DISTRICT RESOURCE MAP

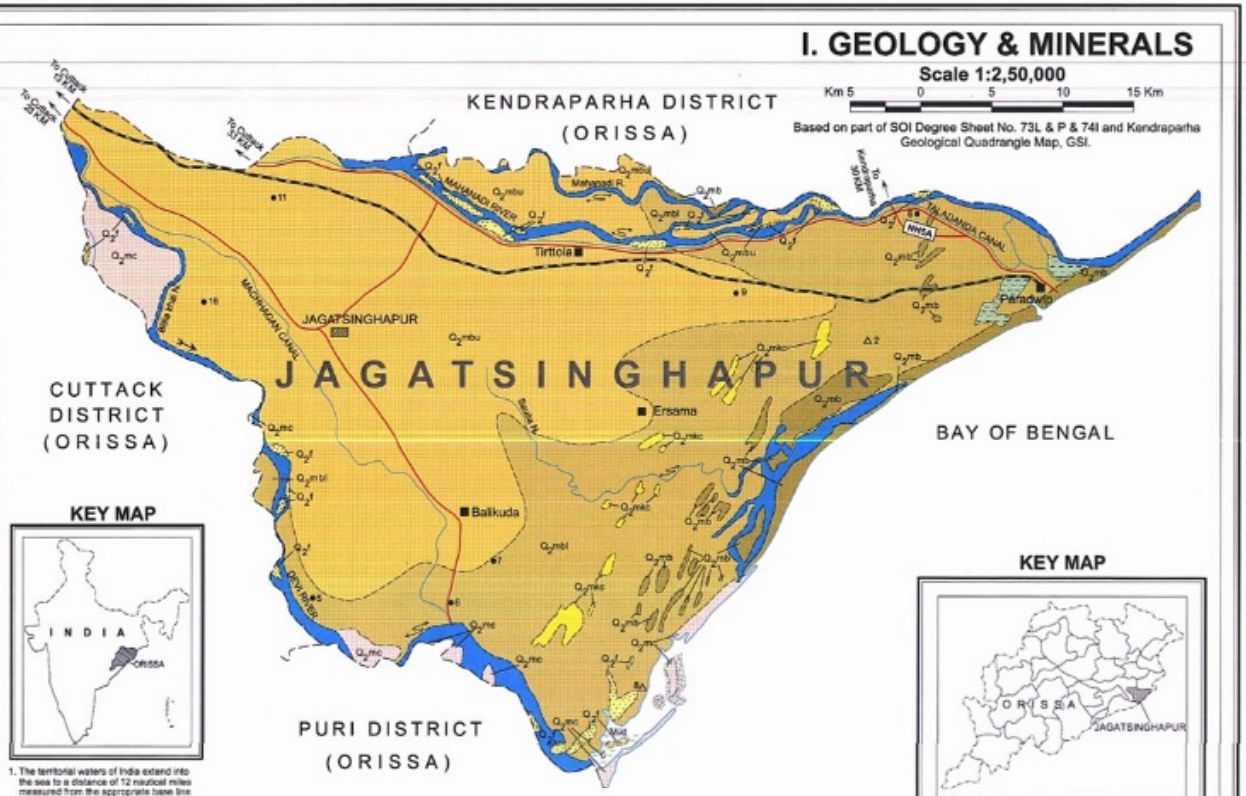
JAGATSINGHAPUR, ORISSA

I. GEOLOGY & MINERALS

Scale 1:2,50,000

Km 5 0 5 10 15 Km

Based on part of SOI Degree Sheet No. 73L & P & 74I and Kendraparha Geological Quadrangle Map, GSI.



1. The territorial waters of India extend into the sea to a distance of 12 nautical miles measured from the appropriate base line

LEGEND

Q_2mc Q_2f	Sand & silts (flat surface with occasional dunes/Point & lateral bars & meander scrolls)	Present day coastal/flood plain deposit	Late Holocene
Q_2mb	Very fine sand, silt and clay (Older dunes)	Younger beach deposit	
Q_2mbu	Sandy silt and silty clay	Upper delta deposit	Middle to Late Holocene
Q_2mbl	Clay with fine sand and silt	Lower delta deposit	
Q_2mkc	Compact sand and silt	Older beach deposit	Late Pleistocene to Early Holocene

GEOGRAPHICAL F

- River / Canal
- Swamp
- Lithological B
- District Boun
- Railway line
- Road
- Locality
- District Headc
- Triangulation
- Spot height (i

EXPLANATORY NOTE

Jagatsinghapur district was formed out of the Jagatsinghapur subdivision of Cuttack district in the year 1993. This small district is East and Southeastern Coastal Plain Zone as per Agro-Climatic classification of Orissa covering an area of 1914.6 sq.km. It is situated be 19°58' and 20°23'N and longitudes 86°02' and 86°47'E and bordered by Kendraparha district to the north, Puri district to the south, Cuttac northwest and Bay of Bengal to the east. District headquarters Jagatsinghapur is located about 85 kms and 65 kms from Bhubaneshw respectively and connected to these two cities by allweather motorable roads. A small branch of southeastern railway line from Cu Paradwip Port within the district. The Highway constructed for carrying metals from Daitary to Paradwip runs through northern part o temperature of the area varies from 13°C in winter to 40°C in peak summer. Average annual rainfall of the area is 150 cm. Its tota 10,58,894 (2001 census).

Geomorphologically the district comprises of three geomorphic units i) Low lying flood plains represented as present day flood pl delta plains and iii) coastal plains. Both present day flood plains and coastal plains are of same age and younger than matured delta strand lines as well as beach ridges and dunes are observed within coastal plains. The beach ridges are often covered by casuarina fon deltaic plain is inundated by high tides and therefore having full of marshy lands. Paradwip a major urban settlement is established in coa north, whereas the rest remain barren.

The district is surrounded by the Mahanadi & Paika River system in the north and Devi river system in the South-west Alaka, Bil Hansua, Kuanria and Lunijhara rivers (some not shown in the map) flow through the district. All of them following the slope have fallen Bengal. Due to the flat terrain and proximity of sea, drainage pattern in this area is meandering.

Geologically the district is covered by soft Quaternary sediment overlying Baripada beds of tertiary age. A total of five Quaternary identified within the district, namely (i) Older beach deposit (ii) Lower delta deposit (iii) Upper delta deposit (iv) Younger beach deposit a day coastal and flood plain deposit. Older beach deposit consisting of compact sand and silt of Late Pleistocene to early Holocene age patches (mainly as small ridges) within Lower Delta deposit. Lower and Upper Delta deposit consist of clay with fine sand and silt and al of sandy silt and silty clay respectively. Both are of Middle to Late Holocene age. Major difference between them is that Lower Delta is a whereas Upper Delta is typically fluvial deposit. Areas near the Bay of Bengal sea shore are mainly occupied by younger beach depos very fine sand and silt. This is a marine-aeolian deposit and occurs as small ridges. Present day coastal deposit occurs within narrow zon of medium grained sand with heavy minerals. Present day fluvial deposit consisting of sand and silt occurs at the banks of the rivers beach deposit and Present day coastal and fluvial deposits are of Late Holocene age.

The area does not have any viable mineral deposit. However the beach contains heavy minerals like monazite, rutile, ilmenite, patches of these heavy minerals are seen around small lagoons situated south of Paradwip. The beach and dune sand are extensiv construction work. The silty clay in the upper deltaic plain is used for making bricks.

Geohydrologically saline water occurs above the fresh water table in the coastal part of the district whereas in land saline water oc fresh water table. The district is covered by recent alluvium, clay, silt, sand, gravel and pebble etc hence has fairly thick, extensive unconfined aquifers with yield prospects more than 40 Lps (liter per square). Deep tube wells are dug to tap the deeper fresh water aquife drinking purpose.

Geotechnically the district is composed of unconsolidated sand of deltaic plain that have high permeability, low bearing cap foundation character. However number of earth embankments are observed on both the sides of major and minor rivers like Mahanad