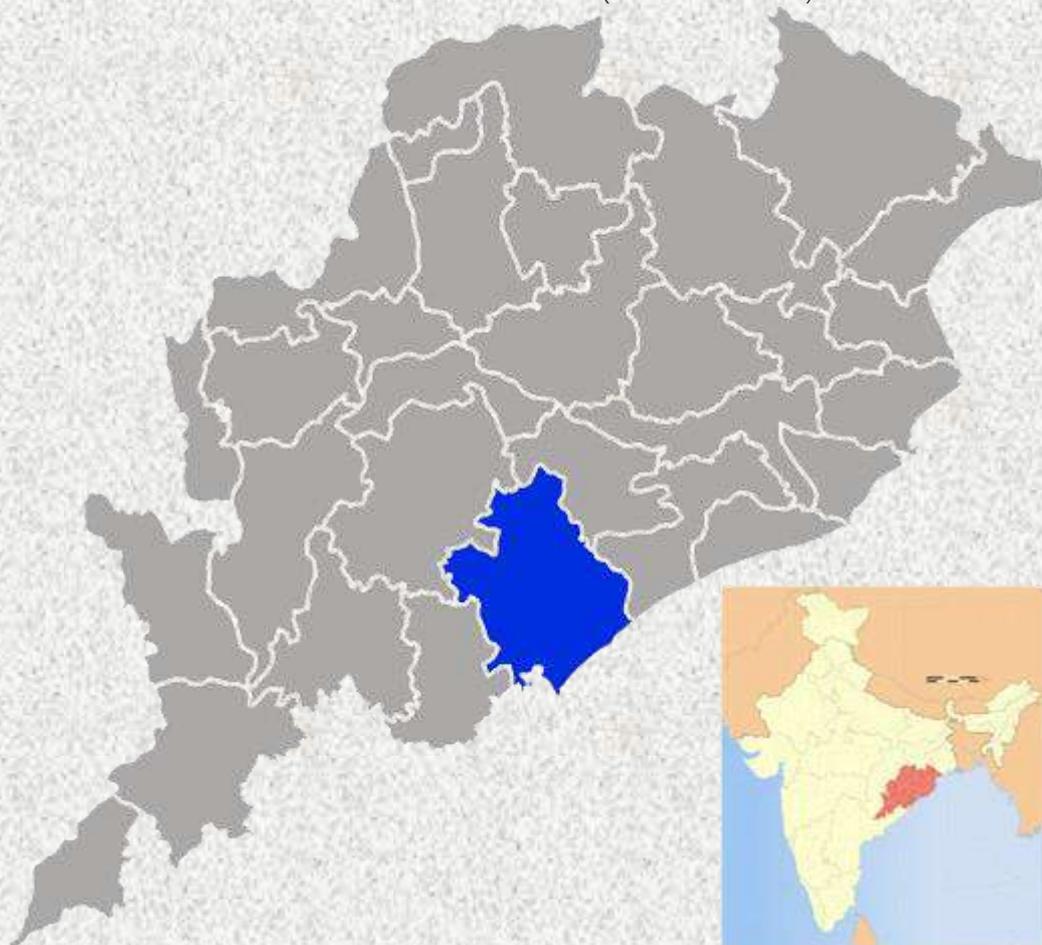


DRAFT



DISTRICT SURVEY REPORT (DSR) OF GANJAM DISTRICT, ODISHA FOR DECORATIVE STONE MINING

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



**COLLECTORATE GANJAM
DECEMBER-2024**

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PREFACE

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

OBJECTIVES

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

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

01. INTRODUCTION.

Ganjam District came into existence on 1st April 1936. The district is named after the old township and European fort of Ganjam situated on the northern bank of river Rushikulya which was the head quarter of the District during early British administration up to 1815. The name of the town Ganjam or locally pronounced Ganja, has probably been derived from the word "Gunj" of Iranian (Persian) origin which means the granary. There is also another meaning of this word i.e. "The Market". The Ganjam area was a part of ancient Kalinga which was occupied by Ashok in 261 B.C. The period of 1757 was ruled by the French Commander Bussy. In 1759, the French ruler was defeated by English and the District was annexed by them. The office of the District Collector was established in 1794. The District got separated from the Madras Presidency and formed the part of the newly created State of Odisha province with effect from 1.4.1936. Ganjam District is on 19.4 to 20.17 degree North Latitude and 84.7 to 85.12 degree East Longitude. It covers an area of 8070.60 sq km. The district is broadly divided into two divisions, the Coastal plain area in the east and hill and table lands in the west. The eastern ghats run along the western side of the District. The climate of Ganjam is characterized by an equable temperature round the year, particularly in the coastal regions. The District's cold season from December to February is followed by hot season from March to May. The District experiences normal annual rainfall of 1444 mms. Agriculture is a traditional occupation and the way of living of the inhabitants of the Ganjam District. The District is well known for its fertile soil and agricultural productivity. A large variety of crops are grown here like Paddy, Ground nut, Sugar cane, Oil seeds, Ragi, Mung, Biri etc. Because of the agro climatic condition Ganjam is included as the agricultural District. The literacy rate of the Ganjam district is above 60 percent. There are many reputed educational institutes in the District like Brahmapur University, Ganjam Law college, Lingaraj Law college, NIST, Khalikote College Brahmapur, R.C.M. Science college Khalikote, Government Science College Chhatrapur, Maharaja Krishna Chandra Gajapati Medical College, Nursing College, and Pharmaceutical Colleges etc. Ganjam District celebrates many festivals round the year. Dola Yatra, Tara Tarini Mela, Thakurani Yatra, Durga Puja, Shiv Ratri, Ratha Yatra, Makar Sankranti, Manabasa Gurubara and Danda Yatra are the famous festivals being celebrated in the District with great enthusiasm. Ganjam District is full of many tourist spots that are visited by a large number of tourists every year like Arjyapalli, Athagadapatna, Balkumari, Brahmapur, Bhairabi (Mantridi), Bhetanai, Biranchi Narayan, Budhakhol- Buguda, Chilika (Rambha), Girisola, Gopalpur sea beach, Taratarini etc.

02. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT.

Over the year the mining activities of the district is multiplying keeping in view of population pressure, different development activities and scientific requirement of the society. The mining activities of the district may be broadly divided into 3 categories, viz: i) Atomic Mineral Exploration and processing 2) Extraction and Processing of Specified Minor Mineral (Decorative Stone) and 3) Extraction of minor mineral other than specified minor mineral such as ordinary earth, Sand, Stone & Morrum.

Mineral Resources Overview:

Sand: The rivers and streams in Ganjam, particularly the Rushikulya, Ghodahada, Bahuda , Badanadi , and Rushikulya, are rich sources of sand deposits. Sand extracted from these waterways is primarily used in construction, especially for producing concrete and plaster. It is essential to the building industry, supporting the development of residential, commercial, and infrastructure projects.

Road Metal/Stone: Ganjam is home to vast reserves of building stones, such as granite, limestone, and various other construction materials. The district boasts numerous quarries that supply stones for use in construction, road building, and other civil engineering projects.

Morrum: Morrum is a type of gravel or loose earth commonly used in construction and road construction. It is primarily extracted from riverbeds and alluvial deposits. Morrum is widely utilized for roadbuilding, particularly in rural and semi-urban areas, and is also used in the construction of embankments and as a foundational material for highways.

Ordinary Earth: The clay-rich soil found in parts of Ganjam is highly suitable for the production of bricks. Clay is commonly extracted for the manufacturing of bricks for both industrial and residential construction. The extracted clay is molded into bricks, which are then fired in kilns. These bricks are vital for the construction of buildings, roads, and other infrastructure.

All the these sources extraction of Minor Mineral are being done as per the approved mining Plan. All the mining activities in the district are open cast working and carried out either manually or semi mechanised manner.

03. GENERAL PROFILE OF THE DISTRICT.

a. Geographical position: Longitude -84.7 to 85.12 degree East
Latitude- 19.4 to 20.17 degree North

b. Area & Population: -

The district has an area of 8070.60 sq.kms and 35.29 lakhs of population as per 2011 census. The density of population of the district is 429 per sq. kms against 270 person per sq.km of the state. It has 3227 villages covering 11 blocks, 23 Tahasils and 3 Subdivisions. As per 2011 census the schedule caste population is 6.88 lakhs (19.5%) and schedule tribe population 1.18 lakhs (3.37%). The literacy percentage of the district covers 62.62 against 72.9 of the state.

c. Climate: -

The climate condition of the district is generally hot with high humidity during April to May and cold during December to January. The monsoon generally breaks during the month of June. Annual rainfall of the district was 1109.68 mm in 2018-19 which is less than the normal rainfall (1444 mm).

d. Economy:

The economy of the Ganjam District is supported by both industry and agriculture. The District is well known for its food grain production and its export. The agricultural sector supplies about 75 percent of the total workforce of the Ganjam District. The animal husbandry also adds economical support to the District. There are a considerable section of people who are living on animal rearing. The share of industries in the economic development of Ganjam District is also important. Ganjam District has store a variety of economically important minerals like limestone, soapstone, china clay, fireclay, graphite, granite and quartz.

Agriculture forms the backbone of the District's economy, with more than 70 Percent of the population being dependent on it. The district has alluvial soil at the eastern part (coastal region) and late rite soil on the west (hilly table land) with small patches of black cotton soil at the centre and in the north east close to Chilika. This helps in obtaining a substantial agricultural yield. Availability of mineral resources and forest resources also contributes to the District's economy.

Abrasives and grinding materials, lime stone (kankar), manganese, monazite, sand and talc are some of the chief economic minerals found in the District. Black granite stones are abundantly available in the District, sustaining the stone crushing and stone polishing units. Matikhala mines, operated by Indian Rare Earths Limited (IRE) is one

mine in the District that exploits sand deposits containing monazite, zircon and rutile illuminate.

The forests of the District provide a wide range of raw materials contributing to its economic growth. Timber, bamboo, tamarind, mahua, resin, kendu leaves, siali leaves, sal leaves, neem and karanja seeds are the main forest products. As regards livestock resources, the rich live stock population of the District contributes in its own way to the District's economic development. This District fulfills the major portion of the total lime needs of the state, with the rich resource of lime shells that its long coast line offers. Ganjam and Humma area and the area near the mouth of river Bahuda and Rushikulya are the rich sources of salt production, catering not only to the needs of the District but also of the state. There are a number of industries functioning in the District. The District also has three industrial estates, located at Brahmapur, Bhanjanagar and Chatrapur respectively.

Most of the educated youths of poor households are migrating to various cities of Gujarat, India for breadwinning. It covers a major migrated population of Ganjam District and affects the district economy significantly.

e. Industry:

The contribution of the mineral to the economy of the district is insignificant. A huge amount of minerals are available in the district such as granite, limestone, soap stone, fire clay, china clay, quartz manganese etc. Basing on the above resources and infrastructure large number of SSI and large and medium scale unit are coming up through out the district. So far only one mine at Matikhalo is being operated by Indian Rare Earth Limited (IREL) to exploit sand deposits containing monazite, zircon, rutile, illuminite etc. The IREL is established in the year 1984 at Arjapalli. It is also going to establish a thorium, monazite processing unit and titanium pigment in near future. However, the mining activities of the district has been discussed in previous paragraph of the report.

Similarly, another large scale unit i.e. M/s. Jayashree Chemicals Pvt. Ltd. (Now M/s. Grasim Industry Ltd.) was established in the year 1962 which started production in 1967 and it producing caustic soda, chlorine and Hydrochloric acid and sulphur dioxide Gas. Similarly. 2 medium scale enterprises namely M/s. Sudhakar PVC products Pvt. Ltd. and M/s. United Spirits Ltd. at Pitapalli under Chikiti Tahasil and Narayanpur under Konisi Tahasils are existing respectively. Apart from these. different industrial units will come up in the TATA Steel SEZ Ltd. relating to food and beverage. chemical and

chemical product, fabrication metal product, electrical and electronics, construction and mineral products etc.

f. Demography: -

description	Value
Area	8070.60 sq.km
No. of Sub-Division	3
No. of Block	11
No. of Police Station	35
No. of Tahasils	23
No. of Gram Panchayats	503
No. of ULBs	18
No. of Revenue Villages	3227

g. Culture & Heritage:

Ganjam District celebrates many festivals round the year. Dola Yatra, Tara Tarini Mela, Thakurani Yatra, Durga Puja, Shiv Ratri, Ratha Yatra, Makar Sankranti, Manabasa Gurubara and Danda Yatra are the famous festivals being celebrated in the District with great enthusiasm. Ganjam District is full of many tourist spots that are visited by a large number of tourists every year like Arjyapalli, Athagadapatna, Balkumari, Brahmapur, Bhairabi (Mantridi), Bhetanai, Biranchi Narayan, Budhakhol- Buguda, Chilika (Rambha), Girisola, Gopalpur sea beach, Taratarini etc.

h. Transport & Communication: -

The District is well connected by roads, rail, air and water ways. Most of the villages and towns are connected through motorable good roads. The district is served by roads of different categories like National Highways. State Highways. Major District Roads. Other District Roads and classified village roads, the length of each type of roads in the district upto the year 2014-2015 is given below.

Sl. No.	Category of the Road	Length in km.
1	2	3
1	National highways	396 km
2	State Highways	630Km
3	Major District Roads	270Km
4	Other District Roads	867Km
	TOTAL	2150Km

i. National Highways: -

N.H. 16	:	Puintola near Ganjam to Girisola- 85Kms
N.H. 516	:	Connects NH-16 with Gopalpur Port-5.35Kms
N.H. 57	:	Connects Bhanjanagar, Aska & Berhampur – 62 Kms
N.H. 326	:	Connects Aska, Sheragada & Taptapani-53 Kms
N.H. 59	:	Connects Berhampur, Surada & Gajalabadi-191 Kms

ii. National Highways: -

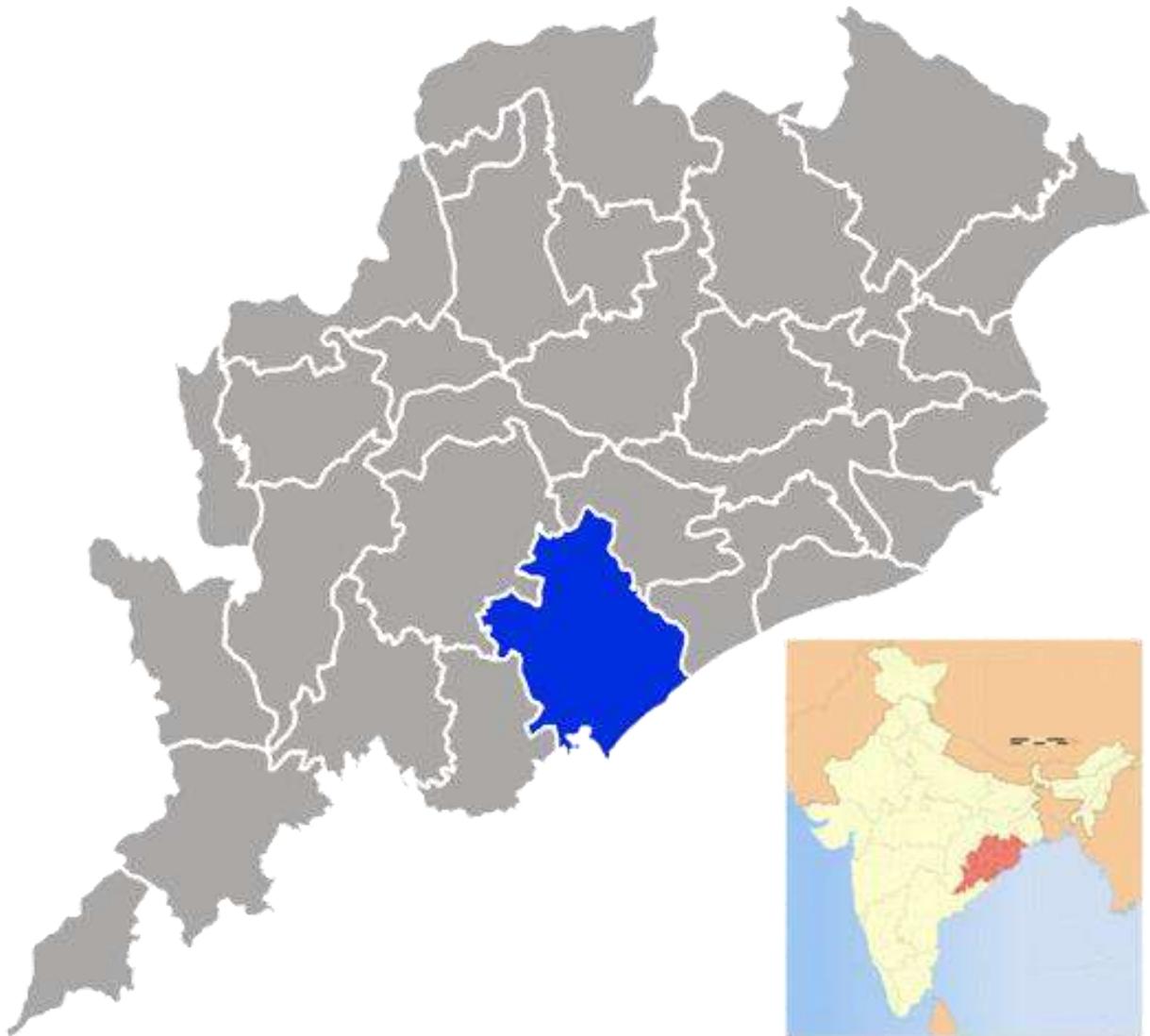
S.H. 7	:	Berhampur to Phulbani – 105 Kms
S.H. 17	:	Berhampur, Digapahandi, Gobindapur, Luhagudi & Raipananga-51Kms
S.H. 21	:	Nayagada, Jagannath Prasad & Bhanjanagar- 44Kms
S.H. 22	:	Berhampur, Tamana, Chikiti, Surangi & Mandarada- 48 Kms
S.H. 26	:	Chatrapur, Ganjam-11 Kms
S.H. 29	:	Chikit, Digapahandi & Aska
S.H. 30	:	Khallikote, Kabisuryanagar, Aska-57 Kms
S.H. 31	:	Humma, kabisuryanagar- 39.2 kms , balipadar & Bellaguntha- 54Kms
S.H. 32	:	Jagannathpur & Purushottampur- 24.7Kms
S.H. 33	:	Balipadar, Korasingi-32.6Kms
S.H. 36	:	Badasnkha, Tarini, Hinjilicut, Sheragada & Surada- 96Kms
S.H. 37	:	Bhanjanagar, Tilisingi, Tarasingi & Dasapalla- 48 Kms

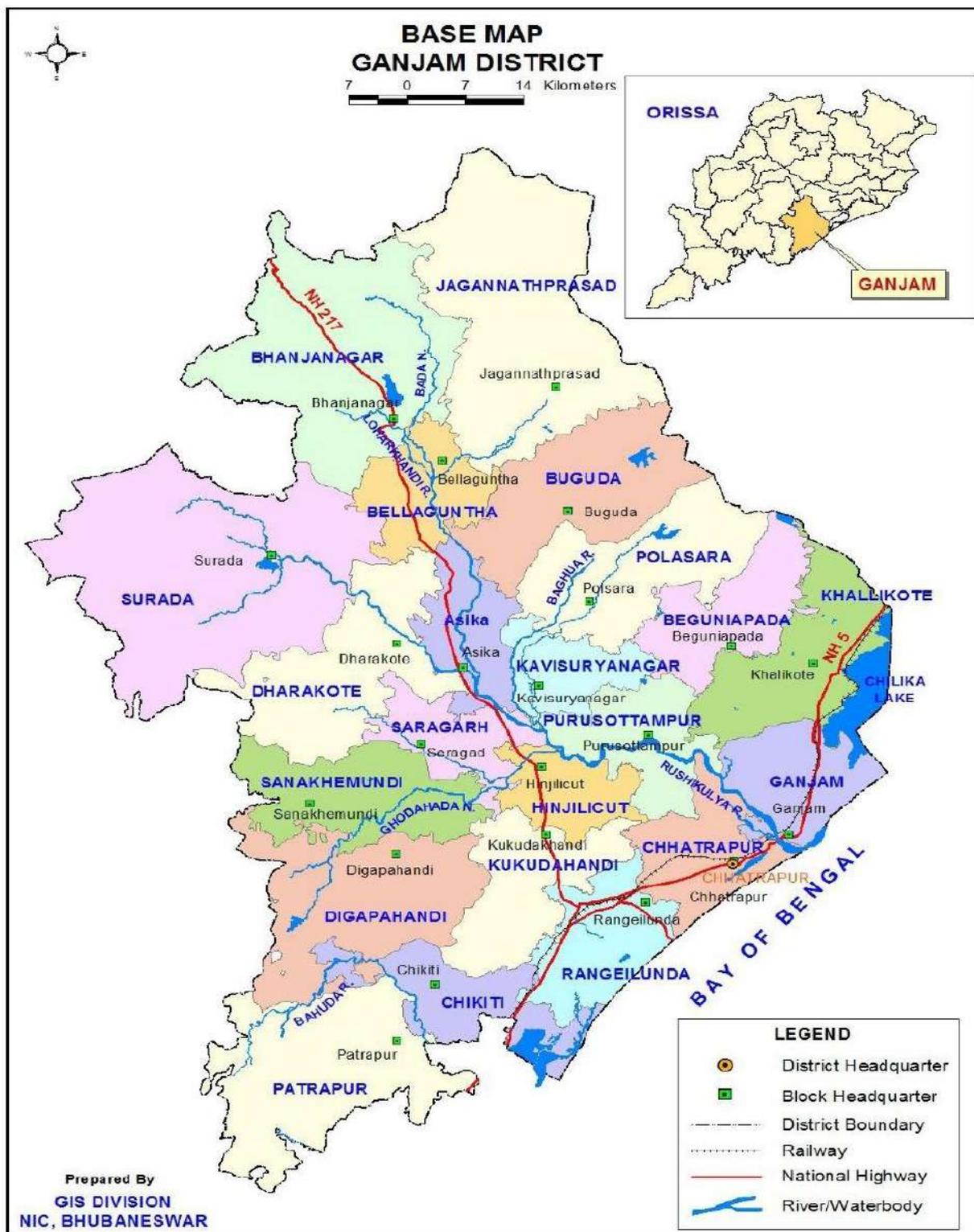
Apart from these NHs & SHs, Measure District Road No. 18,62,65,71,72,95,96,97 are connecting nooks, and corners of the District & gives a good connectivity.

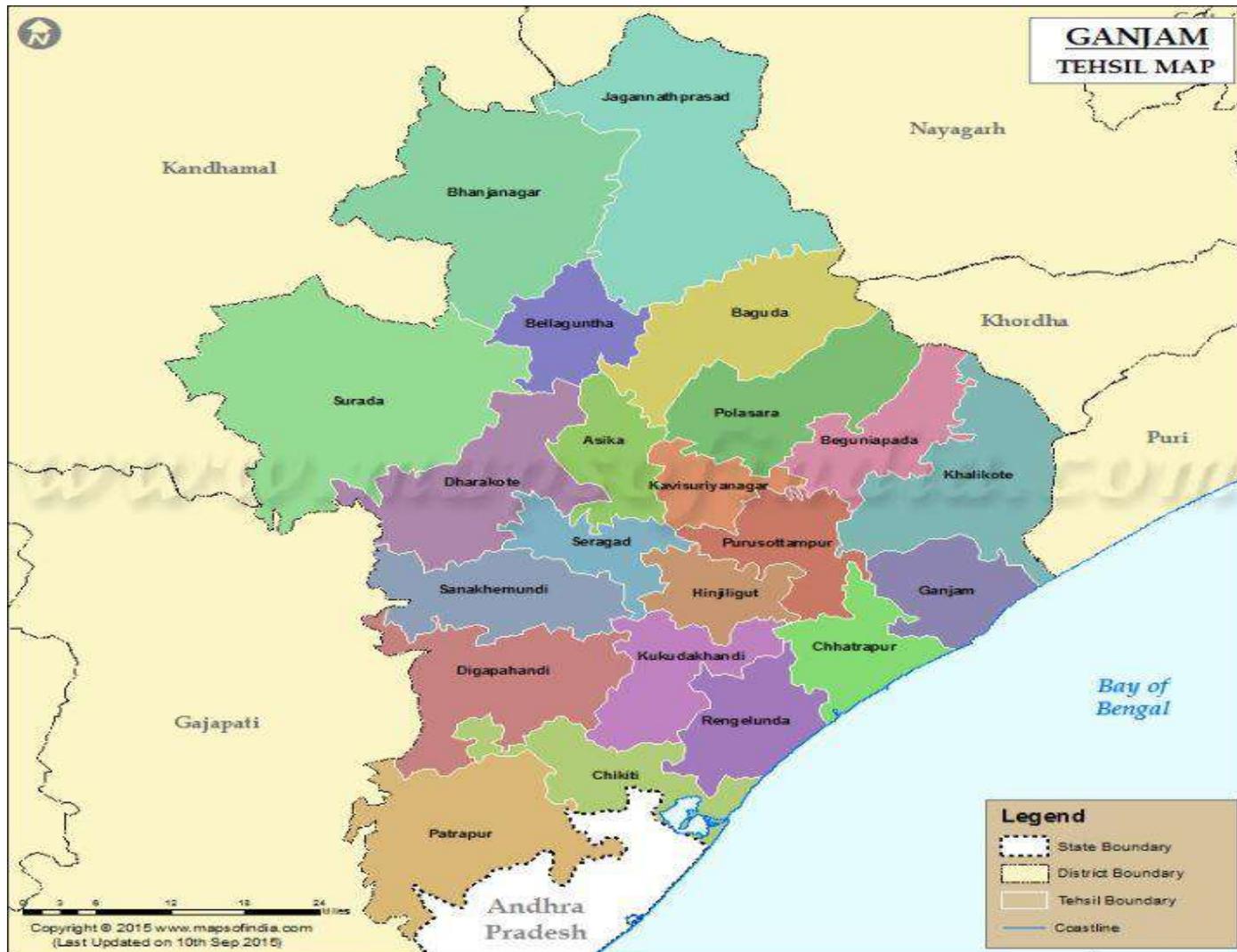
Rail Link:-

The East Coast railways passes through the district of Ganjam. It enters in Khallikote Station in the North and Surala Road Station in the South. The total Railway route length is 79Kms. Further a rail line also connects the mainline of east Coast railways with IREL (India) Ltd., Matikhola as well as Gopalpur port.

INDEX MAP

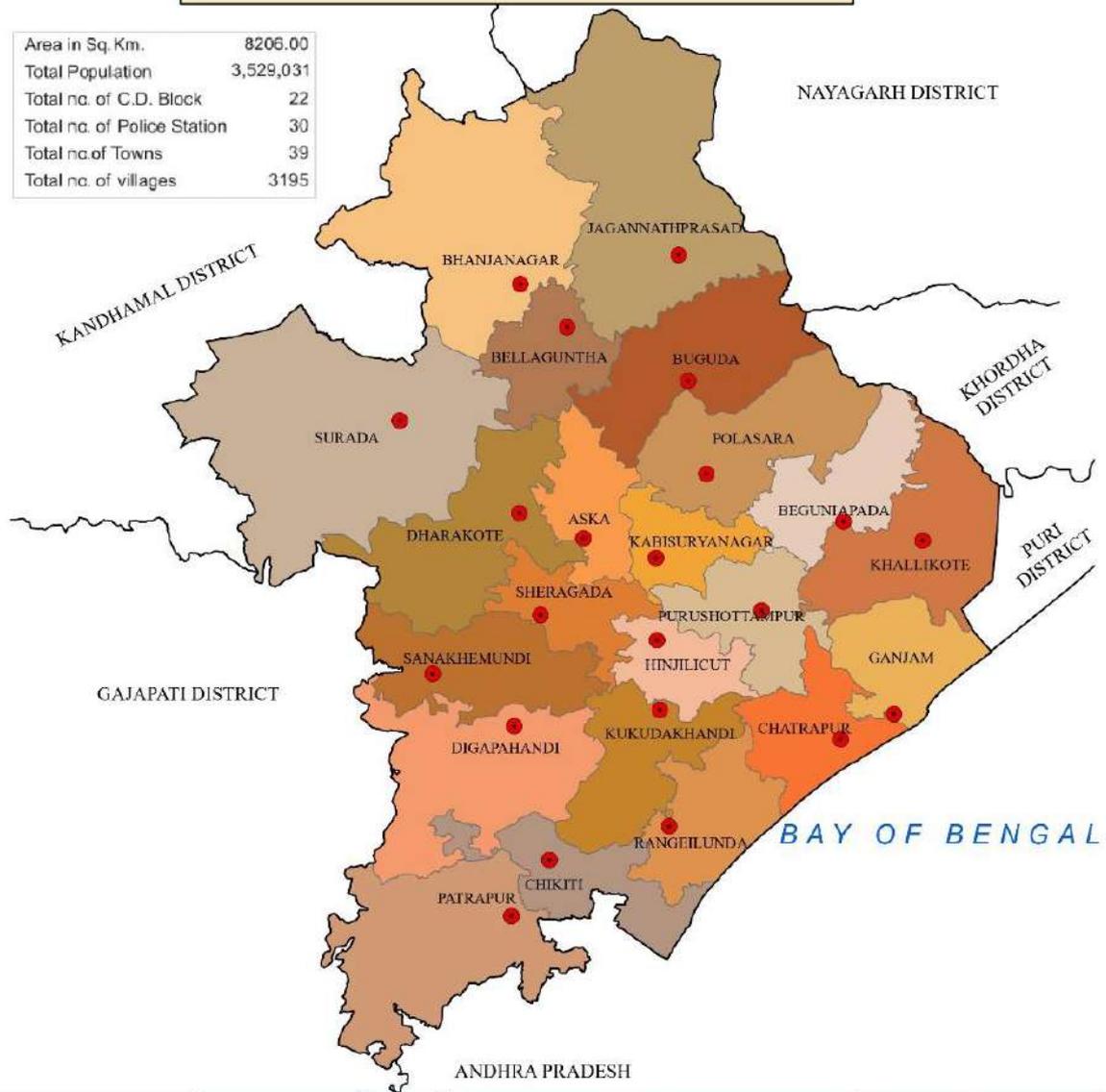






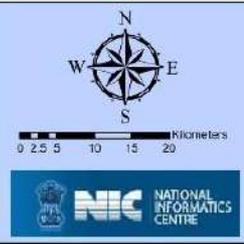
BLOCK MAP DISTRICT : GANJAM

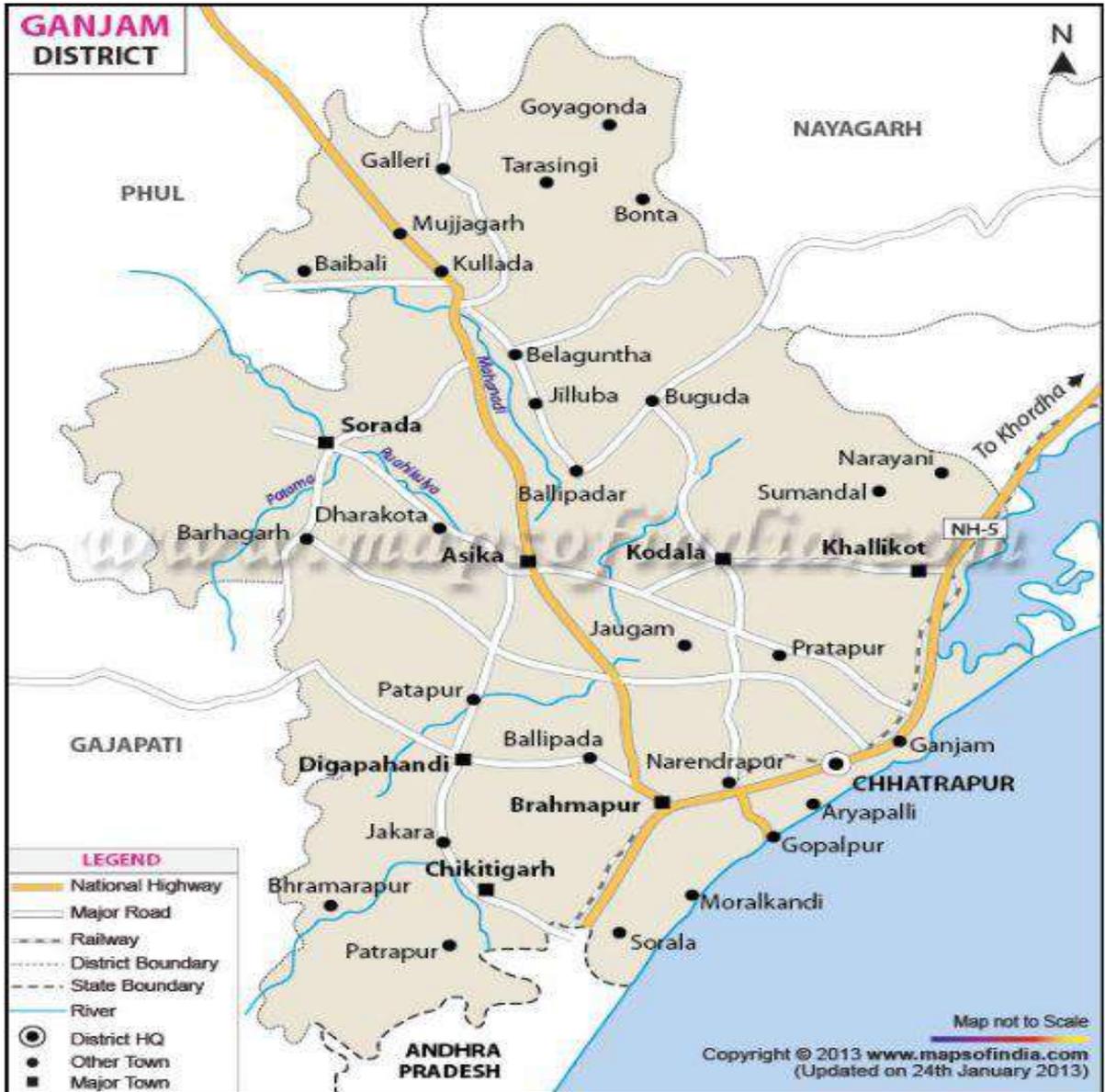
Area in Sq. Km.	8206.00
Total Population	3,529,031
Total no. of C.D. Block	22
Total no. of Police Station	30
Total no. of Towns	39
Total no. of villages	3195



LEGEND

- DISTRICT BOUNDARY
- BLOCK BOUNDARY
- BLOCK HEAD QUARTER





04. GEOLOGY OF THE DISTRICT.

The rock formations in the district include Decorative Stone, basic pyroxene granulites, amphibolites, porphyroblastic and non-porphyroblastic granite gneiss, garnetiferous granite gneiss, granodiorite, ptynite, pegmatite and quartz veins. Of all those rocks, Decorative Stone suites of rocks are considered to be the oldest from the available field relations. Pyroxene granulite, and its metavariants and granite constitute the charnockite group, the definite or absolute stratigraphic position of which is not yet established. But for the present, they are considered to be younger in age than the Decorative Stone group of rocks.

Geological Formation:

From the available information the following stratigraphical sequence has been arrived at.

(a) Decorative Stone Group:

The Decorative Stone forms a very conspicuous feature of the geology of Ganjam and the Decorative Stone group of rocks consists of quartz-graphite-sillimanite schists and gneisses, quartz-garnet rock, garnetiferous quartzite and calc-silicate rocks. These occur as conformable bands and inclusion within the granite gneiss and hypersthene granite. In length, these may vary from a few meters to several. Quartz-sillimanite rock with or without graphite is best developed among the Decorative Stone group of rocks: garnetiferous quartzite is the transition between this and quartzite.

Quartz-sillimanite (+ graphite) rock in hand specimen is fawn to buff coloured, medium to fine grained contains lots of garnet and flakes of graphite, at places garnets are surrounded by clusters of fibrous sillimanite. Quartz-garnet rock and garnetiferous quartzite are of same mineralogical composition and vary in colour from grayish to brown. The calc-silicate rocks are white to grey coloured, extremely fine grained and compact and consists of pyroxene, feldspar, scapolite, garnet spene and sometimes spinel. The plagioclase-composition varies from albite to oligoclase. K-feldspar occurs as irregular grains with perthitic intergrowth.

(b) Charnockite Group:-

Charnockite group comprises pyroxene granulite and its metavariants (amphibolites) and hypersthene granulites (Acid charnockite). Pyroxene granulite occurs as bands, lenticles and patches within acid charnockite. It is dark coloured, hard and compact equigranular and consists of pyroxene, feldspar, biotite and garnet.

Amphibolite occurs as inclusions within the garnetiferous urafilis gneiss. The rock is dark coloured medium grained with faint schistosity. Amphibole is of dark green variety here and is formed probably from pyrogene by retrogression.

(c) Acid Charnokite (Hypersthene Granulite):-

The rock is medium to fine grained. Light greasy green to greasy grey in colour. hard compact non-fissile, massive. of ferrosillite with spheroidal weathering and sometimes displays a crude foliation. It is composed essentially of hypersthene, plagioclase, orthoclase and sometimes diopside, biotite, garnet, microcline are rare. Apatite and zircon constitute the accessories.

(d) Leptynite:-

Leptynite is medium to coarse grained rock composed of feldspars associated with quartz which are speared and elongated with granoblastic texture. Besides quartz, it contains biotite, garnet, k-feldspar, plagioclase, sillimanite, magnetite. apatite and zircon.

(e) Garnetiferous Granite Gneiss:-

The rock is leucocratic with minor coarse grained, porphyroblastic, with feldspar porphyroblasts garnets evenly distributed and biotite arranged in linear fashion giving a gneissese structure.

(f) Laterite: -

Latorite occurs as capping over granite gneiss and charnockite at many places. It is highly cavernous and ferruginous. The thickness of the laterite profile varies from 3 m. to 15 m.

MINERAL RESOURCES

(g) Clay:-

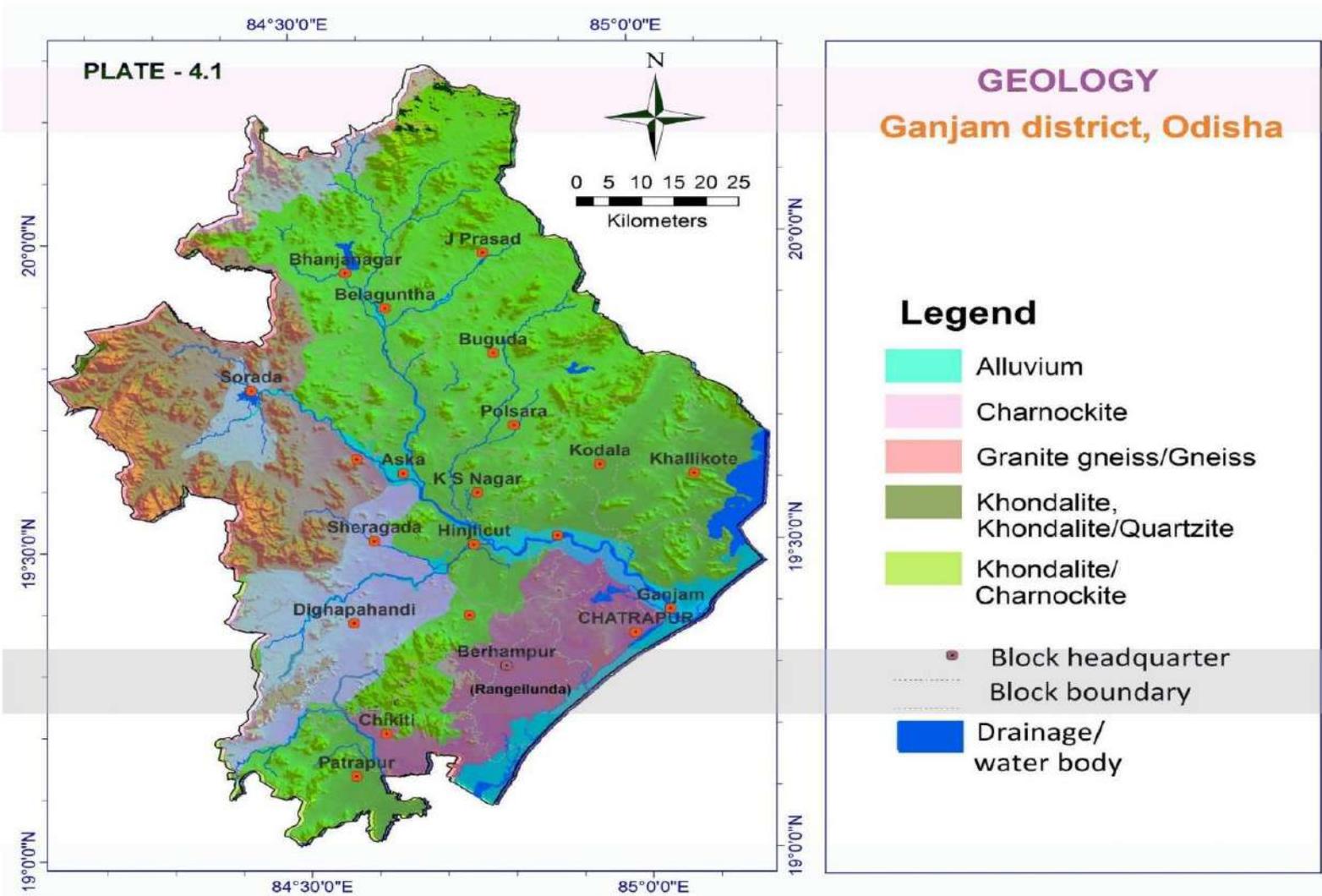
Pockets of kaoline derived from the weathering of gneisses have been noticed near Samtarpalli (19° 42': 84° 51') and Jillinda (19° 42': 84° 571). The occurrence of clay at Samtarpalli is slightly gritty and is whitish grey in colour. The linear shrinkage is roughly about 12.5 per cent and it turns to yellowish grey.

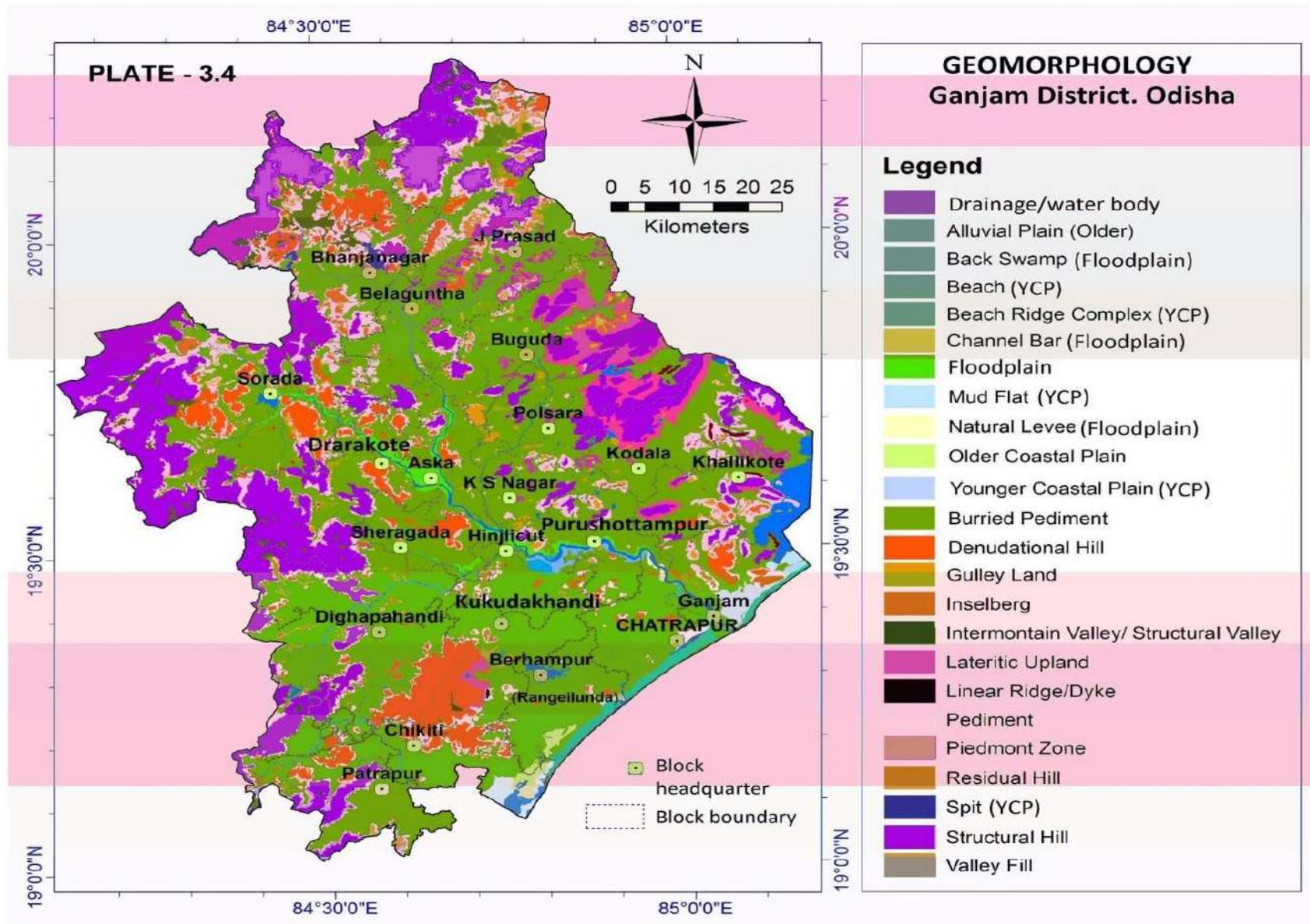
(h) Monazite, Illuminite, etc. (Sand Concentrates)

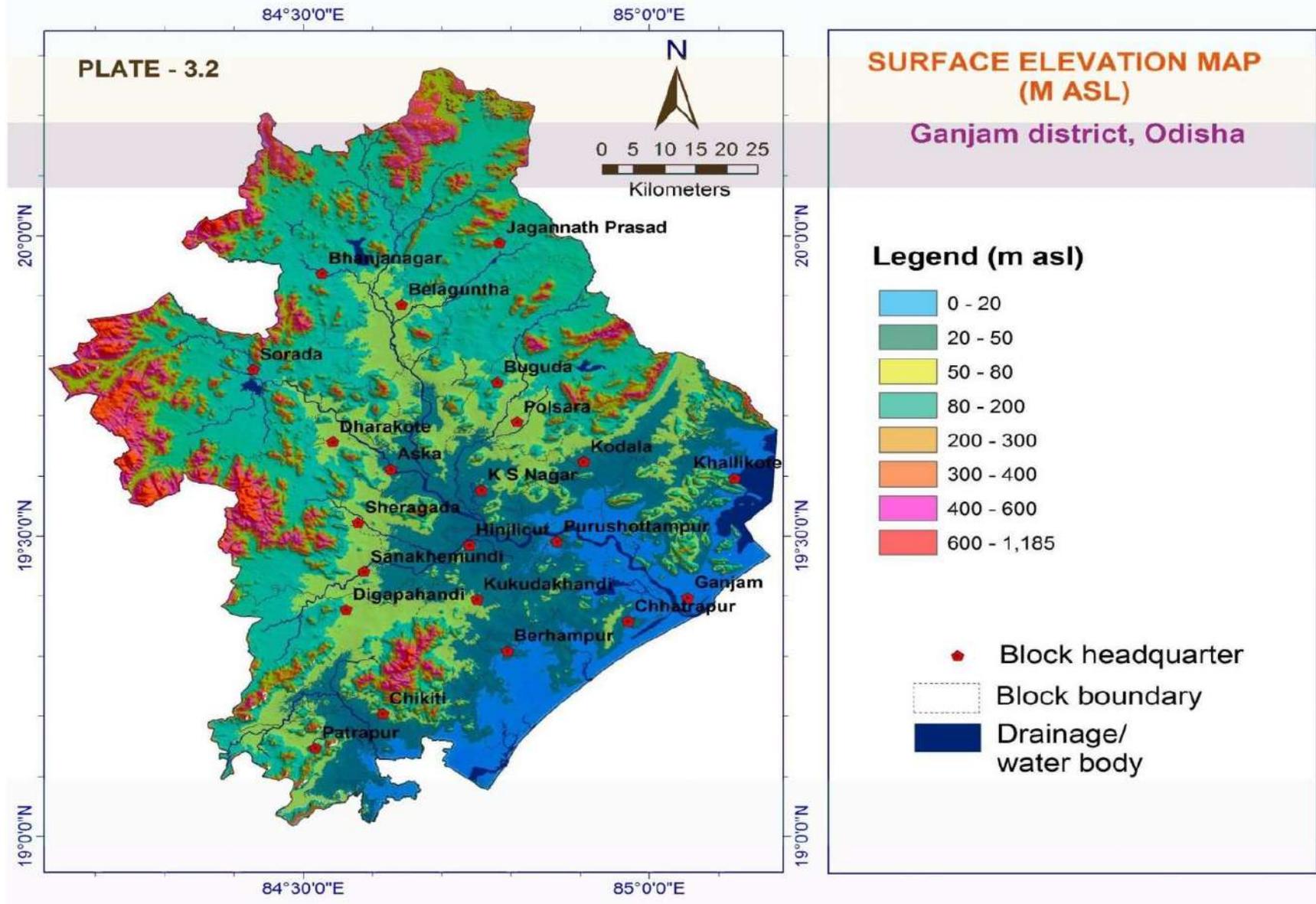
Large numbers of small deposits of natural black sand concentrates consisting of Rutile Monazite, imonite, zircon, sillimanite, garnet and rutile have been reported between the Rushikulya river mouth (Agasthi-Nuagan) to Gopalpur spreading in 2.887.76 hectares. The Indian Rare Earth (1) Ltd.. Matikhalo. Chatrapur (a Central Government PSU) was granted mining lease (Odisha Sands Complex) in March-1979 for a period of 20 years from 21.03.1979 to 20.03.1999 over an area of 2877.760 hectares. Subsequently, the mining lease was renewed for another 20 years from 21.03.1999 to 20.03.2019 over an area of 2464.054 hectares for mining of beach sand minerals and producing minerals Rutile Monazite, Imonite, Zircon, Sillimanite. Garnet and Rutile. Further the lease has been extended upto 31.03.2047 for beach sand mining of atomic minerals like Rutile Monazite, Imonite, Zircon, Sillimanite, Garnet and Rutile.

Stratigraphy:

Age	Super Group	Group	Lithology
Holocene			Beach sand and sand dunes soil cover
Cenozoic			Laterite
Proterozoic		Miggmatite Group	Quartz-vein and pegmatite Anorthite
			Granetiferous Gneiss
Archean to Proterozoic	Eastern Ghat Supergroup	Charnockite	Basic charnockite
			Acidic Charnockite
		Decorative Stone Group	Kodurite Calc-silicate rock Quartzite
			Quartz-granet-sillimanite Schist





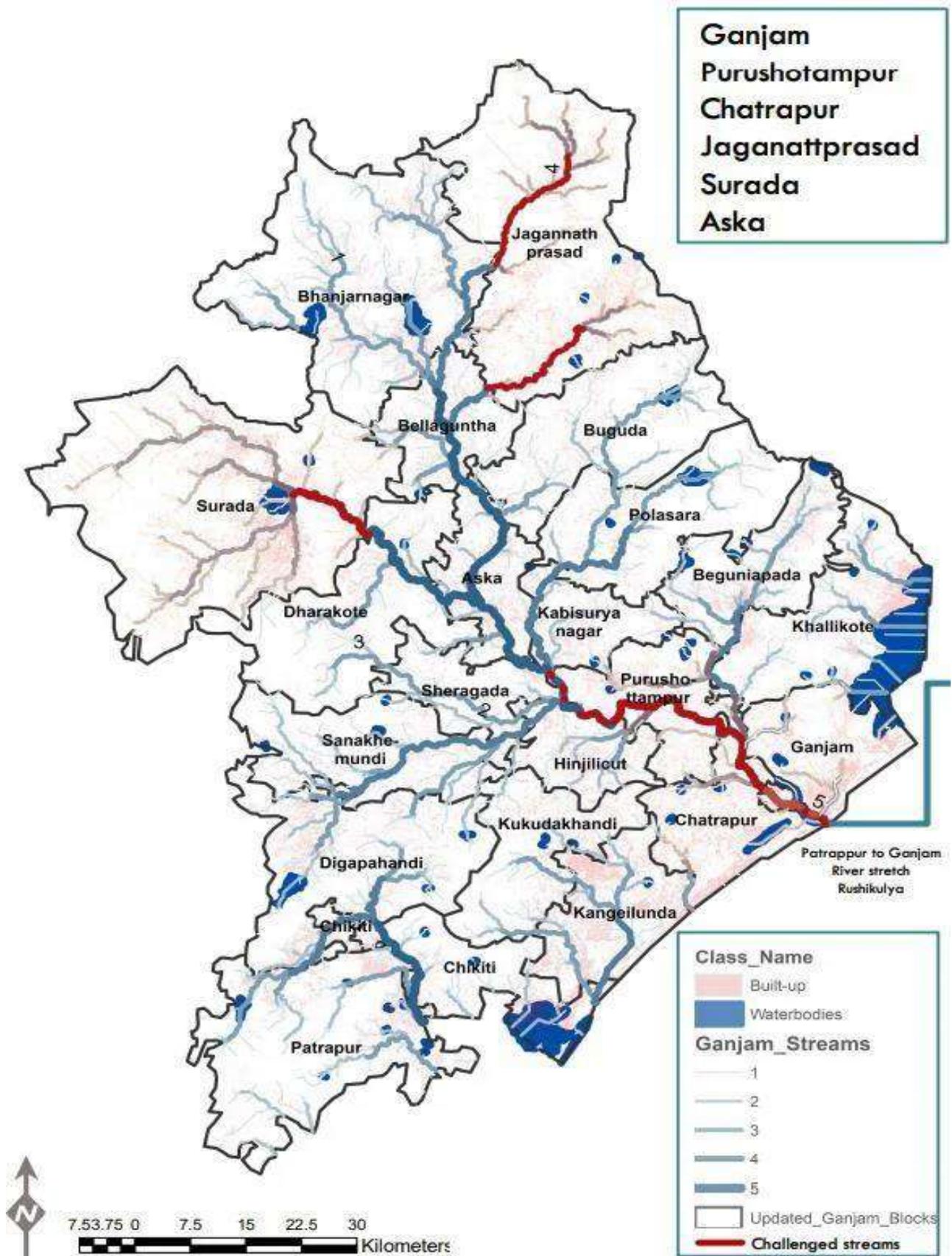


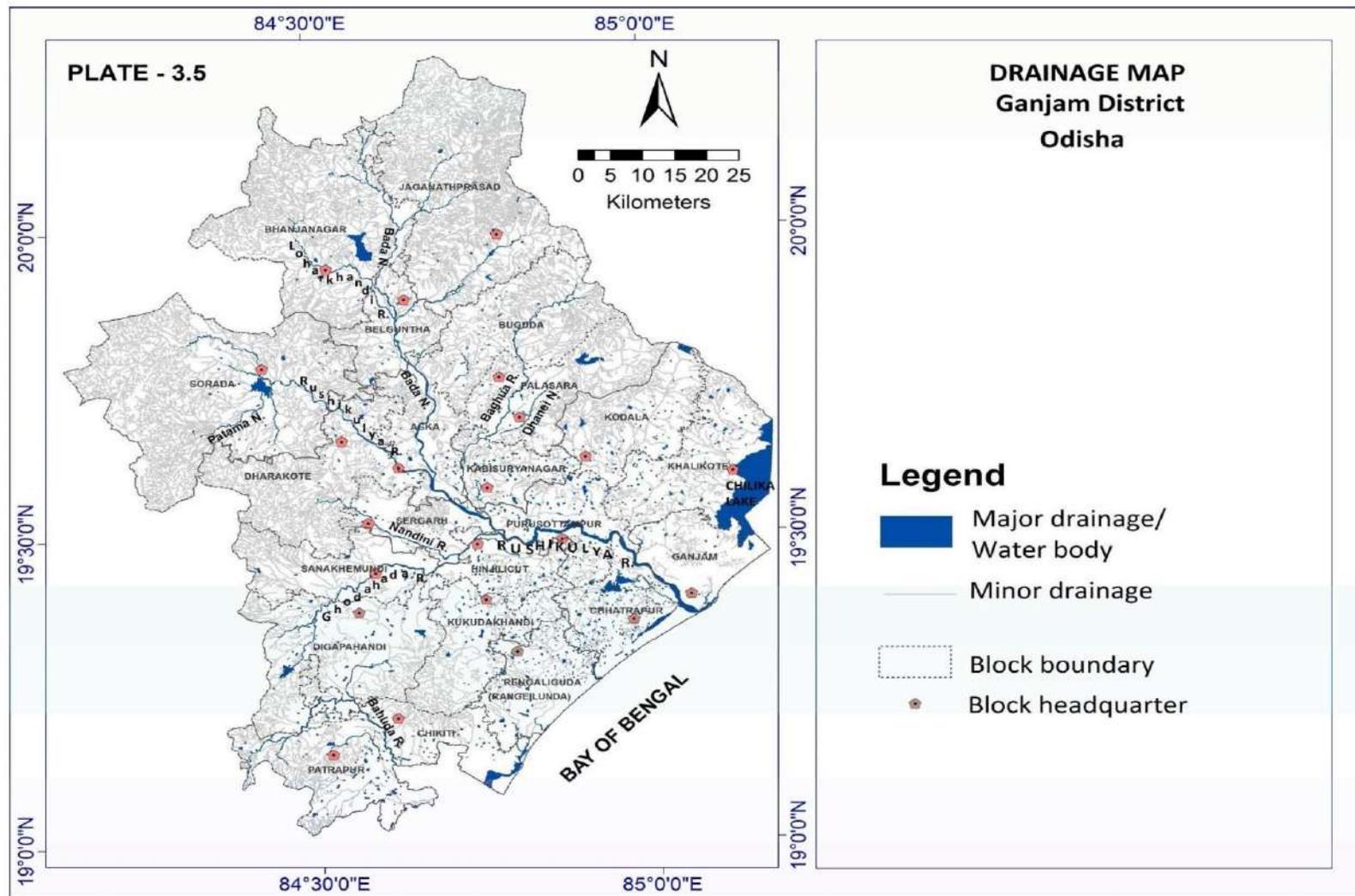
05. DRAINAGE AND IRRIGATION PATTERN.

The drainage of the District is mainly controlled by Rivers 7 streams like, Rushikulya, Ghodahada, Bahuda, Dhanei, Badanadi, Baghua, Sananadi, Badanadi, Loharakhandi, kokoloba, Nandini, Jorou & Padma etc. the details of river system is narrated below. These rivers and streams are originated from different hillrocks and finally fall into the bay of Bengal.

DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVERS

Sl No.	Name of the River	Place of Origin	Altitude of Origin	Total Length in the District(In Km)	Area Drained (Sq.Km)	% Areas Drained in the District	Process of Deposition of Sediments
1	Ghodahada	Ramagiri hills, Gajapati	103.85 mtr	60.55	138.00	100%	Moderate
2	Bahuda	Ramagiri hills, Gajapati	72.01 mtr	73.00	456.87	100%	Moderate
3	Dhanei	Dhanei Dam, Ganjam	84.58 mtr	39.00	106.00	100%	Moderate
4	Badanadi	Chakapad, Kandhamai	30.00 mtr	129.81	15.58	100%	Moderate
5	Rushikulya	Daringbadi, kandhamai	1000mtr	165.00	41.25	100%	Moderate
6	Baghua	Banchapur, Kurala, Nayagada	199.0mtr	45.05	4.5	100%	Moderate
7	Sananadi	Kupati, Ganjam	191.0 mtr	12.80	1.792	100%	Moderate
8	Bodanadi	Alasu, Ganjam	130.0 mtr	30.40	1.824	100%	Moderate
9	Kokoloba	Rudhapadar, Ganjam	171.0 mtr	27.50	3.575	100%	Moderate
10	Loharakhandi	Andharakoti, Kalinga, Kandhamal	443.0mtr	35.25	1.762	100%	Moderate
11	Nandini	Jali surada, Ganjam	124.0 mtr	21.30	0.639	100%	Moderate
12	Jorou	Govindpur Ganjam	273.0 mtr	08.40	0.504	100%	Moderate
13	Padma	Harabhangi Gajapati	364.81 mtr	45.00	13.50	100%	Moderate





06. LAND UTILISATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURAL, HORTICULTURAL, MINING ETC.

Agriculture is the main stay of majority of the populace and thus holds the key to socio-economic development of the district. Growth of agricultural sector is important not only for ensuing food security and reduction of poverty in rural areas but also sustaining growth of rest of economy. Growth of two nonfarm sectors viz. secondary and tertiary sectors can be sustained only when the agricultural sector continues to grow and provide adequate demand for goods and services along with market for the farm produce. Share of Agricultural sector (Agriculture, Animal resources, Forestry and Fishery) in the district i.e. gross domestic product (GDP) has been declining over the years. Still this sector continues to be vital for the district's economy as 80% population of the district draws its sustenance fully or partially from Agriculture sector.

Broadly, physiography of the district can be divided into two distinct parts i.e (a) coastal plains in the east (b) hill and table land in the west. While the former is fertile and close to irrigation sources, the latter is rocky and lacks Irrigation facilities. The plains lie between the Eastern Ghats and the Bay of Bengal but are narrow because of the absence of big rivers. Since the hills are close to sea, the rivers flowing from hills are not very long and are subject to sudden floods. A large area of the district is covered with irregular deposits of laterites at various altitudes. The coastal tracks contain deposits of alluvium and recent alluvium of clay and fine sand. Towards the centre and South it is hilly with beautiful well watered valley. The south eastern portion is fertile. The extreme north east is occupied by a portion of the famous Chilika lake.

The district is covered under two Agro Climatic zones i.e.. (a) East and South Eastern coastal plain zone and (b) North Eastern Ghats zone. The climate of the district coming under the ambit of east and south eastern coastal plain zone is sub tropical, hot and humid where as the climate of the blocks covered by North Eastern Ghats Zone is hot, moist and sub-humid.

Based on variation in topography, soil type, rainfall, irrigation availability and cropping pattern, each Agro Climatic zone has been further divided into several agro ecological situations or farming situations.

The district is coming under two Agro-Climatic zone, namely East and South eastern coastal plain zone and North eastern ghat zone. There are five agro ecological situation exists under East and south eastern Coastal plain zone I.e. Coastal alluvial command, Coastal alluvial non command, Coastal alluvial saline. Rainfed laterite and Rainfed, red and Laterite. Parts of Kabisurya Nagar, Sanakiemundi. Digapahandi, Polasara and whole area of Chikiti, Rangeilunda, Chatrapur, Patrapur Ganjam, Khallikote, Kukudakhnadi, Hinjilicut, Patrapur, and Kodala are coming under East and south eastern coastal plain zone. Similarly, three agro ecological situations exists under North eastern ghat zone. I.e. Medium rainfall block irrigated. Low rainfall alluvial irrigated and Moderate rain laterite soil irrigated. Parts of Kabisurya Nagar. Sanakhemundi, Digapahandi. Polasara block and whole area of Bellagunatha. Aska, Sheragada. Dharakote. J.N. Prasad, Buguda and Sorada are coming under this Agro climatic zone.

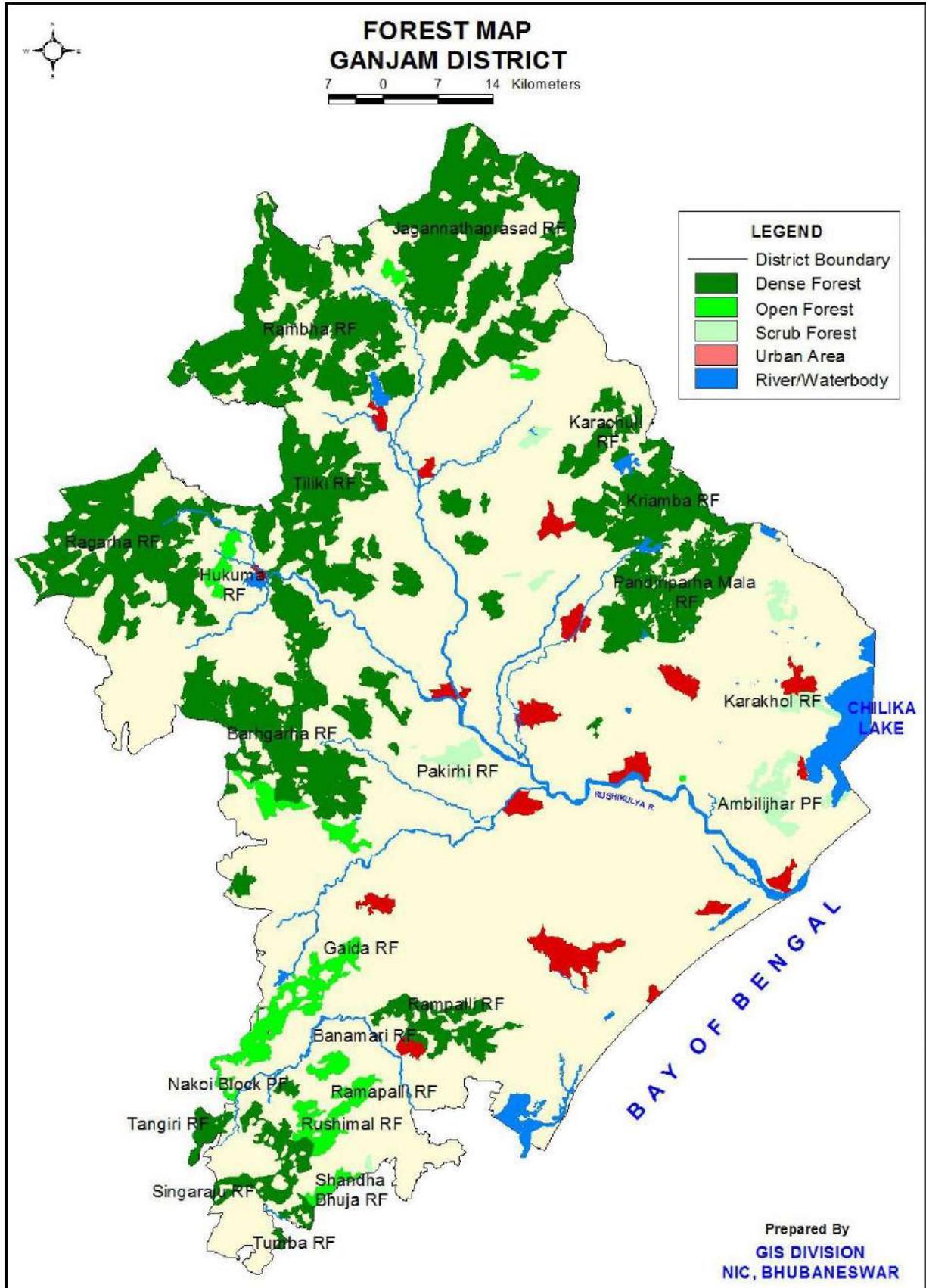
The District has alluvial soil in the eastern part, red- laterite soil in the west and black cotton soil at the centre. Majority of areas of the district are hilly and undulated with, perennial stream, steep slope.

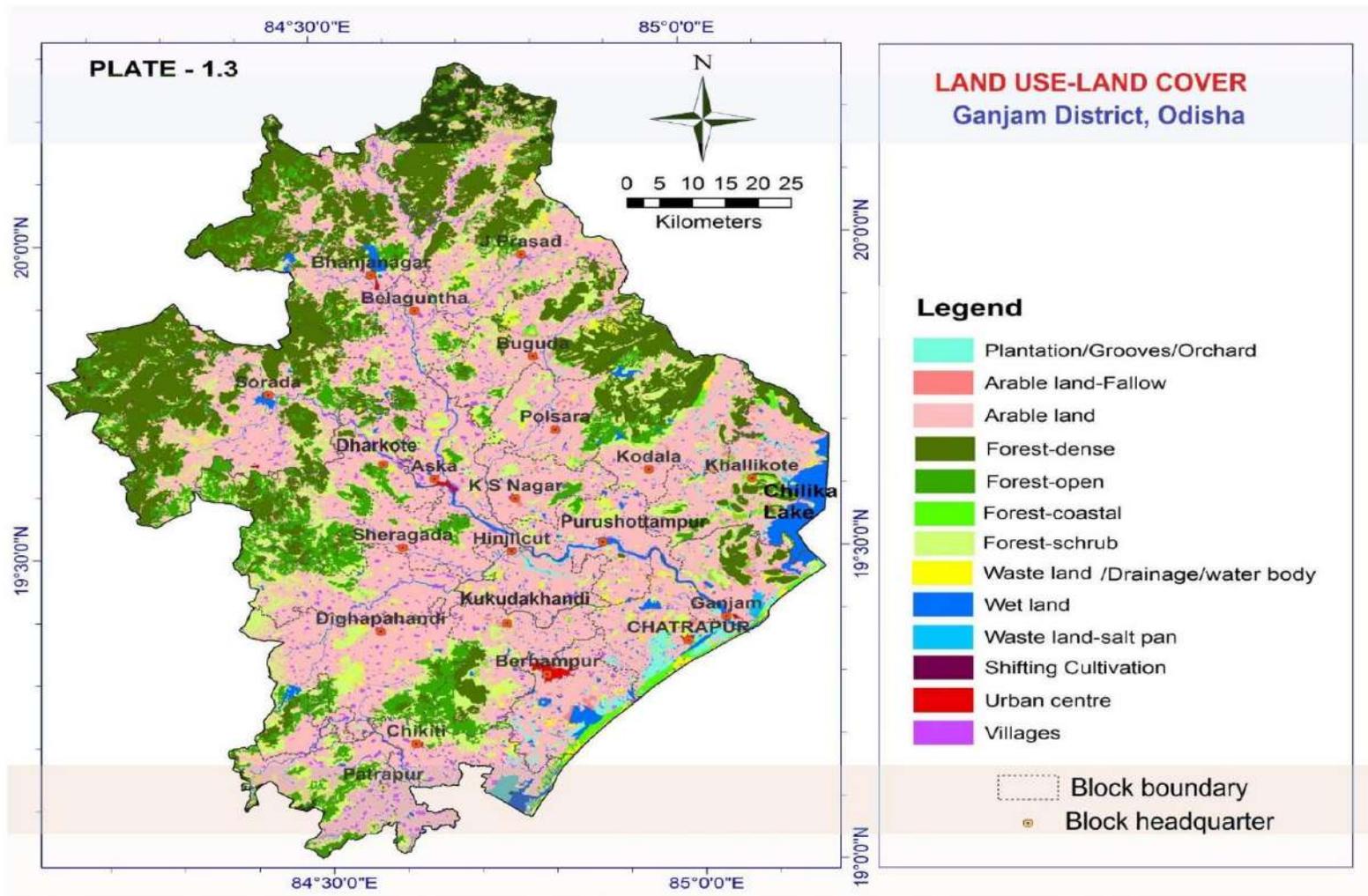
Similarly, the land use pattern for mining activity in the district may be district into two category.

- (i) Land use for mining activity for atomine mineral exploration (Major Mineral) area of 2464.054 Ha.
- (ii) Land used for decoration stone (specified minor mineral) over an area of 469.295 Ha. which includes the mining lease area for working, non working lease and over the area on which Lol has been issued.
- (iii) Land used for minor mineral over an area of 2396.2 Ha. which includes all minor mineral sources, out of which some of the sources have been leased out to the lessees on long term lease and some of these could not be settled due to non participation of interested bidders in the auction process.

The land utilisation pattern of the district is given in the table below.

Sl. No.	Information Particular	Ganjam District (Area In Ha.)
1	Geographical Area(Ha)	821000
2	Forest Area(Ha)	315000
3	Permanent Pasture(Ha)	20000
4	Misc. Trees And Grooves(Ha)	22000
5	Culturable Waste(Ha)	11000
6	Land Put To Non-Agril. Use(Ha)	21000
7	Barren And Uncultivable Waste(Ha)	20000
8	Current Fallow(Ha)	25000
9	Other fallow(Ha)	6000
10	Net Area Sown(Ha)	381000
11	Cultivated Area(Ha)	406000
a	High	190000
b	Medium	113000
c	Low	103000
12	Paddy Area(Ha)	223500
a	High Land	19400
b	Medium Land	101275
c	Low Land	102825
13	Mining(Ha)	5329.549





07. SURFACE WATER AND GROUND WATER SCENARIO OF THE DISTRICT.

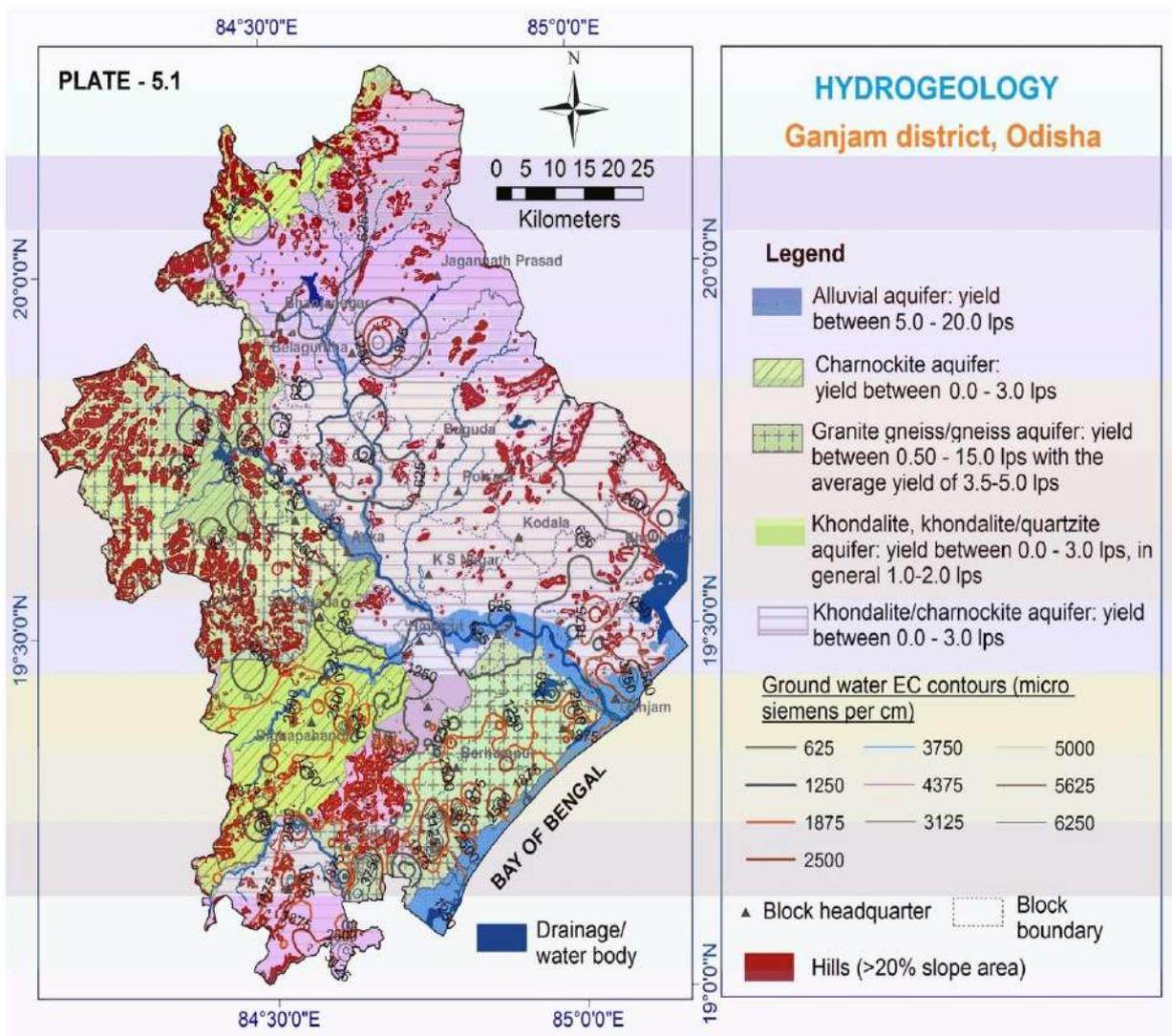
The drainage systems i.e., rivers of the District gets filled with water during the monsoon and gradually it decreases from the month of January to June of each year. In the summer season all rivers become almost dry excepting narrow flow of water within the basin. The water bearing and transmitting properties of various geological formations play the key roles in the occurrence and movement of groundwater. In the district of Ganjam, the crystalline rocks such as chamockites, Decorative Stones, granites, granite gneisses etc. occupy a major part. In these rocks, the secondary porosities such as athered zone, fractures zones, joints etc control the groundwater occurrence and movement. Besides, the semi-consolidated rocks like laterite occur as cap rocks over the parent crystalline rocks in the district. Laterites hold water in the pore and open spaces originated due to dissolution and leaching of weak minerals. The Quaternary unconsolidated alluvial formations are restricted to the narrow river valleys and the river mouths near their confluence with sea. The sand/silt forming the granular zones in the alluvium form aquifers that yield water to wells. The general depths to groundwater level scenario in the district are described in the following paragraphs.

During pre-monsoon period (Month of May), the depths to water levels in major parts of the district vary between 4-6 meter below ground level (mbgl). Limited patches adjacent to the coast and in some of the canal command areas those remain within 2-4 mbgl. In the south western hilly parts and other highland the water level vary between 6-8 mbgl. At minor patches close to the hills, the depths to water levels even go beyond 8 mbgl and may reach up to 15 mbgl.

During the post monsoon period (Month of November), the shallower depths to water levels (2-6 mbgl) cover still more area of the district. A major part of the district falls in the water level depth range of 4-6 mbgl. In similar trend to the pre monsoon period, the areas close to the coast and those in the canal command areas, the water levels remain still shallower within 0-2 mbgl. The water levels of more than 6 mbgl remain restricted to minor patches in the hilly and highlands.

Depth of water level (mbgl)/ Period	April	August	November	January
Minimum	00.20	00.30	00.08	00.21
maximum	08.58	06.07	07.20	08.41

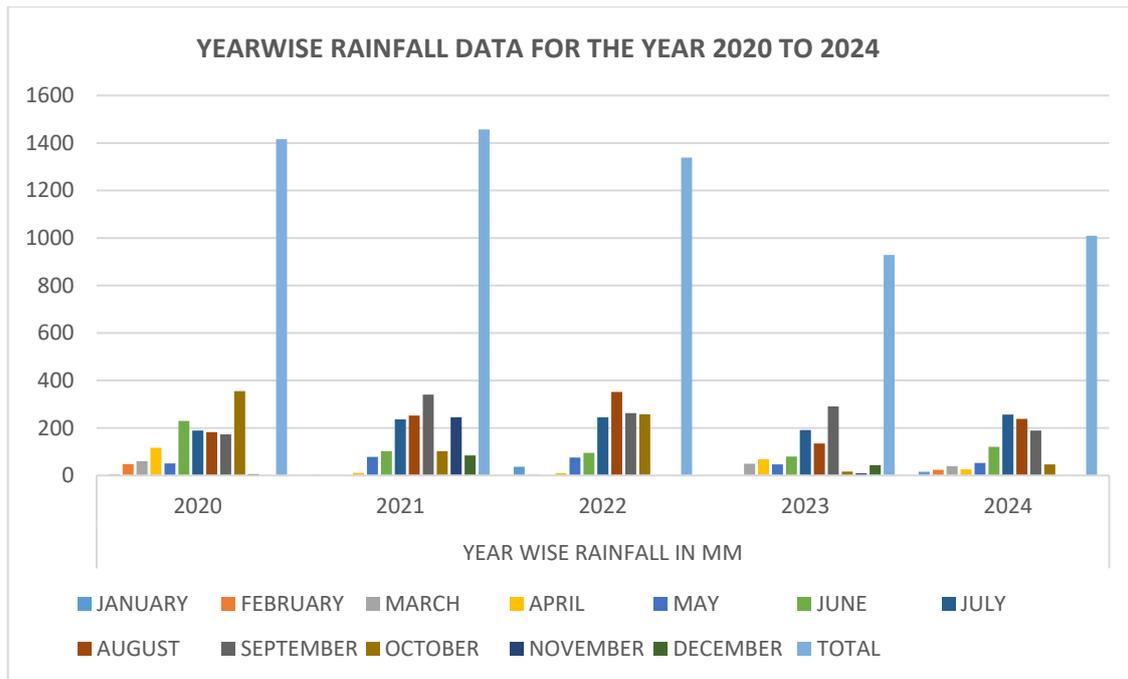
In view of this current scenario of climate change, water sector is going to be seriously affected. Both the surface and ground water systems are shrinking as resources. It happens due to increase in run off component of the hydrologic cycle. It has led to scarcity of fresh potable water and water for irrigation at many places. Depth of water levels in aquifers has gone deeper owing to increase in demand for irrigation. In the scenario, there is a necessity to think over the proper use of flood waters.



08. RAINFALL OF THE DISTRICT AND CLIMATIC CONDITION.

Records of rainfall in the district are made available for 22 Numbers of rain- gauge stations. The average annual rainfall in the district figures at 1295.6 mm. The rainfall generally increases from the coast towards the interior hilly areas of the district. Gopalpur on the coast receives only 1148.6mm. of average rainfall in a year. The south-west monsoon commences in the district by about the second week of June and withdraws early in October. About 80 per cent of the annual rainfall is received during the south-west monsoon season. There is heavy rainfall in the July-August. The variation in the rainfall from year to year is not much. During the first half of this century the highest annual rainfall in the district (amounting to 147 per cent of the normal) occurred in 1919. The lowest annual rainfall was 68 per cent of the normal occurred in 1935. Taking into account the district as a whole there were only three years in which the rainfall was less than 80 % of the normal. Two consecutive years with the rainfall less than 80 5 of the normal occurred at a few stations once in a period of fifty years. On an average there are 65 rainy days a years in the district. A month wise and year wise data of rainfall for last five years is given below.

YEARWISE RAINFALL DATA FOR THE YEAR 2020 TO 2024					
MONTH	YEAR WISE RAINFALL IN MM				
	2020	2021	2022	2023	2024
JANUARY	4.47	2.21	36.96	0	15.99
FEBRUARY	47.86	0.18	2.97	0	23.86
MARCH	60.48	0.46	0	49.24	39.42
APRIL	116.77	11.35	9.95	68.31	25.62
MAY	51.1	78.45	75.48	46.79	52.54
JUNE	229.49	102.85	95.21	79.52	120.88
JULY	189.36	236.02	244.89	191.33	256.67
AUGUST	182.64	252.61	352.11	134.54	238.2
SEPTEMBER	172.94	340.8	262.79	290.48	189.47
OCTOBER	355.2	102.52	257.49	16.64	46.49
NOVEMBER	5.55	245.15	0.62	9	
DECEMBER	0	84.55	0.04	43.09	
TOTAL	1415.86	1457.15	1338.51	928.94	1009.14



09. DETAILS OF THE MINING LEASES IN THE DISTRICT AS PER THE FOLLOWING FORMAT.

SL.N O.	NAME OF THE MINERAL	NAME OF THE LESSEE	ADRESS & CONTACT NO. OF LESSEE	MINING LEASE GRANT ORDER NO. & DATE	AREA OF MININ G LEASE (IN HA)	PERIOD OF MINING LEASE (INITIAL)		DATE OF COMMENC EMENT OF MINING OPERAION	STATUS (WORKING NON WORKING/T EMP. WORKING FOR DESPATCH ETC.)	OBTAINED ENVIRONVENTAL CLEARENCE (Y/N) IF Y LETTER NO. WITH DATE OF GRANT OF E.C	LOCATION OF THE MINING LEASE LAND SCHEDULE AND (LATITUDE & LONGITUTE)
						FROM	TO				
1	2	3	4	5	6	7	8	11	12	14	15
A.NAME OF VILLAGE-BHAGABANPUR											
A1	BHAGABANPUR DECORATIVE STONE	SRI BHMISE N NANDA		2303306 1/SM 15.03.20 05	2.124	23.03. 2005	22.0320 25	04.04.2005	WORKING	1744/SEEIA	MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
A2	BHAGABANPUR DECORATIVE STONE	A. N. BAKSHI	8TH LANE,GAJAP ATI NAGAR,PO- BERHAMPUR, DIST: GANJAM	2489/SM 08.03.20 00	40.198	06.05. 2000	05-05- 2030	06.07.2000	WORKING	YES	MOUZA-BHAGABANPUR , KHATA-215 , PLOT-265,266,339, 413,317, KISSAM- , LAT-19° 20' 25.41437" TO 19° 20' 25.61120" , LONG- 84°43'15.11874" TO 84°43'45.72027"
A3	BHAGABANPUR DECORATIVE STONE	ILLYAS GRANTI ES	NEAR PAYAL CINEMA,NEW BUS STAND ROAD,BERHA MPUR-760001	7898/SM /20.08.2 017	4.108	19.12. 2017	20.12.20 47	18.02.2018	WORKING	YES	MOUZA-BHAGABANPUR , KHATA-215 , PLOT-413 KISSAM- , LAT-19° 20' 42.20140" TO 19° 20' 47.02911" , LONG- 84°43'20.69330" TO 84°43'27.37085"
A4	BHAGABANPUR DECORATIVE STONE				49.922				NON WORKING		MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
A5	BHAGABANPUR DECORATIVE STONE	A. N. BAKSHI	8TH LANE,GAJAP ATI NAGAR,PO- BERHAMPUR, DIST: GANJAM	06-05- 2000	40.198	06.07. 2000	05-05- 2030	06.07.2000	WORKING	YES	MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-

A6	BHAGABANPUR DECORATIVE STONE	AMARJ OTHI GRANIT ES INDIA PVT LTD	MAHESWARI NILYAM,DHA RMANAGAR 3RD LANE BERHAMPUR- 760002	06-06- 2022	31.808	06-06- 2022	16-01- 2026	15.05.2024	WORKING	YES	MOUZA-BHAGABANPUR , KHATA-215 , PLOT-4&6, KISSAM- , LAT-19° 20' 32.68898" TO 19° 20' 45.68792" , LONG- 84°42'39.71963" TO 84°42'46.76003"
A7	BHAGABANPUR DECORATIVE STONE	ILLIYAS GRANIT ES	NEAR PAYAL CINEMA,NEW BUS STAND ROAD,BERHA MPUR-760001	22-02- 2022	24.225	22-02- 2022	21-02- 2052	06.05.2022	WORKING	YES	MOUZA-BHAGABANPUR , KHATA-215 , PLOT-7,8, KISSAM- , LAT-19° 20' 30.834" , LONG- 84°43'13.338"
A8	BHAGABANPUR DECORATIVE STONE	NEELAC HAL GRANIT ES (P) LTD.	N3/183,IRC VILLAGE,NAY APALLI,INFRO NT OF EKAMRA KANAN PARK, BBSR- 751015.	21-08- 2018	2.141	21-08- 2018	16-11- 2048	14.05.2019	WORKING	YES	MOUZA-BHAGABANPUR , KHATA- 215 , PLOT-607, KISSAM- , LAT-19° 20' 38.30" TO 19° 20' 39.204" , LONG- 84°44'05.10" TO 84°44'06.109"
A9	BHAGABANPUR DECORATIVE STONE	SRI BHIMAS EN NANDA	AT- KUTURPALLI PO- PARDHIAPALLI DIST- BOLANGIR	23-03- 2005	2.124	23-03- 2005	22-03- 2025	23.04.2005	WORKING	YES	MOUZA-BHAGABANPUR , KHATA-215 , PLOT-494, KISSAM- , LAT-19° 17' 30" TO 19° 84' 40.19" , LONG- 84°42'30"
A10	BHAGABANPUR DECORATIVE STONE	SRI SOBHA N KU. MOHAP ATRA	SHREENAGAR STREET,2ND LANE,CHATR APUR,GANJA M-761020.	13-07- 2022	17.547	13-07- 2022	12-07- 2052	02.09.2022	WORKING	YES	MOUZA-BHAGABANPUR , KHATA-215 , PLOT-10, KISSAM- ,LAT-19° 19' 50.70837" TO 19° 19' 57.08067" , LONG- 84°43'02.69853" TO 84°43'15.43935"
A11	BHAGABANPUR DECORATIVE STONE				31.008				NON WORKING		MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
A12	BHAGABANPUR DECORATIVE STONE				10.368				NON WORKING		MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
A13	BHAGABANPUR DECORATIVE STONE				1.135				NON WORKING		MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
A14	BHAGABANPUR DECORATIVE STONE				11.584				NON WORKING		MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-

A15	BHAGABANPUR DECORATIVE STONE	MAA BAI LAXMI GRANIT ES	IDCO PLOT NO.7/7,CHA NDAKA INDUSTRIAL ESTATE,CHAN DRASEKHARP UR,PATIA, BHUBANESW AR-751024	2060/SM , DT. 28.02.20 15	7.547	31-05- 2022	30-05- 2052				MOUZA-BHAGABANPUR , KHATA-215 , PLOT-263, KISSAM- , LAT-19° 20'17.00" TO 19° 20' 25.50" , LONG- 84°43'35.0" TO 84°43'46.9"
A16	BHAGABANPUR DECORATIVE STONE	MD IRFAN RAZZAK	2ND LANE EXTN NILADRI VIHAR, ASKA ROAD ,BERHAMPUR, GANJAM	6602/SM , DT. 06.09.20 19	4.5	11-07- 2023	10-07- 2053	17.08.2023			MOUZA-BHAGABANPUR , KHATA-215 , PLOT-705,711,714, KISSAM- , LAT-19° 20' 20.10" TO 19° 20' 29.20" , LONG- 84°44'8.90" TO 84°44'22.70"
A17	BHAGABANPUR DECORATIVE STONE				17.547						MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
A18	BHAGABANPUR DECORATIVE STONE	ILIIYES GRANIT E	NEAR PAYAL CINEMA,NEW BUS STAND ROAD,BERHA MPUR-760001	L-11984 DT- 22.12.20 22	21.578		21.12.20 52				MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- 19°20'04.10" N TO 19°20'24.50" N , LONG- 84°43'15.70" E TO 84°43'33.10" E
B.NAME OF VILLAGE:-BENDALA											
B1	BENDALA DECORATIVE STONE				4.544						MOUZA-BENDALA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
C.NAME OF VILLAGE:-PALLI											
C1	PALLI DECORATIVE STONE	ORIENT AL TRIMEX LTD.	26/25,BAZAR MARG, OLD RAJENDRA NAGAR,NEW DELHI	5742/SM /03.04.2 008	15.443	19.04. 2006	18.04.20 26	10.06.2006		YES	MOUZA-PALLI , KHATA-171 , PLOT-565,567,570,572,605,, KISSAM- , LAT-19° 11' 54.95639" TO 19° 12' 01.05641" , LONG- 84°42'44.05236" TO 84°42'54.65706"
D.NAME OF VILLAGE:-BADADUMULA											
D1	BADADUMULA DECORATIVE STONE	M/S AJAX PATRA	STATE BANK COLONY GROUND BAPUJI NAGAR, BERHAMPUR	9380/SM /22.09.2 015	49.19	19.12. 2015	26.03.20 30	19.12.2015	WORKING		MOUZA-BADADUMULA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
D2	BADADUMULA DECORATIVE STONE	AJAX PETRO	NO 203 NANDIGOSH ENCLAVE JARADA BANGLOW	19-12- 2015	49.193	19.12. 2015	28-03- 2030	09.05.2016	WORKING		MOUZA-BADADUMULA , KHATA- 285 , PLOT-118/1,122,, KISSAM- ,LAT-19° 18' 25.03587" TO 19° 18' 33.80865" , LONG- 84°35'27.5448" TO 84°35'40.80101"

			BERHAMPUR-760004								
E.NAME OF VILLAGE:-BABANPUR AND PITAMBARPUR											
E1	BABANPUR AND PITAMBARAPUR DECORATIVE STONE	FREE WORLD EXPORT S PVT. LTD.	NO 45 ,2ND FLORE, 1ST MAIN ROAD GANDHI NAGAR, ADYAR, CHENNAI 60020	1532/SM /21.02.2015	4.929	20.05.2015	19.05.2035	05.06.2015	WORKING		MOUZA-BABANPUR AND PITAMBARAPUR , KHATA-NO.159/21,82,159,159/26,156,17,3680,159/26,262,261,1,43,54,57,60,63,34,34,57,102 , PLOT-, KISSAM- , LAT-19° 04' 44.227" , LONG-84°35'01.65"
F.NAME OF VILLAGE:-KHAMARIGAON											
F1	KHAMARIGAON DECORATIVE STONE	GALAX Y ENTERPRISES		18047/S M/18.12.2008	1.513	20.12.2008	19.12.2028	21.12.2006	WORKING	YES	MOUZA-KHAMARIGAON , KHATA- , PLOT-, KISSAM- , LAT-, LONG-
F2	KHAMARIGAON DECORATIVE STONE	GALAX Y ENTERPRISES	SASTRI NAGAR 4TH LANE NEAR UTKAL CINIMA HALL BERHAMPUR-760009	20-12-2006	1.513	20.12.2006	20-12-2026	21.12.2006	WORKING	YES	MOUZA-KHAMARIGAON , KHATA-871 , PLOT-3087/P,3092/P,3264/P, KISSAM- , LAT-19° 05' 17.16173" TO 19° 05' 17.86359" , LONG-84°33'49.13265" TO 84°33'50.36148"
F3	KHAMARIGAON DECORATIVE STONE	GALAX Y ENTERPRISES	SASTRI NAGAR 4TH LANE NEAR UTKAL CINIMA HALL BERHAMPUR-760009	06-05-2022	14.101	06-05-2022	05-05-2052	28.10.2022	WORKING	YES	MOUZA-KHAMARIGAON , KHATA-870,155,237,279,374,408,414,565,478,481,481,550,596/9,596/11,596/12,596/93,98,596/15,596/16,,235,456,208,544, , PLOT-, KISSAM- , LAT-19° 05' 8.5" TO 19° 05' 24.2" , LONG- 84°33'38.4" TO 84°33'53.00"
F4	KHAMARIGAON DECORATIVE STONE				13.982				NON WORKING		MOUZA-KHAMARIGAON , KHATA- , PLOT-, KISSAM- , LAT-, LONG-
F5	KHAMARIGAON DECORATIVE STONE				15.204						MOUZA-KHAMARIGAON , KHATA- , PLOT-, KISSAM- , LAT-, LONG-

G.NAME OF VILLAGE:-PANDIAPATHAR											
G1	PANDIAPATHAR DECORATIVE STONE	MD. IRFAN RAZZAK	NILADRI VIHAR,2ND LANE EXTN.BERHA MPUR SADAR,GANJ AM-760001	7908/SM /21.09.2 017	9.579	20.12. 2017	04.01.20 48	04.05.2018	WORKING	YES	MOUZA-PANDIAPATHAR , KHATA-1173 , PLOT-672, KISSAM- , LAT-19° 41'34.59924" TO 19° 41' 40.321" , LONG- 84°43'16.27534" TO 84°43'30.67931"
G2	PANDIAPATHAR DECORATIVE STONE	MD. IRFAN RAZZAK	NILADRI VIHAR,2ND LANE EXTN.BERHA MPUR SADAR,GANJ AM-760001	20-12- 2017	9.579	04.05. 2018		04.05.2018	WORKING	YES	MOUZA-PANDIAPATHAR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
G3	PANDIAPATHARA DECORATIVE STONE	SRI AJAY AGRAW AL	JAY MINERALS, PLOT NO- 24, VIP COLONY, NAYAPALI, BHUBANESW AR	5879/SM , DT. 09.06.20 19	20.566 HA	27-09- 2022	28-09- 2052				MOUZA-PANDIAPATHAR , KHATA-1173 , PLOT-671,672, KISSAM- , LAT-19° 41' 41.08979" TO 19° 41' 53.98787" , LONG- 84°43'08.33078" TO 84°43'31.78341"
H.NAME OF VILLAGE:-MAHUGHARA HILL											
H1	MAHUGHARA HILLS DECORATIVE STONE	SUMITA DAS		5861/SM /28.05.2 005	13.901	11.07. 2005	10.07.20 25	11.07.2005	WORKING	YES	MOUZA-MAHUGHARA HILLS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
H2	MAHUGHARA HILLS DECORATIVE STONE	SMT.SU MITA DAS	PLOT NO.M/C- 5,BRAHMESW AR PATNA CHHACK,BA DAGADA BRIT COLONY, BHUBANESW AR,KHURDA.	11-07- 2005	13.901	11.07. 2005	10.07.20 25	24.08.2005	WORKING	YES	MOUZA-MAHUGHARA HILLS , KHATA-191 , PLOT-321/P,322, KISSAM- , LAT-19° 22' 01.74981" TO 19° 22' 12.35666" , LONG- 84°42'58.81952" TO 84°43'68.584"
H3	MAHUGHARA HILLS DECORATIVE STONE				10.283				NON WORKING	NO	MOUZA-MAHUGHARA HILLS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
H4	MAHUGHARA HILLS DECORATIVE STONE	NIRMA N VIKAS PVT LTD	JANANA HOSPITAL ROAD, BERHAMPUR7 60001,	28-08- 2019	11.635	28-08- 2019	27-08- 2049	01.12.2019	WORKING	YES	MOUZA-MAHUGHARA HILLS , KHATA-191 , PLOT-593,596, KISSAM- , LAT-19° 21' 41.5" TO 19° 21' 53.4" , LONG- 84°43'41.3" TO 84°43'42.7"

H5	MAHUGHARA HILLS DECORATIVE STONE				1.265				NON WORKING	NO	MOUZA-MAHUGHARA HILLS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
H6	MAHUGHARA HILL DECORATIVE STONE	SMT. BABITA PATRA	E/W-NILACHALA NAGAR, BERHAMPUR GANJAM	4148/SM , DT. 07.05.20 15	3.035	04-07-2022	27-11-2052	07.07.2022			MOUZA-MAHUGHARA HILLS , KHATA-191 , PLOT-503, KISSAM- ,LAT-19° 24' 31.3" TO 19° 24' 32.4" , LONG- 84°40'45.7" TO 84°40'45.91"
H7	MAHUGHARA HILL DECORATIVE STONE	M/S NIRMAN BIKASH PVT. LTD	JANANA HOSPITAL ROAD, BERHAMPUR	5951/SM , DT. 01.07.20 15	11.635						MOUZA-MAHUGHARA HILLS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
I.NAME OF VILLAGE:-DUKHUPADA											
I1	DUKHUPADA DECORATIVE STONE	ILLYAS GRANTIES		12317/S M/19.12.2015	14.933	17.03.2017	16.03.2047	19.12.2017			MOUZA- DUKHUPADA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
I2	DUKHUPADA DECORATIVE STONE	M.M ANNAPURNA	SRI KRISHNA NAGAR,4TH LANE, LANJIPALLI,BERHAMPUR-760009	11798/S M, DT. 04.12.20 15	23.337	25-11-2022	27-11-2052	25-11-2022			MOUZA- DUKHUPADA , KHATA-1382,1275,1276,1277,1278,1279,1497 , PLOT-, KISSAM- , LAT-19° 11' 59.72654" TO 19° 46' 31.15391" , LONG- 84°42'46.92747" TO 84°48'37.83251"
J.NAME OF VILLAGE-DINDIPALLI											
J1	DINDIPALLI DECORATIVE STONE	SMT. RANJUL ATA SWAIN		7894/SM /20.09.2017	4.066	19.12.2017	18.12.2047	21.06.2018	WORKING	YES	MOUZA- DINDIPALLI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
J2	DINDIPALLI DECORATIVE STONE	SMT. RANJUL ATA SWAIN	AT-BAUSALUNDI PO-BAUSALINDI BHANJANAGAR GANJAM-761126	19-12-2017	4.055	19.12.2017	15-01-2048	02.08.2018	WORKING	YES	MOUZA- DINDIPALLI , KHATA-705 , PLOT-434,705, KISSAM- ,LAT-19° 57' 27.51610" TO 19° 57' 34.524" , LONG- 84°36'25.50728" TO 84°36'32.055"
J3	DINDIPALLI DECORATIVE STONE				4.879						MOUZA- DINDIPALLI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
J4	DINDIPALLI DECORATIVE STONE				29.23						MOUZA- DINDIPALLI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-

K.NAME OF VILLAGE-LOKAMARI											
K1	LOKAMARI DECORATIVE STONE	ILYAS AHAMA D KHAN	BIG MOSQUE STREET,BHAPU R BAZAR, PO- BERHAMPUR- 760001	08-03- 2022	4.178	08-03- 2022	26-05- 2030	02.07.2022	WORKING	YES	MOUZA- LOKAMARI , KHATA-430 , PLOT-189/P,193/P,194,195 & 196/P, KISSAM- , LAT-19° 40' 30" TO 19° 42' 30" , LONG- 84°22'30" TO 84°25'30"
K2	LOKAMARI DECORATIVE STONE	LYAS AHAMA D KHAN	BIG MASJID STREET	5148/SM DT. 23.07.20 15	4.178	26.05. 2010	25.05.20 30	26.05.2010	WORKING	NO	MOUZA- LOKAMARI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
L.NAME OF VILLAGE-GAGANPUR											
L1	GANGANAPUR DECORATIVE STONE	SRI SIBARA M PATAN AYAK	AT/PO- NARAYAN NAGAR,PS- HINILICUT,GA NJAM- 761102.	05-07- 2022	4.974	05-07- 2022	04-07- 2052	01-11-2023	WORKING	YES	MOUZA-GAGANAPUR , KHATA- 531/52,810, PLOT- 4607,4608,4612,4622, KISSAM- , LAT-19° 30' 11.00" TO 19° 30' 17.80" , LONG- 84°47'04.20" TO 84°47'16.40"
L2	GAGANAPUR DECORATIVE STONE				4.974				NON WORKING		MOUZA-GAGANAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
M.NAME OF VILLAGE-MAHUDA											
M1	MAHUDA DECORATIVE STONE				5.32				NON WORKING		MOUZA-MAHUDA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
N.NAME OF VILLAGE-BENDALIA											
N1	BENDALIA DECORATIVE STONE				2.645				NON WORKING		MOUZA-BENDALIA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
N2	BENDALIA DECORATIVE STONE				6.03				NON WORKING		MOUZA-BENDALIA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
O.NAME OF VILLAGE-TUTIPUR											
O1	TUTIPUR DECORATIVE STONE				1.339				NON WORKING		MOUZA-TUTIPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
P.NAME OF VILLAGE-KUMBHARAJHARI											
P1	KUMBHARAJHARI DECORATIVE STONE				13.638				NON WORKING		MOUZA-KUMBHARAJHARI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
Q.NAME OF VILLAGE-DAKHINAPUR											
Q1	DAKHINAPUR DECORATIVE STONE				8.64				NON WORKING		MOUZA-DAKHINAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-

Q2	DAKHINAPUR DECORATIVE STONE				6.964				NON WORKING		MOUZA-DAKHINAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
R.NAME OF VILLAGE-MATAJHARI											
R1	MATAJHARI DECORATIVE STONE				0.548				NON WORKING		MOUZA-MATAJHARI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
S.NAME OF VILLAGE-MADHAPUR											
S1	MADHAPUR DECORATIVE STONE				18.87				NON WORKING		MOUZA-MADHAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
T.NAME OF VILLAGE-NUAGHARA											
T1	NUAGHARA DECORATIVE STONE				4.006				NON WORKING		MOUZA-NUAGHARA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
U.NAME OF VILLAGE-KARACADS											
U1	KARACADS DECORATIVE STONE				13.962				NON WORKING		MOUZA-KARACADS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-
V.NAME OF VILLAGE-SANDHABUJA HILL											
V1	SANDHABUJA HILL DECORATIVE STONE				4.363				NON WORKING		MOUZA-SANDHABUJA HILL, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
W.NAME OF VILLAGE-SANDUMULA											
W1	SANDUMULA DECORATIVE STONE				10.572				NON WORKING		MOUZA-SANDUMULA, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
X.NAME OF VILLAGE-CHIKITI											
X1	CHIKITI DECORATIVE STONE				13.532				NON WORKING		MOUZA-CHIKITI, KHATA- , PLOT- , KISSAM- , LAT- , LONG-
Y.NAME OF VILLAGE-PARBATIPUR											
Y1	PARBATIPUR DECORATIVE STONE				3.691				NON WORKING		MOUZA-PARBATIPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
Z.NAME OF VILLAGE-DHUNKAPADA											
Z1	DHUNKAPADA DECORATIVE STONE				23.337				NON WORKING		MOUZA-DHUNKAPADA, KHATA- , PLOT-, KISSAM- , LAT- , LONG-

AB.NAME OF VILLAGE-GADAGOVINDAPUR											
AB	GADAGOVINDA PUR DECORATIVE STONE				13.023					NON WORKING	MOUZA-GADAGOVINDAPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
AC.NAME OF VILLAGE-PURUSOTTAMPUR											
AC1	PURUSOTTAMPUR DECORATIVE STONE				25.302						MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
AC2	PURUSOTTAMPUR DECORATIVE STONE				25.234						MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
AC3	PURUSOTTAMPUR DECORATIVE STONE				25.302						MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
AC4	PURUSOTTAMPUR DECORATIVE STONE				25.272						MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-
AD.NAME OF VILLAGE-PURUSOTTAMPUR											
AD1	BHATAKUMARDA DECORATIVE STONE	Smt Sunita Patro,W /o Late Sankars han Patra			1.177						MOUZA-BHATAKUMARDA, KHATA- , PLOT-, KISSAM- , LAT- , LONG-

NB: In the above table omitted Columns are,

Column- 09 & 10, Period of Mining lease (1st/2nd...renewal)-NA

Column-13, Use (Captive/ Non-Captive) - All Non-Captive

Column-16, Open cast/ Underground- All sources are open cast

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

Revenue collected for Decorative Stone.

ROYALTY FOR DECORATIVE STONE				
SL. NO.	NAME OF SOURCE	REVENUE COLLECTED FOR LAST THREE YEARS (IN RS)		
		2021-22	2022-23	2023-24
A1	BHAGABANPUR DECORATIVE STONE			
A2	BHAGABANPUR DECORATIVE STONE			
A3	BHAGABANPUR DECORATIVE STONE			
A4	BHAGABANPUR DECORATIVE STONE			
A5	BHAGABANPUR DECORATIVE STONE			
A6	BHAGABANPUR DECORATIVE STONE			
A7	BHAGABANPUR DECORATIVE STONE			
A8	BHAGABANPUR DECORATIVE STONE			
A9	BHAGABANPUR DECORATIVE STONE			
A10	BHAGABANPUR DECORATIVE STONE			
A11	BHAGABANPUR DECORATIVE STONE			
A12	BHAGABANPUR DECORATIVE STONE			
A13	BHAGABANPUR DECORATIVE STONE			
A14	BHAGABANPUR DECORATIVE STONE			
A15	BHAGABANPUR DECORATIVE STONE			
A16	BHAGABANPUR DECORATIVE STONE			
A17	BHAGABANPUR DECORATIVE STONE			
A18	BHAGABANPUR DECORATIVE STONE			
B1	BENDALA DECORATIVE STONE			
C1	PALLI DECORATIVE STONE			
D1	BADADUMULA DECORATIVE STONE			
D2	BADADUMULA DECORATIVE STONE			
E1	BABANPUR AND PITAMBARAPUR DECORATIVE STONE			
F1	KHAMARIGAON DECORATIVE STONE			
F2	KHAMARIGAON DECORATIVE STONE			
F3	KHAMARIGAON DECORATIVE STONE			
F4	KHAMARIGAON DECORATIVE STONE			
F5	KHAMARIGAON DECORATIVE STONE			
G1	PANDIAPATHAR DECORATIVE STONE			
G2	PANDIAPATHAR DECORATIVE STONE			
G3	PANDIAPATHARA DECORATIVE STONE			
H1	MAHUGHARA HILL DECORATIVE STONE			
H2	MAHUGHARA HILL DECORATIVE STONE			
H3	MAHUGHARA HILL DECORATIVE STONE			
H4	MAHUGHARA HILL DECORATIVE STONE			
H5	MAHUGHARA HILL DECORATIVE STONE			
H6	MAHUGHARA HILL DECORATIVE STONE			
H7	MAHUGHARA HILL DECORATIVE STONE			
I1	DUKHUPADA DECORATIVE STONE			

I2	DUKHUPADA DECORATIVE STONE			
J1	DINDIPALLI DECORATIVE STONE			
J2	DINDIPALLI DECORATIVE STONE			
J3	DINDIPALLI DECORATIVE STONE			
J4	DINDIPALLI DECORATIVE STONE			
K1	LOKAMARI DECORATIVE STONE			
K2	LOKAMARI DECORATIVE STONE			
L1	GANGANAPUR DECORATIVE STONE			
L2	GAGANAPUR DECORATIVE STONE			
M1	MAHUDA DECORATIVE STONE			
N1	BENDALIA DECORATIVE STONE			
N2	BENDALIA DECORATIVE STONE			
O1	TUTIPUR DECORATIVE STONE			
P1	KUMBHARAJHARI DECORATIVE STONE			
Q1	DAKHINAPUR DECORATIVE STONE			
Q2	DAKHINAPUR DECORATIVE STONE			
R1	MATAJHARI DECORATIVE STONE			
S1	MADHAPUR DECORATIVE STONE			
T1	NUAGHARA DECORATIVE STONE			
U1	KARACADS DECORATIVE STONE			
V1	SANDHABUJA HILL DECORATIVE STONE			
W1	SANDUMULA DECORATIVE STONE			
X1	CHIKITI DECORATIVE STONE			
Y1	PARBATIPUR DECORATIVE STONE			
Z1	DHUNKAPADA DECORATIVE STONE			
AB	GADAGOVINDAPUR DECORATIVE STONE			
AC1	PURUSOTTAMPUR DECORATIVE STONE			
AC2	PURUSOTTAMPUR DECORATIVE STONE			
AC3	PURUSOTTAMPUR DECORATIVE STONE			
AC4	PURUSOTTAMPUR DECORATIVE STONE			
AD1	BHATAKUMARDA DECORATIVE STONE			

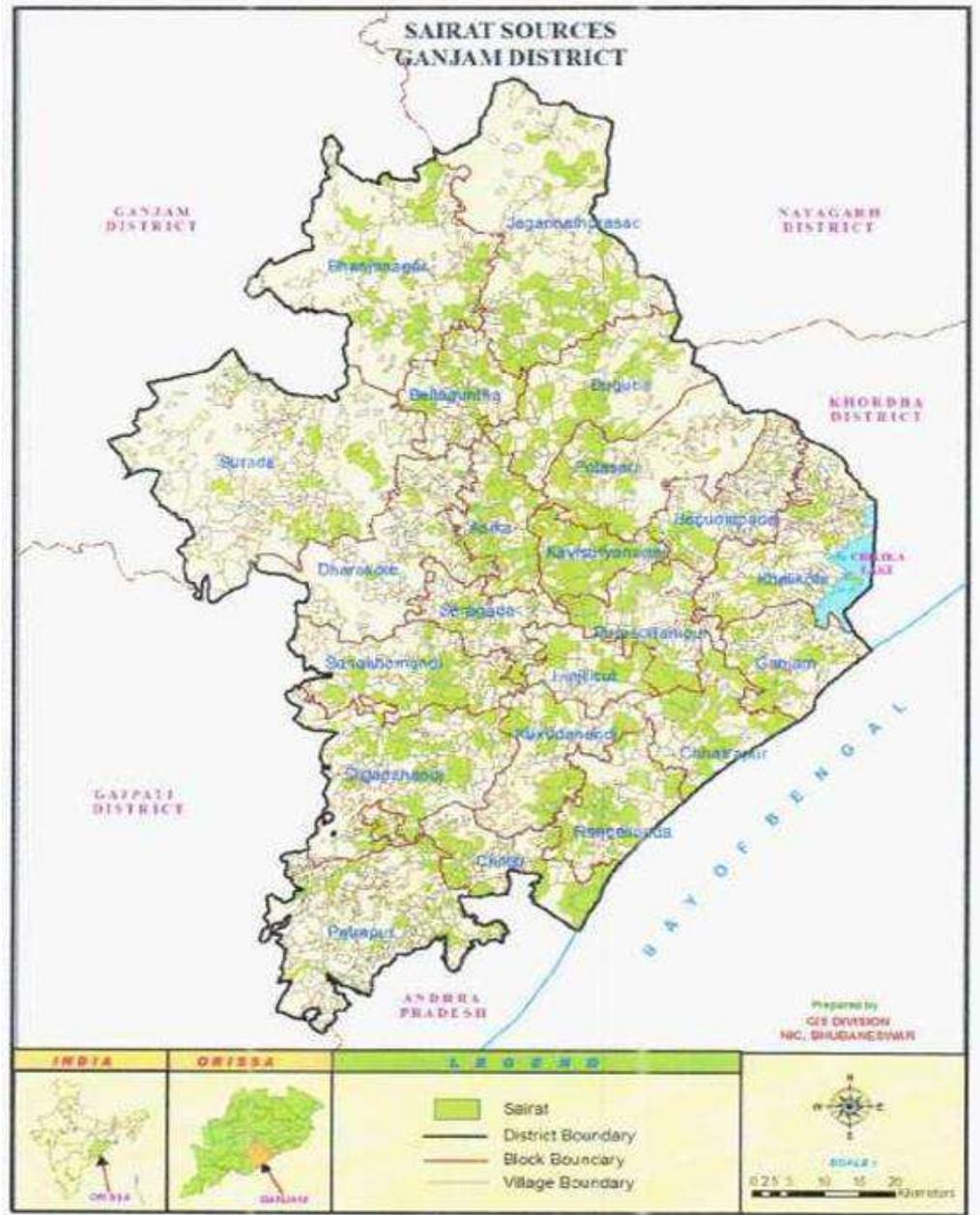
11. DETAILS OF PRODUCTION OF MINOR MINERAL IN LAST THREE YEARS.

Production of Decorative Stone

PRODUCTION OF DECORATIVE STONE				
SL. NO.	NAME OF SOURCE	PRODUCTION FOR LAST THREE YEARS (IN CUM)		
		2021-22	2022-23	2023-24
A1	BHAGABANPUR DECORATIVE STONE			
A2	BHAGABANPUR DECORATIVE STONE			
A3	BHAGABANPUR DECORATIVE STONE			
A4	BHAGABANPUR DECORATIVE STONE			
A5	BHAGABANPUR DECORATIVE STONE			
A6	BHAGABANPUR DECORATIVE STONE			
A7	BHAGABANPUR DECORATIVE STONE			
A8	BHAGABANPUR DECORATIVE STONE			
A9	BHAGABANPUR DECORATIVE STONE			
A10	BHAGABANPUR DECORATIVE STONE			
A11	BHAGABANPUR DECORATIVE STONE			
A12	BHAGABANPUR DECORATIVE STONE			
A13	BHAGABANPUR DECORATIVE STONE			
A14	BHAGABANPUR DECORATIVE STONE			
A15	BHAGABANPUR DECORATIVE STONE			
A16	BHAGABANPUR DECORATIVE STONE			
A17	BHAGABANPUR DECORATIVE STONE			
A18	BHAGABANPUR DECORATIVE STONE			
B1	BENDALA DECORATIVE STONE			
C1	PALLI DECORATIVE STONE			
D1	BADADUMULA DECORATIVE STONE			
D2	BADADUMULA DECORATIVE STONE			
E1	BABANPUR AND PITAMBARAPUR DECORATIVE STONE			
F1	KHAMARIGAON DECORATIVE STONE			
F2	KHAMARIGAON DECORATIVE STONE			
F3	KHAMARIGAON DECORATIVE STONE			
F4	KHAMARIGAON DECORATIVE STONE			
F4	KHAMARIGAON DECORATIVE STONE			
G1	PANDIAPATHAR DECORATIVE STONE			
G2	PANDIAPATHAR DECORATIVE STONE			
G3	PANDIAPATHARA DECORATIVE STONE			
H1	MAHUGHARA HILL DECORATIVE STONE			
H2	MAHUGHARA HILL DECORATIVE STONE			
H3	MAHUGHARA HILL DECORATIVE STONE			
H4	MAHUGHARA HILL DECORATIVE STONE			
H5	MAHUGHARA HILL DECORATIVE STONE			
H6	MAHUGHARA HILL DECORATIVE STONE			
H7	MAHUGHARA HILL DECORATIVE STONE			
I1	DUKHUPADA DECORATIVE STONE			
I2	DUKHUPADA DECORATIVE STONE			
J1	DINDIPALLI DECORATIVE STONE			
J2	DINDIPALLI DECORATIVE STONE			
J3	DINDIPALLI DECORATIVE STONE			

J4	DINDIPALLI DECORATIVE STONE			
K1	LOKAMARI DECORATIVE STONE			
K2	LOKAMARI DECORATIVE STONE			
L1	GANGANAPUR DECORATIVE STONE			
L2	GAGANAPUR DECORATIVE STONE			
M1	MAHUDA DECORATIVE STONE			
N1	BENDALIA DECORATIVE STONE			
N2	BENDALIA DECORATIVE STONE			
O1	TUTIPUR DECORATIVE STONE			
P1	KUMBHARAJHARI DECORATIVE STONE			
Q1	DAKHINAPUR DECORATIVE STONE			
Q2	DAKHINAPUR DECORATIVE STONE			
R1	MATAJHARI DECORATIVE STONE			
S1	MADHAPUR DECORATIVE STONE			
T1	NUAGHARA DECORATIVE STONE			
U1	KARACADS DECORATIVE STONE			
V1	SANDHABUJA HILL DECORATIVE STONE			
W1	SANDUMULA DECORATIVE STONE			
X1	CHIKITI DECORATIVE STONE			
Y1	PARBATIPUR DECORATIVE STONE			
Z1	DHUNKAPADA DECORATIVE STONE			
AB	GADAGOVINDAPUR DECORATIVE STONE			
AC1	PURUSOTTAMPUR DECORATIVE STONE			
AC2	PURUSOTTAMPUR DECORATIVE STONE			
AC3	PURUSOTTAMPUR DECORATIVE STONE			
AC4	PURUSOTTAMPUR DECORATIVE STONE			
AD1	BHATAKUMARDA DECORATIVE STONE			

12. MINERAL MAP OF THE DISTRICT.



13. LIST OF LETTER OF INTENT (LOI) HOLDERS IN THE DISTRICT ALONG WITH ITS VALIDITY AS PER THE FOLLOWING FORMAT.

Sl.No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Letter of Intent Holder	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
-	-	-	-	-	-	-	-	-

** The selected bidder shall be required to execute quarry lease in Form-N within three weeks from the date of intimation of his selection, if the approval of the mining plan and environment clearance has been obtained before auction, and in other cases, three months from the date of intimation, failing which, the intimation shall stand cancelled and the security deposit shall stand forfeited:*

*Provided that the Controlling Authority may, for genuine and sufficient reasons, extend the said period, if it is satisfied that the delay in execution of lease deed is not due to reasons attributable to the selected bidder (See **Rule-27(13) of OMMCR-2016**).*

14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT.

SL NO.	NAME OF SOURCE WITH LOCATION	MINERAL RESOURCE(MT)
A1	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A2	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA-215 , PLOT-265,266,339, 413,317, KISSAM- , LAT-19° 20' 25.41437" TO 19° 20' 25.61120" , LONG- 84°43'15.11874" TO 84°43'45.72027"	
A3	BHAGABANPUR DECORATIVE STONEMOUZA-BHAGABANPUR , KHATA-215 , PLOT-413 KISSAM- , LAT-19° 20' 42.20140" TO 19° 20' 47.02911" , LONG- 84°43'20.69330" TO 84°43'27.37085"	
A4	BHAGABANPUR DECORATIVE STONEMOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A5	BHAGABANPUR DECORATIVE STONEMOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A6	BHAGABANPUR DECORATIVE STONEMOUZA-BHAGABANPUR , KHATA-215 , PLOT-4&6, KISSAM- , LAT-19° 20' 32.68898" TO 19° 20' 45.68792" , LONG- 84°42'39.71963" TO 84°42'46.76003"	
A7	BHAGABANPUR DECORATIVE STONEMOUZA-BHAGABANPUR , KHATA-215 , PLOT-7,8, KISSAM- , LAT-19° 20' 30.834" , LONG- 84°43'13.338"	
A8	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- 215, PLOT-607, KISSAM- , LAT-19° 20' 38.30" TO 19° 20' 39.204" , LONG- 84°44'05.10" TO 84°44'06.109"	
A9	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA-215 , PLOT-494, KISSAM- , LAT-19° 17' 30" TO 19° 84' 40.19" , LONG- 84°42'30"	
A10	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA-215 , PLOT-10, KISSAM- ,LAT-19° 19' 50.70837" TO 19° 19' 57.08067" , LONG- 84°43'02.69853" TO 84°43'15.43935"	
A11	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A12	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A13	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A14	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A15	BHAGABANPUR DECORATIVE STONEMOUZA-BHAGABANPUR , KHATA-215 , PLOT-263, KISSAM- , LAT-19° 20'17.00" TO 19° 20' 25.50" , LONG- 84°43'35.0" TO 84°43'46.9"	

A16	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA-215 , PLOT-705,711,714, KISSAM- , LAT-19° 20' 20.10" TO 19° 20' 29.20" , LONG- 84°44'8.90" TO 84°44'22.70"	
A17	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
A18	BHAGABANPUR DECORATIVE STONE,MOUZA-BHAGABANPUR , KHATA- , PLOT-, KISSAM- , LAT-19°20'04.10" N TO 19°20'24.50" N , LONG-84°43'15.70" E TO 84°43'33.10" E	3272819
B1	BENDALA DECORATIVE STONE MOUZA-BENDALA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
C1	PALLI DECORATIVE STONE ,MOUZA-PALLI , KHATA-171 , PLOT-565,567,570,572,605,, KISSAM- , LAT-19° 11' 54.95639" TO 19° 12' 01.05641" , LONG- 84°42'44.05236" TO 84°42'54.65706"	
D1	BADADUMULA DECORATIVE STONEMOUZA-BADADUMULA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
D2	BADADUMULA DECORATIVE STONEMOUZA-BADADUMULA , KHATA-285 , PLOT-118/1,122,, KISSAM- ,LAT-19° 18' 25.03587" TO 19° 18' 33.80865" , LONG- 84°35'27.5448" TO 84°35'40.80101"	
E1	BABANPUR AND PITAMBARAPUR DECORATIVE STONEMOUZA-BABANPUR AND PITAMBARAPUR , KHATA-NO.159/21,82,159,159/26,156,17,3680,159/26,262,261,1,43,54,57,60,63,34,34,57,102 , PLOT-, KISSAM- , LAT-19° 04' 44.227" , LONG-84°35'01.65"	
F1	KHAMARIGAON DECORATIVE STONE,MOUZA-KHAMARIGAON , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
F2	KHAMARIGAON DECORATIVE STONE,MOUZA-KHAMARIGAON , KHATA-871 , PLOT-3087/P,3092/P,3264/P, KISSAM- , LAT-19° 05' 17.16173" TO 19° 05' 17.86359" , LONG-84°33'49.13265" TO 84°33'50.36148"	
F3	KHAMARIGAON DECORATIVE STONE,MOUZA-KHAMARIGAON , KHATA-870,155,237,279,374,408,414,565,478,481,481,550,596/9,596/11,596/12,596/93,98,596/15,596/16,,235,456,208,544 , , PLOT-, KISSAM- , LAT-19° 05' 8.5" TO 19° 05' 24.2" , LONG- 84°33'38.4" TO 84°33'53.00"	
F4	KHAMARIGAON DECORATIVE STONE,MOUZA-KHAMARIGAON , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
F5	KHAMARIGAON DECORATIVE STONE,MOUZA-KHAMARIGAON , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
G1	PANDIAPATHAR DECORATIVE STONE,MOUZA-PANDIAPATHAR , KHATA-1173 , PLOT-672, KISSAM- , LAT-19° 41'34.59924" TO 19° 41' 40.321" , LONG- 84°43'16.27534" TO 84°43'30.67931"	
G2	PANDIAPATHAR DECORATIVE STONEMOUZA-PANDIAPATHAR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	

G3	PANDIAPATHARA DECORATIVE STONE,MOUZA-PANDIAPATHAR , KHATA-1173 , PLOT-671,672, KISSAM- , LAT-19° 41' 41.08979" TO 19° 41' 53.98787" , LONG- 84°43'08.33078" TO 84°43'31.78341"	
H1	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILL , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
H2	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILL , KHATA-191 , PLOT-321/P,322, KISSAM- , LAT-19° 22' 01.74981" TO 19° 22' 12.35666" , LONG- 84°42'58.81952" TO 84°43'68.584"	
H3	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILLS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
H4	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILL , KHATA-191 , PLOT-593,596, KISSAM- , LAT-19° 21' 41.5" TO 19° 21' 53.4" , LONG- 84°43'41.3" TO 84°43'42.7"	
H5	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILL , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
H6	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILL , KHATA-191 , PLOT-503, KISSAM- ,LAT-19° 24' 31.3" TO 19° 24' 32.4" , LONG- 84°40'45.7" TO 84°40'45.91"	
H7	MAHUGHARA HILL DECORATIVE STONE,MOUZA-MAHUGHARA HILL , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
I1	DUKHUPADA DECORATIVE STONE,MOUZA-DUKHUPADA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
I2	DUKHUPADA DECORATIVE STONE,MOUZA-DUKHUPADA , KHATA-1382,1275,1276,1277,1278,1279,1497 , PLOT-, KISSAM- , LAT-19° 11' 59.72654" TO 19° 46' 31.15391" , LONG- 84°42'46.92747" TO 84°48'37.83251"	
J1	DINDIPALLI DECORATIVE STONE,MOUZA-DINDIPALLI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
J2	DINDIPALLI DECORATIVE STONE,MOUZA-DINDIPALLI , KHATA-705 , PLOT-434,705, KISSAM- ,LAT-19° 57' 27.51610" TO 19° 57' 34.524" , LONG- 84°36'25.50728" TO 84°36'32.055"	
J3	DINDIPALLI DECORATIVE STONE,MOUZA-DINDIPALLI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
J4	DINDIPALLI DECORATIVE STONE,MOUZA-DINDIPALLI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
K1	LOKAMARI DECORATIVE STONEMOUZA-LOKAMARI , KHATA-430 , PLOT-189/P,193/P,194,195 & 196/P, KISSAM- , LAT-19° 40' 30" TO 19° 42' 30" , LONG- 84°22'30" TO 84°25'30"	
K2	LOKAMARI DECORATIVE STONEMOUZA-LOKAMARI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	

L1	GANGANAPUR DECORATIVE STONEMOUZA- GANGANAPUR , KHATA-531/52,810, PLOT- 4607,4608,4612,4622, KISSAM- , LAT-19° 30' 11.00" TO 19° 30' 17.80" , LONG- 84°47'04.20" TO 84°47'16.40"	
L2	GAGANAPUR DECORATIVE STONE MOUZA- GAGANAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
M1	MAHUDA DECORATIVE STONE MOUZA-MAHUDA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
N1	BENDALIA DECORATIVE STONE MOUZA- BENDALIA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
N2	BENDALIA DECORATIVE STONE MOUZA- BENDALIA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
O1	TUTIPUR DECORATIVE STONE MOUZA-TUTIPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
P1	KUMBHARAJHARI DECORATIVE STONE MOUZA- KUMBHARAJHARI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
Q1	DAKHINAPUR DECORATIVE STONE MOUZA- DAKHINAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
Q2	DAKHINAPUR DECORATIVE STONE MOUZA- DAKHINAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
R1	MATAJHARI DECORATIVE STONE MOUZA- MATAJHARI , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
S1	MADHAPUR DECORATIVE STONE MOUZA- MADHAPUR , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
T1	NUAGHARA DECORATIVE STONE MOUZA- NUAGHARA , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
U1	KARACADS DECORATIVE STONE MOUZA- KARACADS , KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
V1	SANDHABUJA HILL DECORATIVE STONE MOUZA- SANDHABUJA HILL, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
W1	SANDUMULA DECORATIVE STONE MOUZA- SANDUMULA, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
X1	CHIKITI DECORATIVE STONE MOUZA-CHIKITI, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
Y1	PARBATIPUR DECORATIVE STONE MOUZA- PARBATIPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
Z1	DHUNKAPADA DECORATIVE STONE MOUZA- DHUNKAPADA, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	
AB	GADAGOVINDAPUR DECORATIVE STONE MOUZA-GADAGOVINDAPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	

AC1	PURUSOTTAMPUR DECORATIVE STONE,MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	5.75
AC2	PURUSOTTAMPUR DECORATIVE STONE,MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	7.557
AC3	PURUSOTTAMPUR DECORATIVE STONE,MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	6.774
AC4	PURUSOTTAMPUR DECORATIVE STONE,MOUZA-PURUSOTTAMPURPUR, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	4.067
AD1	BHATAKUMARDA DECORATIVE STONE,MOUZA-BHATAKUMARDA, KHATA- , PLOT-, KISSAM- , LAT- , LONG-	24398

15. QUALITY /GRADE OF MINERAL AVAILABLE IN THE DISTRICT.

Decorative Stone of the district is very much suitable for Sculpture carving purposes due its softness due to the effect of weathering in Decorative Stone. After recovery Balance material may be used for filling purposes particularly of road.

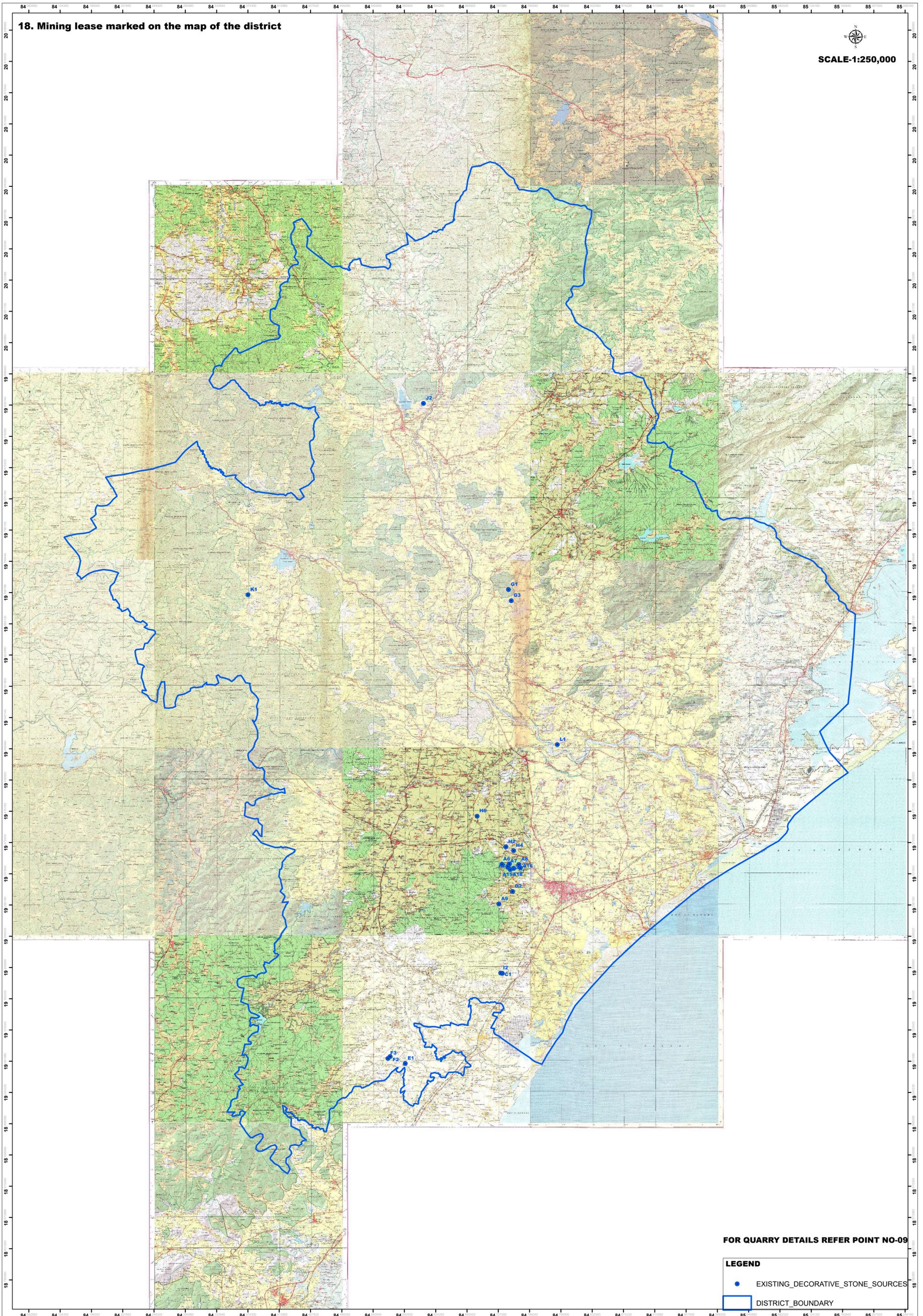
16. USE OF MINERAL.

Specified minor minerals (Decorative Stone) are used as monuments or idols and other decorative purpose. It is also use as Granite Sheets for flooring of buildings. houses and temples etc. Stones of sairat sources are mainly used for road and building materials. Road metal / building metal / moorum of the district are used mainly for various construction purposes like road making, concrete making, construction of dams etc.

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

Decorative stones of Ganjam District has a huge demand globally. As per market demand the supplies from the District is adequate for fulfilling the demand for both local and overseas. Due to the heavy demand, the entire production from the mining leases of the district are totally utilised in the last three years. Stone Quarries of sairat sources also fulfilled the local market demand in the last three years

MINING LEASES (DECORATIVE STONE) MARKED ON THE DISTRICT TOPO-MAP OF GANJAM



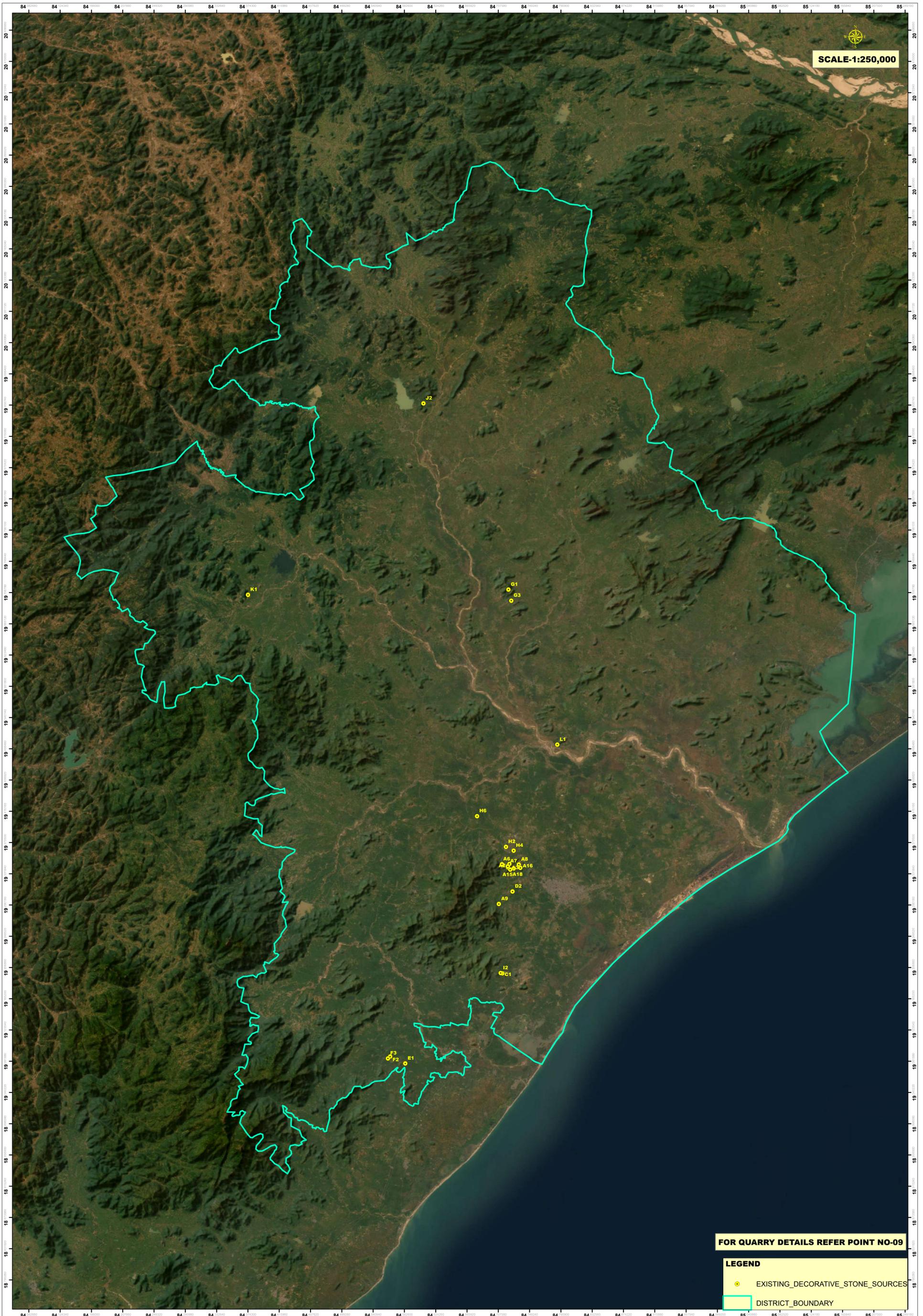
18. Mining lease marked on the map of the district

SCALE-1:250,000

FOR QUARRY DETAILS REFER POINT NO-09

LEGEND
● EXISTING_DECORATIVE_STONE_SOURCES
□ DISTRICT_BOUNDARY

MINING LEASES (DECORATIVE STONE) MARKED ON THE DISTRICT SATELLITE-MAP OF GANJAM



SCALE-1:250,000

FOR QUARRY DETAILS REFER POINT NO-09

LEGEND

- EXISTING_DECORATIVE_STONE_SOURCES
- ▭ DISTRICT_BOUNDARY

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

SL NO.	NAME OF TAHASIL	NAME OF CLUSTER	DETAILS OF QUARRY LEASE AREA	NUMBER OF MINING LEASE
—	—	—	—	—

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

There is no such Eco-Sensitive Area as notified by the Ministry of Environment, Forest and Climate Change, Govt. of India in respect of Ganjam District.

21. IMPACT ON THE ENVIRONMENT (AIR, WATER, NOISE, SOIL, FLORA & FAUNA, LAND USE, AGRICULTURE, FOREST ETC.) DUE TO MINING ACTIVITY.

Due to mining activity of the minor mineral such as sand, stone, morrum etc. the immediate environment i.e. the surrounding is affected by dust emission during mining activity, transportation and ore handing. Similarly, during extraction of minor mineral there may be significant noise problem and the surface run off during monsoon affects the down stream water body, soil etc. In case of sand bed mining there may be erosion in the river embankment, non-rejuvenation of the river dyke and there may be change of water course and flood plain area. In case of the deep mining there may be effect on the ground water table. For sound management of Environment w.r.t. Water, Air & Noise. Under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act. 1981 and regulation of Noise as prescribed in the Noise Pollution (Regulation and Control) Rules, 2000, specific conditions are being imposed to the Sand Mining and Stone Quarries for compliance during operation of the mines/quarries.

Activities attributed to Mining:-

Generally, the environment impact can be categorized as either primary or secondary. Primary Impacts are those, which are attributed directly by the project. Secondary impacts are those which are indirectly induced and typically include the associated investment and changed pattern of social and economic activities by the proposed action.

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

Impact on Ambient Air

Mining operation are carried out by opencast manual, semi mechanized/ mechanized methods generating dust particles due to various activities likes, excavation, loading, handling of mineral and transportation. The air quality in the mining areas depends upon the nature and concentration of emissions and meteorological conditions.

The major air pollutants due to mining activities include:-

- Particulate matter (dust) of various sizes.
- Gases, such as sulphur dioxide, oxides of nitrogen, carbon monoxide etc from machine & vehicular exhaust.

Dust is the single air pollutant observed in the open cast mines. Diesel operating drilling machines, blasting and movement of machineries/ vehicles produce NO_x, SO₂ and CO emissions, usually at low levels. Dust can be of significant nuance surrounding land user and potential health risk in some circumstances.

Water Impact

Sometimes the mining operation leads to intersect the water table causing ground water depletion. Due to the interference with surface water sources like river, nallah etc drainage pattern of the area is altered.

Noise Impact

Noise pollution mainly due to operation of machineries and occasional plying of machineries. These actives will create noise pollution in the surrounding area.

Impact on Land environment

The topography of the area will change certain changes due to mining activity which may cause some alteration to the entire eco system.

Impact on Flora & Fauna

The impact on biodiversity is difficult to quantify because of it's diverse and dynamic characteristics.

Mining activities generally result in the deforestation, land degradation, water, air and noise pollution which directly or indirectly affect the faunal and flora status of the project area.

However, occurrence and magnitude of these impacts are entirely dependent upon the project location, mode of operation and technology involved.

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

Air

Mitigation measures suggested for air pollution controls are to be based on the baseline ambient air quality of the project/cluster area and would include measures such as:

- Dust generation shall be reduced by using sharp teeth of shovels.
- Wet drilling shall be carried out to contain the dust particles.
- Controlled blasting techniques shall be adopted.
- Water sprinkling on haul roads, service roads and overburden dumps will help in reducing considerable dust pollution.
- Proper and regular maintenance of mining equipment's have to be undertaken.
- Transport of materials in trucks are to be covered with tarpaulin.
- The mine pit water can be utilized for dust suppression in and around mines area.
- Information on wind direction and meteorology are to be considered during planning, so that pollutants, which cannot be fully suppressed by engineering techniques, will be prevented from reaching the nearby agricultural land, if any.
- Comprehensive greenbelt around overburden dumps and periphery of the mining projects/clusters has to be carried out to reduce to fugitive dust transmission from the project area in order to create clean & healthy environment.

Water

- Construction of garland drains and settling tanks to divert surface run –off of the mining area to the natural drainage.
- Construction of checks dams/ gully plugs at strategic places to arrest silt wash off from broken up area.
- Retaining walls with weep hole are to be constructed around the mine boundaries to arrest silt wash off.
- The mined out pits shall be converted in to the water reservoir at the end of mine life. This will help in recharging ground water table by acting as a water harvesting structure.

- Periodic analysis of mine pit water and ground water quality in nearby villages are to be undertaken.
- Domestic sewage from site office & urinals/latrines provided within ML/QL areas is to be discharged in septic tank followed by soak pits.

Noise

- Periodic maintenance of machineries, equipments shall be ensured to keep the noise generated within acceptable limit.
- Development of thick green belt around mining/cluster area, haul roads to reduce the noise.
- Provision of earplugs to workers exposed to high noise generating activities like blasting, excavation site etc. Worker and operators at work sites will be provided with earmuffs.
- Conducting periodical medical check-up of all workers for any noise related health problems.
- Proper training to personnel to create awareness about adverse noise related effects.
- Periodic noise monitoring at locations within the mining area and nearby habitations to assess efficacy of adopted control measures.
- During blasting optimum spacing, burden and charging of holes will be made under the supervision of competent qualified mines foreman, mate etc.

Biological Environment

- Development of green belt/gap filling saplings in the safety barrier left around the quarry area/ cluster area.
- Carrying out thick greenbelt with local flora species predominantly with long canopy laves on the inactive mined out upper benches.
- Development of dense poly culture plantation using local floral species in the mining areas at conceptual stage if the mine is not continued much below the general ground level.
- Adoption of suitable air pollution control measures as suggested above.
- Transport of materials in trucks covered with tarpaulin.

23. RECLAMATION OF MINED OUT AREA (BEST PRACTICE ALREADY IMPLEMENTED IN THE DISTRICT, REQUIREMENT AS PER RULES AND REGULATION, PROPOSED RECLAMATION PLAN).

As per statute all mines/quarries are to be properly reclaimed before final closure of the mine. Reclamation of exhausted mines are planned to be undertaken in below three possible means:

1. If, substantial amount of waste is there, the exhausted quarry can be fully or partly backfilled using the stored waste. The backfilled areas are to be brought under plantation of local species.
2. If the generation of waste is much less as in the case of minor mineral mining, the exhausted quarries can be reclaimed by
 - a. Plantation on the broken-up surface if the depth of quarry is not much below the surrounding surface level.
 - b. Converted to water reservoir after stabilization of the slopes if the exhausted quarry continues much below the surrounding surface level. It is preferred to cordon the water reservoir either through wire fencing or retaining wall with plantation from the safety point of view.

Most of the quarry/mining lease areas are yet to be exhausted from ore point of view. Hence, reclamation would be taken up only after exhaustion of the ore/mineral content from these areas. The exhausted minor mineral quarries of the district have been converted to water reservoirs.

24. RISK ASSESSMENT & DISASTER MANAGEMENT PLAN.

The Ganjam district is very prone to natural calamities i.e. Cyclone and Flood. The heavy flood of 1990, super cyclone of 1999 and the super Cyclonic storm (Phailin) 2013, Super cyclonic storm (Hudhud) 2014. Super Cyclonic Storm (Titili) 2018, severe super cyclonic storm (Fani) 2019 have devastated Ganjam District. However, in recent years climate change is reflected in the increasingly fluctuating weather cycle with unpredictable cold waves, hot waves, floods and exceptionally heavy single day downpours, low rainfall long dry spell and early withdrawal of monsoon. The aberrant weather situation was both a challenge and opportunity to the mining exploration as per its nature of extraction and exploitation. The flood occurs due to the sudden rise of the rivers flowing from the hills are not very long and thus their subject to sudden floods. It also rejuvenated the sand mining sources of the district although it causes devastation of the public wealth.

The only risk involved related to mining of minor mineral excepting natural calamities is slope failure and probable accidents due to high and ill maintained bench walls. This can only be addressed through making of regular benches and undertaking mining in benching pattern.

The disaster management plan (DMP) is supposed be a dynamic, changing, document focusing on continual improvement of emergency response planning and arrangements.

The disaster management plan is to be aimed to ensure safety of life, protection of environment, protection of installation, restoration of production and salvage operations in this same order of priorities. For effective implementation of the disaster management plan, it should be widely circulated through rehearsal/induction conducted by the respective department from time to time.

General responsibilities of employees' during an emergency:

During an emergency, it becomes more enhanced and pronounced when an emergency warning is raised, the worker in charge, should adopt safe and emergency shut down and attend to any prescribed duty. If no such responsibility is assigned, the workers should adopt a safe course to assembly point and wait instructions. He should not resort to spread panic. On the other hand, he must assist emergency personnel towards objectives of DMP.

Co-ordination with local authorities:

The Mine Manger who is responsible for emergency will always keep a jeep ready at site. In case of any eventuality, the victim will be taken to the nearby hospitals after carrying out the first aid at the site. The Manger should collect and have adequate information of the nearby hospitals, fire station, police station, village panchayat heads, taxi stands, medical shops, district revenue authorities etc. and use them efficiently during the case of emergency.

25. DETAILS OF THE OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT. (LAST FIVE-YEAR DATA OF NUMBER OF PATIENTS OF SILICOSIS & TUBERCULOSIS IS ALSO NEEDS TO BE SUBMITTED).

Occupational health should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations. the prevention among workers of departures from health caused by their working conditions, the protection of workers at their employment from risks resulting from factors adverse to health, the adaption of work to men and of each man to his job. In recent years the application of ergonomics has made a significant contribution for reducing industrial accidents and to overall health efficiency of workers.

A. Occupational hazards

The industrial worker today is placed in a highly complicated environment which is getting highly complicated as man is becoming more ingenious. An industrial worker may be exposed to many types of hazards depending upon his occupation.

- i) Physical Hazards
- ii) Chemical hazards
- iii) Biological hazards
- iv) Mechanical hazards
- v) Psychosocial hazards

B. Occupational Diseases

Occupational diseases are usually defined as diseases arising out of or in the course of employment. For convenience, they may be grouped as under

i) Diseases due to Physical agents:

- Heat:-Heat hyperpyrexia, heat exhaustion, heat syncope, heat cramps, burns and local effects such as prickly heat.
- Cold:- Trench foot, frost bite, chilblains.
- Light:- Occupational cataract, miner's nystagmus.
- Pressure:- caisson disease, air embolism, blast(explosion)
- Noise:- Occupational deafness
- Radiation:- cancer, Leukaemia, Aplastic Anaemia, Pancytopenia
- Mechanical Factor:- injuries, Accidents
- Electricity:- Burns

ii) Diseases due to Chemical agents:-

Gases: - CO₂, CO, HCN, CS₂, NH₃, N₂, H₂S, HCL, SO₂ these causes gas poisoning.

Dusts (Pneumoconiosis):-

A. Inorganic Dusts:-

- Coal Dust:- Anthracosis
- Silica:- Silicosis
- Asbestos:- Asbestosis, Cancer lung.
- Iron- Siderosis

B. Organic (Vegetable) Dust:-

- Cone Fibre: Bagassosis
- Cotton dust: Bussinosis
- Tobacco: Tobacosis(11)
- Hay or grain Dust: Farmer's lung

❖ Metals and their compound:- Toxic hazards from lead, mercury, cadmium, manganese, beryllium , arsenic, chromium etc.

❖ Chemicals:- Acids, alkalies, pesticides

❖ Solvents:- carbon bisulphide, benzene, trichloroethylene, chotoform, etc.

iii. **Diseases due to biological agents:-** Brucellosis, leptospirosis, anthrax, actionomycosis, hydatidosis, psittacosis, tetanus, ancephallities, fungal infection, etc.

iv. **Occupational cancer:-** Cancer of skin, lungs, bladder.

v. **Occupational dermatosis:-** Dermatitis, eczema

vi. **Diseases of Psychological organs:-** Industrial neurosis, hypertension, peptic ulcer. Etc.

26. PLANTATION AND GREEN BELT DEVELOPMENT IN RESPECT OF LEASES ALREADY GRANTED IN THE DISTRICT.

Specific conditions are being imposed by the State Pollution Control Board during grant of consent to operate to the Mines to develop adequate Nos of plantation as per the recommendations made in the approved mining plan during the operation period and closure of Mining activities as per the mining plan. As most of the minor mineral mines / quarries of the District are yet to be exhausted of their mineral content no sort of reclamation measures including plantation has been undertaken (except by IREL Matikhalo) excluding gap plantation of local species in the peripheral safety zones of the quarries/clusters and in some of the haul roads.

27. ANY OTHER INFORMATION.

Nothing to be specified.