ ମଧ୍ୟରୁ ପ୍ଲଟ ନଂ-୧୩୭୯ ଜଳମଗ୍ନ ହୋଇ ରହିଛି ।
3. ପ୍ରସ୍ତାବିତ ପ୍ଲଟ ଦ୍ୱୟ ର ୫୦୦ମି ପରିସର ମଧ୍ୟରେ ଏକ ଶିବ ମନ୍ଦିର ଏବଂ ଜନବସତି ରହିଅଛି ।
4. ଉପରୋକ୍ତ ବିଷୟକୁ ଦୃଷ୍ଟି ରେ ରଖି ମାର୍ଶାଘାଟ ମଣ୍ଡଳ ର ରେକର୍ଡ ତନଖିବାରୁ ଜଣାଯାଏ ଯେ ଉକ୍ତ
ପ୍ଲଟ ଦ୍ୱୟ ପୂର୍ବରୁ ସନ ୨୦୧୫-୧୬ ଠାରୁ ଛାଡ଼ ନିମନ୍ତେ ପ୍ରସ୍ତାବିତ ଏବଂ ସ୍ଥଗିତ ହୋଇ ରହିଛି ।

ଅତ୍ରୁ ଆପଣଙ୍କ ଗୋଚରାର୍ଥେ ତଥା ପରବର୍ତ୍ତୀ ବିଚାର ନିମନ୍ତେ ଜଣାଇଲି ।

ଆପଣଙ୍କ ବିଶ୍ୱସ୍ତ

N.B:- ଶୁଣିବାକୁ ସମସ୍ତ ସୁବିଧା ସୁବିଧା ସୁବିଧା କରାଗଲା ।

Alaya
ମାର୍ଶାଘାଟ
ରାଜସ୍ୱ ନିରୀକ୍ଷକ, ମାର୍ଶାଘାଟ ମଣ୍ଡଳ
Revenue Inspector
Marshaghat

N
5

ମୌଜା-କୋଟି ଟିକି ନଂ-୧
 ଥାନା-ମହାଲୀ ଗ୍ରାମ ନଂ ୨୦୩
 ବିସ୍ତୃତି-୨୫୩୫୫ ବର୍ଗ ଫୁଟ
 ଦିଗ୍ଘ-କୋଲୁମ୍ବି
 ଖୋଲ-୧୫୫୫-୫୫୫
 ସ୍ତମ୍ଭ-୧୫୫୫-୫୫

ବିବରଣ

ମୌଜା-କୋଟି
 ଥାନା-MCD
 (ଥାନାଦି ଅଧିକାରୀଙ୍କ ଅନୁମତି)
 ପୂର୍ବନଂ-1718
 ହଜିରୀ-୪୪୭.1900
 କିମ୍ପା-୧୫୫

■ ଭୂମିପତ୍ର ନଂ-୧୩୧୮
 ହଜିରୀ-୪୪୭.190
 ବୃତ୍ତାନ୍ତରୀଣ ହାତ
 ଅଧିକାରୀଙ୍କ ଦ୍ଵାରା ନିର୍ଦ୍ଧାରିତ।

■ ନାହିଁ ହଜିରୀ ହାତ
 ପୂ.ନଂ-୧୩୧୮
 ଏମ୍.ଏମ୍.ଏ. ୪୧୭.୪୫ (NOT TO SCALE)
 ହସ୍ତାକ୍ତ ନାହିଁ ଉପରେ ଥିବେ।



ପ୍ଲଟ ନଂ ୨୦୨

KASOTI

କୃତ୍ରିମ ହାତ ନଂ ୨୦୪

Atanve
 12.09.24
 Revenue Inspector
 Marshahat

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- *Garajanga Brick Earth Quarry*
- 2) Minor Mineral :- *Brick Earth*
- 3) Name of the River if River sand :- *—*
- 4) Sufficiency of Source :- *Yes*
- 5) The distance of the source from the following points
- a) Inhabited village :- *Garajanga within 1 km*
 - b) Bridge :- *1 km*
 - c) Historical monument's structure :- *Not exists within 1 km*
 - d) Dams :- *✓*
 - e) Weirs :- *✓*
 - f) Ground water extraction points :- *✓*
 - g) Water supply head work :- *✓*
 - h) Extraction points for irrigation :- *✓*
 - i) Any other cross drainage structure :- *✓*
 - j) National Highway :- *NH 53 - 1.25 km*
 - k) Educational Institution :- *Not exists within 1 km*
 - l) Hospital :- *✓*
 - m) Existing area :- *1.370 Ac*
 - n) Proposed area :- *1.370 Ac*
 - o) Approach Govt. Road to the source :- *Yes*
 - p) Any objection from the locality :- *No*
 - q) Recommendation for lease out for the next five years from 2024-25 :- *Yes*
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- *Yes*
 - s) Elephant movement if any :- *No*
 - t) Whether GPS reading taken :- *Yes (20°23'36.73"N, 86°28'11.62"E)*
 - u) Remarks, if any :- *As per joint inspection & recommendation from the committee, that the proposed source may be entered in DSR.*

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
<i>Garajanga</i>	<i>777/528, 777/667, 777/666</i>	<i>210/2704 210, 2112</i>	<i>Sarad-III</i>	<i>No</i>	<i>1.370 Ac</i>	<i>1.370 Ac</i>
	<i>777/754</i>	<i>212/2701 212/2703 212/2705</i>				

B.D.
23.08.24
P.E, Kuda Iron Section

Prasadi
23.8.24
ACF, Rajnagar

Amey
23/8/24
R.O. K.P. Park.

Shr
23/08/24
Dy. Env. Eng
RO SPCB, Khandeep

S. Mahapatra
23/08/24
Geologist
J.D.H. Dhenkanal

011/01/2024

**COLLECTOR
KENDRAPARA**

M.O. (I/C)
23/08/24

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

- 1) Name of the Source :- Same Badapaldia Brick Earth Quarry
- 2) Minor Mineral :- Brick Earth
- 3) Name of the River if River sand :- —
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Badapaldia within 1km
 - b) Bridge :- 0.8 km from the source
 - c) Historical monument's structure :- Not exists within 1km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-53 - 08 km
 - k) Educational Institution :- Not exists within 1km
 - l) Hospital :- "
 - m) Existing area :- 1.26 Ac
 - n) Proposed area :- 1.26 Ac
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20°24'56.89"N, 86°30'20.66"E)
 - u) Remarks, if any :- As per the joint inspection and recommendation from the committee, that the proposed source may be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
Bada-Paldia	183/68 183/106	1/652 62/684	Sairat II	No	1.26 Ac	1.26 Ac

B.D.A.
23.08.24
J.E., Kula, Pura Section

Prasade
23.8.24
ACF, Rajnagar

23/08/24
R.K. Parida

23/08/24
Dy. Env. Eng
RO SPCB, Paradeep

J. Mohapatra
23/08/24
Geologist
J.D.G. Dhenkanal

23/08/24
M.O. (I/C)

07/10/2024
COLLECTOR
KENDRAPARA

FEASIBILITY REPORT OF NEW SAIRAT SOURCES BASING ON JOINT VISIT OF SUB-DIVISIONAL COMMITTEE

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- 1) Name of the Source :- Bhagabanspur Brick Earth Quarry
- 2) Minor Mineral :- Brick Earth
- 3) Name of the River if River sand :- —
- 4) Sufficiency of Source :- Yes
- 5) The distance of the source from the following points
 - a) Inhabited village :- Bhagabanspur within 1 km
 - b) Bridge :- 2.7 km
 - c) Historical monument's structure :- Not exists within 1 km
 - d) Dams :- "
 - e) Weirs :- "
 - f) Ground water extraction points :- "
 - g) Water supply head work :- "
 - h) Extraction points for irrigation :- "
 - i) Any other cross drainage structure :- "
 - j) National Highway :- NH-53 - 1.3 km
 - k) Educational Institution :- Not exists within 1 km
 - l) Hospital :- "
 - m) Existing area :- 1.170 Ac
 - n) Proposed area :- 1.170 Ac
 - o) Approach Govt. Road to the source :- Yes
 - p) Any objection from the locality :- No
 - q) Recommendation for lease out for the next five years from 2024-25 :- Yes
 - r) Whether hal-sabik kissam of the referring RoR has been verified :- Yes
 - s) Elephant movement if any :- No
 - t) Whether GPS reading taken :- Yes (20° 22' 35.93" N, 86° 29' 12.37" E)
 - u) Remarks, if any :- As per the joint inspection and recommendation from committee, that the proposed source may be entered in DSR.

Land Schedule

Mouza	Khata No	Plot No	Kissam	Covered under DLC	Total existing Area	Proposed area
	542/162 542/244	1654 1662/1961				
Bhagabanspur	239	1656 1657	Sarad-11	No	1.170 Ac	1.170 Ac

B.D.
23.08.2024
J.E, Kaha Inr. Section

Hande
23.8.24
ACF, Rajnagar

Handwritten signature and date: 23/8/24

Handwritten signature and date: 23/08/24
Dy. Env. Engr
ROSPCB, Paraleep

Handwritten signature and date: 23/08/24
Geologist
J.D. Dhenhand

Oll
07/10/2024
**COLLECTOR
KENDRAPARA**

Handwritten signature and date: 25/08/24
M.O (1/C)