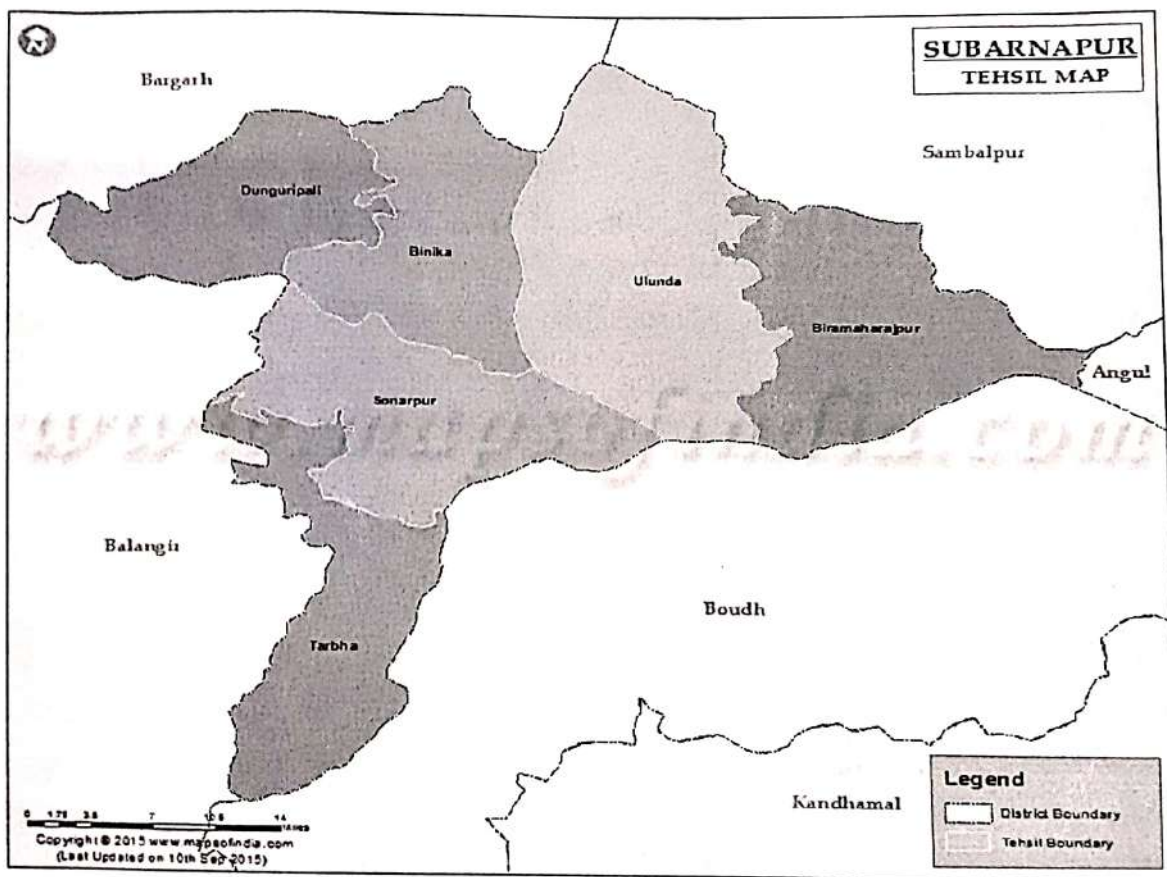




District Survey Report (D.S.R.)

In respect of Minor Mineral (Sand) of Subarnapur District,
Odisha prepared as per Notification No. 141(E) Dated 15th
January, 2016 and S.O. 3611 (E) Dated 25.07.2018 of the
Ministry of Environment, Forest & Climate Change
(MoEF & CC), Government of India.



District Survey Report (D.S.R.) of Subarnapur District

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DISTRICT SURVEY REPORT FOR SAND SOURCES
OF SUBARNAPUR DISTRICT

FOREWARD

The provisions incorporated in Gazette Notification No.S.O.141(E) dtd. 15.01.2016 and S.O. 190(E) dtd.20.01.2016 issued by the Ministry of Environment, Forest & Climate Change, Govt. of India has given birth to DEIAA (District Environment Impact Assessment Authority) & DEAC (District Expert Appraisal Committee) which needs to be constituted on approval of expert members by the Revenue Divisional Commissioner. The primary functions of these above two bodies are to grant Environmental Clearance (EC) for category of B2 Projects prior to the Quarry/ mining of Minor Minerals in whole district. The main purpose of preparation of District Survey Report is to identify the mineral resources and mining activities along with other relevant data of district. This report contains details of Lease, Sand mining and Revenue which comes from minerals in the district. This report is prepared on the basis of data collected from different concerned departments. A survey is carried out by the members of Sub-Divisional Committees constituted for preparation of District Survey Report in the district.

Introduction

Subarnapur has figured on the political and cultural map of Odisha since pre-historic times as an ancient place of human civilization. The discovery of a large number of stone tools, rock art of Puja Dunguri near Rampur Tahasil and punch marked coins is a testimony to primitive human settlements in this region since the 3rd Century B.C.. It was declared a feudatory state by the British in 1867. With the division of Bengal in 1905 it came under the jurisdiction of Lt. Governor of Bengal. This feudatory state merged with Odisha province on 1st January, 1948 and became a sub-division under Bolangir district. Subsequently it was created as a separate district and started functioning w.e.f. 01.04.1993 with headquarter at Sonapur as per Revenue and Excise Department Notification No.14218/R


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dt.27.03.1993 after being carved out from the undivided Balangir District and renamed as Subarnapur.

It is situated in the western part of the State. The District is bounded on the north by Bargarh and Sambalpur Districts, on the east by Sambalpur and Angul Districts, on the south by Boudh District and on the west by Balangir District of Odisha. In the Middle Ages Subarnapur was known as Lanka. The Tibetan historian Taranath refers to Lanka as a place of tantric Buddhism. Buddhist literature of the 8th century also speaks of Lanka. Laxminkara, sister of the Vajrayanist king Indrabhuti of Sambalaka is said to have married prince Jalauka of Lanka. Further the Greek geographer Ptolemy underlines Lanka as a diamond prone zone located on the bank of the river Manad or Mahanadi. According to historians the Subarnapur District was known as Paschima Lanka around 11th Century A.D.

It is known as second Varanasi of India for its cluster of temples (nearly 108) having architectural importance and tantric (sicsic) mystiques. It is also called second Allahabad for the Meeting Point (Sangam) of three rivers Mahanadi, Tel and Suktel. Subarnapur is famous for silk, handloom, prawns, terracotta etc. Textiles and terracotta of Sonepur, Brass metal works and Philigri crafts of Tarva and Binka, Stone carving of Ullunda and Paddy crafts of Dunguripali are recognized all over the state and also in country. In addition, the great poet and prophet of Mahima Dharma, Santh Bhima Bhoi was from this district.

2. Overview of Mining Activity in the District.

In Subarnapur District, there are very few natural mineral deposits scattered throughout the area. Lead and Manganese deposits have been found in Dunguripali area. Manganese ores occur in association with laterites. Manganese content of this ore is low-around 30-35 %, though iron and phosphorus contents are high. These mineral ores are mostly psilomelane. Bauxite is also found in some parts of the district. Other minerals like Garnet are traced in Birmaharajpur and Binka regions. Gemstones like Aquamarine, Heliodor & Topaz and Rhodolite Garnet are there in Birmaharajpur, Badmal, Siali and Naktamunda belts. High grade quartz is also available in the district.

3. The list of Mining Leases in the District with location, area and period of validity.

Name of the Tahasil- Sonapur

Sl. No.	Name of the Sairat Source	Type of Minor Mineral	Land Schedule of the Source	Lease period
1	2	3	4	8
1	Sand Quarry, Telnadi, Sonapur	Sand	H.No.1, Plot No.1, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area- Ac.35.200	2015-16 to 2019-20
2	Sand Quarry, Telnadi, Baldapali	Sand	H.No.73, Plot No.390, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area- Ac.60.700	2018-19 to 2022-23
3	Sand Quarry, Panisiali, Mahanadi	Sand	H.No.97, Plot No.543, Area- Ac.12.355, Mark-A, Kisam- Nadi, Full Area- Ac.33.750	2016-17 to 2020-21
4	Sand Quarry, Ongnadi, Dhaurakhaman	Sand	H.No.115, Plot No.746, Area- Ac.12.355, Mark-A, Kisam- Nadi, Full Area- Ac.36.500	2016-17 to 2020-21
5	Sand Quarry, Baidyanath	Sand	H.No.368, Plot No.668/1721, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area- Ac.40.500	2015-16 to 2019-20
6	Sand Quarry, Kharjhura	Sand	H.No.380, Plot No.1590, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area- Ac.47.000	2016-17 to 2020-20
7	Sand Quarry, Kirtipur	Sand	H.No.334, Plot No.3282, Area- Ac.12.355, Mark-A, Kisam- Nadi, Full Area- Ac.32.500	2018-19 to 2022-23
8	Sand Quarry, Ongnadi- Kha, Kirtipur	Sand	H.No.1, Plot No.32, Area- Ac.12.355, Mark-A, Kisam- Nadi, Full Area- Ac.30.880	Not leasable
9	Sand Quarry, Ong Nadi(Ka), Lachhipur	Sand	H.No.1, Plot No.6, Area- Ac.12.355, Mark- (A) Kisam- Nadi, Full Area- Ac.35.520	2016-17 to 2020-20

10	Sand Quarry, Tel Nadi, Lakarma	Sand	H.No.139, Plot No.1199, Area- Ac.12.355, Kisam- Nadi, Full Area- Ac.74.900	2016-17 to 2020-21
11	Sand Quarry, Malisirgidi	Sand	H.No.298, Plot No.1860, 1861 & 2299, Area- Ac.1.000, Kisam- Nadi, Full Area- Ac.1.240	2018-19 to 2022-23
12	Sand Quarry, Matikod	Sand	H.No.227, Plot No.1496, Area- Ac.12.355, Mark- A, Kisam- Nadi, Full Area- Ac.36.000	2016-17 to 2020-21

Name of the Tahasil- Tarva

Sl. No.	Name of the Sairat Source	Type of Minor Mineral	Land Schedule of the Source	Lease period
13	Nibrutijore Sand Quarry (Cluster)	Sand	H.No.4, Plot No.4, Area- Ac.12.840, Mark-A, Kisam- Nala, Full Area- Ac.20.440	Not leasable
14	Ghatakaintara Sand Quarry	Sand	H.No.1, Plot No.1, Area- Ac.12.550, Mark-A, Kisam- Suktel Nadi, Full Area- Ac.55.000	2015-16 to 2019-20
15	Dilkhushpur Sand Quarry	Sand	H.No.74, Plot No.1, Area- Ac.12.500, Mark-A, Kisam- Suktel Nadi, Full Area- Ac.12.500	31.07.18 to 30.07.23
16	Tulunda Sand Quarry	Sand	H. No.299, Plot No.1, Area- Ac.20.580, Mark- Full, Kisam- Jore, Full Area- Ac.20.580	Not leasable
17	Basashankar Sand Quarry	Sand	H.No.72, Plot No.528, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area- Ac.44.820	26.04.17 to 25.04.22
18	Arda Sand Quarry	Sand	H.No.372, Plot No.2557, Area- Ac.15.000, Mark-A, Kisam- Nadi, Full Area- Ac.30.000	Not leased out
19	Ranisarda Sand Quarry	Sand	H.No.434, Plot No.1604, Area- Ac.15.000, Mark-A, Kisam- Suktel Nadi, Full Area- Ac.40.750	Not leased out
20	Kumunde Sand Quarry	Sand	H.No.216, Plot No.1597, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area- Ac.31.300	Not leased out

21	Bhurad Sand Quarry	Sand	H.No.173, Plot No.1014, Area- Ac.13.000, Kisam- Nadi	Not leased out
22	Bankeda Sand Quarry	Sand	H.No.184, Plot No.1034, Area- Ac.12.900, Kisam- Nadi	Not leased out
23	Kankeda Sand Quarry	Sand	H. No.156, Plot No.515, Ac.12.350, Kisam- Nadi	Not leased out
24	Deulpadar Sand Quarry	Sand	H.NO.602, Plot No.2203, Area- Ac.12.500, Mark-A, Kisam- Nadi, Full Area-45.670	23.10.18 to 22.10.23

Name of the Tahasil- Ullunda

Sl. No.	Name of the Sairat Source	Type of Minor Mineral	Land Schedule of the Source	Lease period
25	Kutmenda Sand Quarry	Sand	H. No.251, Plot No.1156, Area- Ac.1.000	2017-18 to 2021-22
26	Raxa (Kulthijore) Sand Quarry	Sand	H. No.512, Plot No.36, Area- Ac.6.815	2017-18 to 2021-22
27	Sindurpur Sand Quarry	Sand	H. No.1, Plot No.57, Area- Ac.2.000	2017-18 to 2021-22

Name of the Tahasil- Birmaharajpur

Sl. No.	Name of the Sairat Source	Type of Minor Mineral	Land Schedule of the Source	Lease period
28	Surubalijore Sand Quarry	Sand	H.No.1, Plot No.23, Area- Ac.22.600, Mark-A,B,C,D, Full Area- Ac.30.350	2016-17 to 2020-21
29	Hariharjore , Jatesingha Sand Quarry	Sand	H.No.55, Plot No.43, Area- Ac.15.550, Mark-A,B,C, Full Area- Ac.91.950	2016-17 to 2020-21
30	Durdura Sand Quarry- A	Sand	H. No.2, Plot No.291, 294, Area- Ac.10.000, Mark- A, Full Area- Ac.39.000	2018-19 to 2022-23
31	Durdura Sand Quarry- B	Sand	H. No.2, Plot No.291, 294, Area- Ac.10.000, Mark- B, Full Area- Ac.39.000	2018-19 to 2022-23
32	Janakpur Sand Quarry	Sand	H.No.1, Plot No.12, Area- Ac. 2.000 , Kisam- Nadi full Area- Ac. 2.000	Not leased out

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4. Details of Royalty received in last three years.

Sl. No.	Name of the Tahasil	Name of the Sand Sources	Royalty collected in last three years (in Rs.)		
			2016-17	2017-18	2018-19
1	2	3	4	5	6
1	Sonepur	Sand Quarry, Telnadi, Sonepur	0.00	0.00	0.00
2		Sand Quarry, Telnadi, Baldapali	0.00	0.00	119099.00
3		Sand Quarry, Panisiali, Mahanadi	208452.00	95792.00	153113.00
4		Sand Quarry, Ongnadi, Dhaurakhaman	227738.00	186201.00	173038.00
5		Sand Quarry, Baidyanath	249371.00	140053.00	235849.00
6		Sand Quarry, Kharjhura	249371.00	140053.00	63046.00
7		Sand Quarry, Kirtipur	0.00	0.00	84518.00
8		Sand Quarry, Ongnadi-Kha	0.00	0.00	0.00
9		Sand Quarry, Ong Nadi(Ka), Lachhipur	221746.00	109317.00	166942.00
10		Sand Quarry, Tel Nadi, Lakarma	255510.00	143668.00	201293.00
11		Sand Quarry, Malisirgidi	0.00	0.00	86142.00
12		Sand Quarry, Matikod	224567.00	109317.00	0.00
13	Tarva	Nibrutijore Sand Quarry (Cluster)	0.00	0.00	0.00
14		Ghatakaintara Sand Quarry	55420.00	85420.00	131040.00
15		Dilkhushpur Sand Quarry	0.00	0.00	125448.00
16		Tulunda Sand Quarry	0.00	0.00	0.00
17		Basashankar Sand Quarry	0.00	47081.00	76024.00

18		Arda Sand Quarry	0.00	0.00	0.00
19		Ranisarda Sand Quarry	0.00	0.00	0.00
20		Kumunde Sand Quarry	0.00	0.00	0.00
21		Bhurad Sand Quarry	0.00	0.00	0.00
22		Bankeda Sand Quarry	0.00	0.00	0.00
23		Kankeda Sand Quarry	0.00	0.00	0.00
24		Deulpadar Sand Quarry	0.00	0.00	26250.00
25	Ullunda	Kutmenda Sand Quarry	0.00	63272.00	0.00
26		Raxa (Kulthijore) Sand Quarry	0.00	65114.00	0.00
27		Sindurpur Sand Quarry	56896.00	63061.00	0.00
28	Birmaharajpur	Surubalijore Sand Quarry	0.00	0.00	111000.00
29		Hariharjore , Jatesingha Sand Quarry	256930.00	270957.00	111000.00
30		Durdura Sand Quarry- A	0.00	0.00	0.00
31		Durdura Sand Quarry- B	0.00	0.00	322696.00
32		Janakpur Sand Quarry	0.00	0.00	0.00

5. Details of production of Sand in last three years.

Sl. No.	Name of the Tahasil	Name of the Sand Sources	Production of Sand in last three years (in CuM)		
			2016-17	2017-18	2018-19
1	2	3	4	5	6
1	Sonapur	Sand Quarry, Telnadi, Sonapur	0	0	0
2		Sand Quarry, Telnadi, Baldapali	0	0	500
3		Sand Quarry, Panisiali, Mahanadi	0	257.5	375

4		Sand Quarry, Ongnadi, Dhaurakhaman	625	500	500
5		Sand Quarry, Baidyanath	4160	1005	0
6		Sand Quarry, Kharjhura	4160	1005	0
7		Sand Quarry, Kirtipur	0	0	0
8		Sand Quarry, Ongnadi-Kha	0	0	0
9		Sand Quarry, Ong Nadi(Ka), Lachhipur	1250	1500	2242.5
10		Sand Quarry, Tel Nadi, Lakarma	375	250	250
11		Sand Quarry, Malisirgidi	0	0	750
12		Sand Quarry, Matikod	750	625	625
13	Tarva	Nibrutijore Sand Quarry (Cluster)	0	0	0
14		Ghatakaintara Sand Quarry	2500	2500	3400
15		Dilkhushpur Sand Quarry	0	0	2906
16		Tulunda Sand Quarry	0	0	0
17		Basashankar Sand Quarry	0	1395	1462
18		Arda Sand Quarry	0	0	0
19		Ranisarda Sand Quarry	0	0	0
20		Kumunde Sand Quarry	0	0	0
21		Bhurad Sand Quarry	0	0	0
22		Bankeda Sand Quarry	0	0	0
23		Kankeda Sand Quarry	0	0	0

24		Deulpadar Sand Quarry	0	0	309
25	Ullunda	Kutmenda Sand Quarry	0	1104	1120
26		Raxa (Kulthijore) Sand Quarry	0	1108	1120
27		Sindurpur Sand Quarry	1200	1720	1452
28	Birmaharajpur	Surubalijore Sand Quarry	0	500	0
29		Hariharjore , Jatesingha Sand Quarry	0	1097.5	500
30		Durdura Sand Quarry- A	0	0	0
31		Durdura Sand Quarry- B	0	0	5673
32		Janakpur Sand Quarry	0	0	0

6. Process of Deposition of Sediments in the rivers of the District.

Rivers are the most powerful agents of sedimentation process which includes erosion, transportation and deposition of the eroded materials. The process of sedimentation in the district is done by the major rivers like Mahanadi, Telnadi and its tributaries. The sedimentation process is seen to be highest in the rainy season. The size of the sediments so deposited varies from fine gravel to very fine sand and in some places silt and clay are also found. The alluvial deposits done by rivers on their banks are very fertile & utilized for cultivation of various vegetables, cereals and cash crops.

The amount of sediments that has been carried by the Mahanadi from Chhattisgarh is checked by Hirakud Dam over it at its entry point in Odisha. The siltation in Mahanadi in down stream of Hirakud dam depends upon the sediments supplied by the catchment area in Odisha only.

The erosion process in the catchment area is however supported to a greater extent by heavy deforestation, changing scenario of land use pattern and climate change. Now,

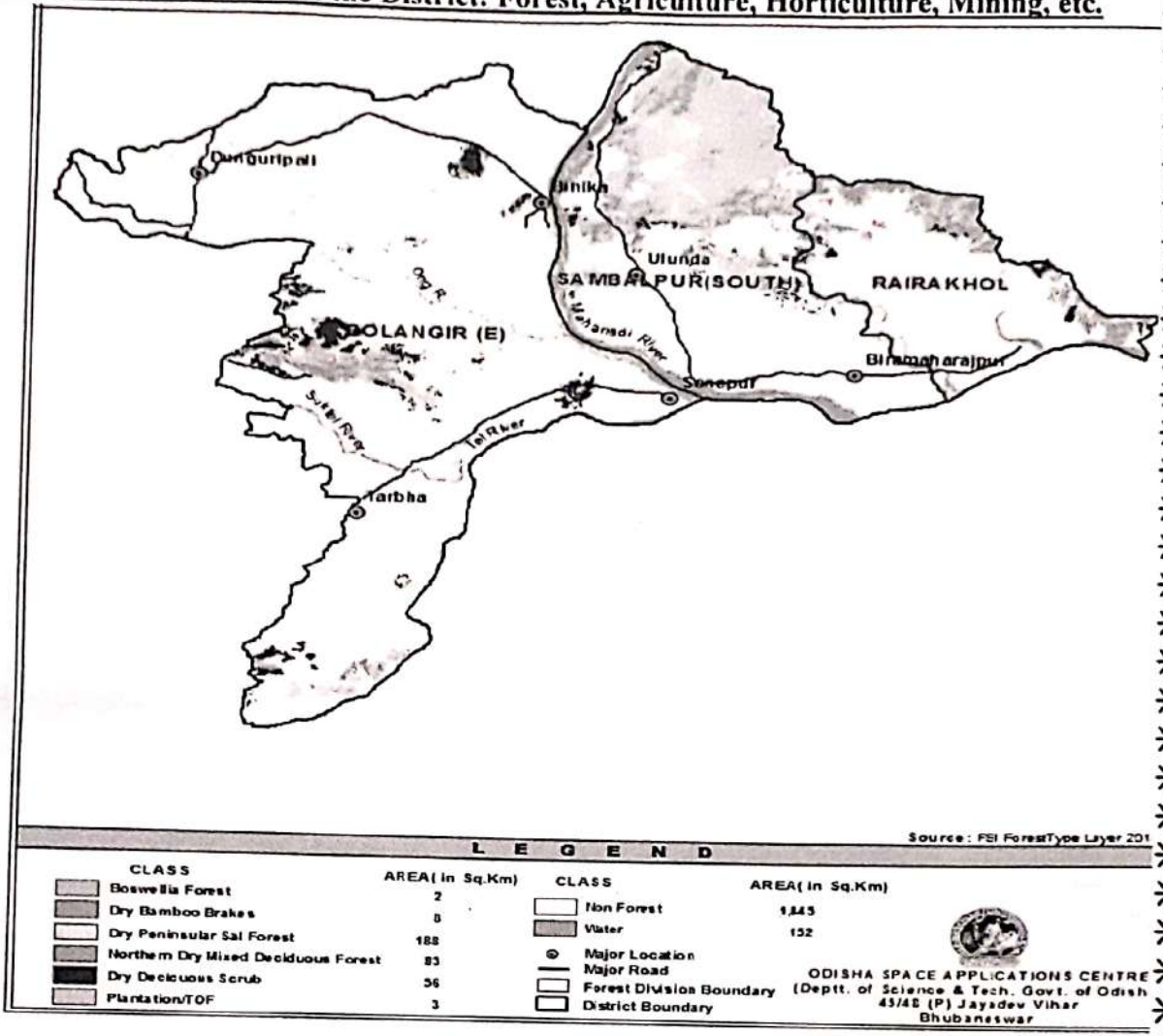
the accelerated process of erosion supplies huge amount of sediments to the Mahanadi river course. The sediments are transported with the flow of water in suspended form and starts deposition called sedimentation, where the flow velocity is considerably low. The heavier particles settle down due to gravity and clear water flows to the downstream of river. This process of separation of solids from liquid is called De-cantation.

7. General Profile of the District.

The brief details of this district are as follows:

Geographical Area	2337 Sq. Km.
Area under Forest	328.75 Sq. Km.
Total Population (2011 Census)	610183
Population Density	261 (Per Sq. Km.)
No. of Sub-Divisions	02(Sonepur & Birmaharajpur
No. of Tahasils	06 (Sonepur, Tarva, Binka, Rampur, Birmaharajpur & Ullunda)
No. of Municipality	01 (Sonepur)
No. of N.A.Cs.	02 (Tarva & Binka)
No. of Panchayat Samitis	06
No. of Gram Panchayats	109
No. of Police Stations	08
No. of villages	987
Total Households	152454
Total Literate	398421 (74.42%)
No. of Assembly Constituencies	02 (64-Birmaharajpur & 65-Sonepur)

8. Land Utilization Pattern in the District: Forest, Agriculture, Horticulture, Mining, etc.



Land	Area
Forest	42,875.00 Ha
Agriculture	1,35,415.00 Ha.
Horticulture	
Mining	191.658 Ha.

9. Physiography of the District.

Physiographically the district comprises undulating plains dotted with residual hills and mounds except for a few patches of scattered hills and high relief areas in the east central and northern parts. A gently undulating terrain with a vast stretch of cultivable land

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characterizes the major parts of the district, the average elevation being 200m to 300m above mean sea level with a general topographic slope towards east.

Depending upon the mode of origin, occurrence and the physical and chemical characteristics the soils in the district are mainly classified into two major groups 1) Alfisols and 2) Vertisols.

The Alfisols includes Red loamy soil and red Sandy Soil and are generally light textured with a PH ranging from 6.5 to 7.3. These soils are usually deficient in nitrogen, phosphate, organic matter and lime. The soils are in general having average to good fertility. These soil are suitable for cultivation of paddy and other crops.

The Vertisols are medium black soil found around the course of Mahanadi and Tel rivers in the southern part of the district. These soils are highly argillaceous and contain high amount of iron, calcium and magnesium. The PH varies from neutral to alkaline and texture varies from loam to clay loam. These soil are highly argillaceous and contain high amount of iron, calcium and magnesium.

10. Rainfall: Month wise Rainfall data of the District (in mm)

Financial Year	April	May	June	July	August	September
2015-16	65.33	23.33	308.17	228.33	255.65	137.67
2016-17	2.83	14.17	89.67	209.78	400.87	306.72
2017-18	0.00	7.48	263.93	337.57	205.16	168.75
2018-19	16.80	93.73	126.37	556.08	445.05	241.95
Average	21.24	34.68	197.04	332.94	326.68	213.77

October	November	December	January	February	March	Total
0.83	0.00	14.00	4.50	15.71	4.00	1057.52
60.45	0.00	0.00	0.00	0.00	2.50	1086.99
127.42	3.30	0.00	0.00	4.30	0.50	1118.41
48.43	0.85	90.38	2.13	17.12	40.12	1679.01
59.28	1.04	26.10	1.66	9.28	11.78	1235.48

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11. Geology and Mineral Wealth.

(a) District wise detail of river or stream and other sand source

Sl. No.	Name of the River	Name of Sand Sources
1	Mahanadi	Pansiali Sand Quarry / Kutmenda Sand Quarry/ Sindurpur Sand Quarry/ Durdura Sand Quarry- A/ Durdura Sand Quarry-B
2	Tel	Telnadi Sand Quarry, Sonapur/ Baldapali Sand Quarry/ Baidyanath Sand Quarry/ Lakarma Sand Quarry/ Kharjhura Sand Quarry/ Malisirigidi Sand Quarry Basashankar Sand Quarry/ Bhurad Sand Quarry/ Bankeda Sand Quarry/ Kankeda Sand Quarry
3	Suktel	Matikod Sand Quarry/ Ghatkaintara Sand Quarry/ Dilkhupur Sand Quarry/ Arda Sand Quarry/ Ranisarda Sand Quarry/ Kumunde Sand Quarry/ Deulpadar Sand Quarry
4	Ong	Kirtipur Sand Quarry/ Dhaurakhman Sand Quarry/ Ongnadi- Kha Sand Quarry/ Ongnadi- Ka Lachhipur Sand Quarry/
5	Nibrutijore	Nibrutijore Sand Quarry (Cluster)/ Tulunda Sand Quarry/
6	Hariharjore	Hariharjore Jatesingha Sand Quarry
7	Surubalijore	Surubalijore Sand Quarry/ Janakpur Sand Quarry
8	Kulthijore	Raxa (Kulthijore) Sand Quarry

(b) District wise availability of sand

Sl. No.	Name of the Sairat Source	Type of Minor Mineral	Name of the Tahasil	Mineable Reserve
1	2	3	4	5
1	Sand Quarry, Telnadi, Sonapur	Sand	Sonapur	41500 Cu.M.
2	Sand Quarry, Telnadi, Baldapali	Sand	Sonapur	35200 Cu.M.
3	Sand Quarry, Panisiali, Mahanadi	Sand	Sonapur	30800 Cu.M.
4	Sand Quarry, Ongnadi, Dhaurakhman	Sand	Sonapur	24900 Cu.M.
5	Sand Quarry, Baidyanath	Sand	Sonapur	38350 Cu.M.
6	Sand Quarry, Kharjhura	Sand	Sonapur	43900 Cu.M.
7	Sand Quarry, Kirtipur	Sand	Sonapur	30800 Cu.M.
8	Sand Quarry, Mahadevpali Ongnadi- Kha	Sand	Sonapur	Not leasable
9	Sand Quarry, Ong Nadi(Ka), Lachhipur	Sand	Sonapur	35200 Cu.M.
10	Sand Quarry, Tel Nadi, Lakarma	Sand	Sonapur	25200 Cu.M.
11	Sand Quarry, Malisirgidi	Sand	Sonapur	42083 Cu.M.
12	Sand Quarry, Matikod	Sand	Sonapur	30100 Cu.M.
13	Nibrutijore Sand Quarry (Cluster)	Sand	Tarbha	Not leasable

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14	Ghatakaintara Sand Quarry	Sand	Tarbha	50790 Cu.M.
15	Dilkhushpur Sand Quarry	Sand	Tarbha	20107 Cu.M
16	Tulunda Sand Quarry	Sand	Tarbha	Not leasable
17	Basashankar Sand Quarry	Sand	Tarbha	37938 Cu.M.
18	Arda Sand Quarry	Sand	Tarbha	71316 Cu.M.
19	Ranisarda Sand Quarry	Sand	Tarbha	71310 Cu.M.
20	Kumunde Sand Quarry	Sand	Tarbha	70615 Cu.M.
21	Bhurad Sand Quarry	Sand	Tarbha	52609 Cu.M.
22	Bankeda Sand Quarry	Sand	Tarbha	22291 Cu.M.
23	Kankeda Sand Quarry	Sand	Tarbha	24900 Cu.M.
24	Deulpadar Sand Quarry	Sand	Tarbha	50586 Cu.M.
25	Kutmenda Sand Quarry	Sand	Ullunda	5544 Cu.M.
26	Raxa (Kulthijore) Sand Quarry	Sand	Ullunda	5548 Cu.M.
27	Sindurpur Sand Quarry	Sand	Ullunda	11090 Cu.M.
28	Surubalijore Sand Quarry	Sand	Birmaharajpur	28326.11 Cu.M.
29	Hariharjore , Jatesingha Sand Quarry	Sand	Birmaharajpur	17482.39 Cu.M.

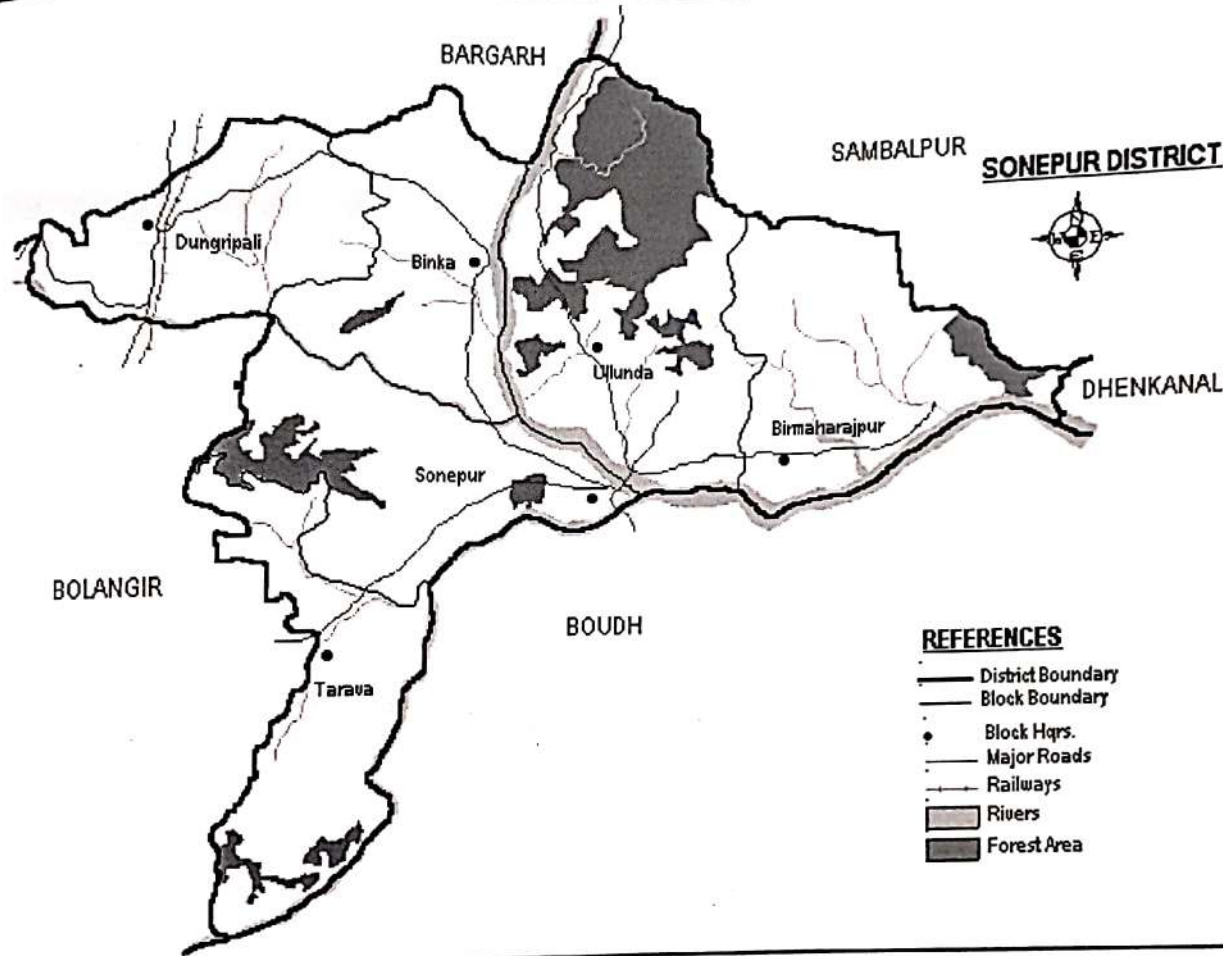
30	Durdura Sand Quarry- A	Sand	Birmaharajpur	105000 Cu.M.
31	Durdura Sand Quarry- B	Sand	Birmaharajpur	113460 Cu.M.
32	Janakpur Sand Quarry	Sand	Birmaharajpur	Not leased out

(c) District wise detail of existing mining leases of sand

Sl. No.	Name of the leased out Sand Source	Type of Minor Mineral	Name of the Tahasil	Mineable Reserve
1	2	3	4	5
1	Sand Quarry, Telnadi, Baldapali	Sand	Sonepur	35200 Cu.M.
2	Sand Quarry, Panisiali, Mahanadi	Sand	Sonepur	30800 Cu.M.
3	Sand Quarry, Ongnadi, Dhaurakhaman	Sand	Sonepur	24900 Cu.M.
4	Sand Quarry, Baidyanath	Sand	Sonepur	38350 Cu.M.
5	Sand Quarry, Kharjhura	Sand	Sonepur	43900 Cu.M.
6	Sand Quarry, Kirtipur	Sand	Sonepur	30800 Cu.M.
7	Sand Quarry, Ong Nadi(Ka), Lachhipur	Sand	Sonepur	35200 Cu.M.
8	Sand Quarry, Tel Nadi, Lakarma	Sand	Sonepur	25200 Cu.M.
9	Sand Quarry, Malisirgidi	Sand	Sonepur	42083 Cu.M.
10	Sand Quarry, Matikod	Sand	Sonepur	30100 Cu.M.
11	Ghatakaintara Sand Quarry	Sand	Tarbha	50790 Cu.M.
12	Dilkhushpur Sand Quarry	Sand	Tarbha	20107 Cu.M.
13	Basashankar Sand Quarry	Sand	Tarbha	37938 Cu.M.
14	Deulpadar Sand Quarry	Sand	Tarbha	50586 Cu.M.
15	Kutmenda Sand Quarry	Sand	Ullunda	5544 Cu.M.
16	Raxa (Kulthijore) Sand Quarry	Sand	Ullunda	5548 Cu.M.

17	Sindurpur Sand Quarry	Sand	Ullunda	11090 Cu.M.
18	Surubalijore Sand Quarry	Sand	Birmaharajpur	28326.11 Cu.M.
19	Hariharjore , Jatesingha Sand Quarry	Sand	Birmaharajpur	17482.39 Cu.M.
20	Durdura Sand Quarry- A	Sand	Birmaharajpur	105000 Cu.M.
21	Durdura Sand Quarry- B	Sand	Birmaharajpur	113460 Cu.M.

12. Drainage System with descriptions of main rivers:



The Mahanadi , is the biggest river of Odisha and the sixth largest in India. It is about 851 km long (494 km in Odisha) and its catchment area spreads over 141,600 Sq. Km. out of which 65,580 Sq. Km. (42% of area of the State) lies in Odisha.

Ray
COLLECTOR
SUBARNAPUR

The river Mahanadi flows through Subarnapur District and travels for a distance of about 80 kms and drains an area of 2284.89 sq. km. along with its main tributaries river Tel and Ong.

Tel River is one of the largest rivers of Odisha. It's origin is near Jharigaon in Nabarangpur district and flows through Kalahandi, Balangir, Subarnapur district of Odisha and finally merges with Mahanadi near Sonepur. It travels 296 km and has a total catchment area of 22818 sq. km. The river Suktel is a tributary to Tel.

Ong River flows across Odisha and joins Mahanadi upstream of Sonepur at Pandkital. The river travels 204 km before it meets Mahanadi. It drains an area of about 5,128 sq. km.. Ong river is tributary of Mahanadi River.

Besides these the district has other important rivers, namely Suktel, the tributary of Tel, Nibrutijore, the tributary of Suktel, Hariharjore and Surubalijore, tributaries of river Mahanadi.

SI No	Name of the River	Area Drained (Sq. Km)	% Area drained in the District.
1	Mahanadi	152	17.09
2	Tel	46.4	35.15
3	Suktel	5.6	62.22
4	Ong	7.52	24.58
5	Nibrutijore	0.8	33.33
6	Hariharjore	3.3	100.00
7	Surubalijore	1.05	100.00

13. Salient Features of important Rivers and Streams:

Sl No	Name of the River or Stream	Total Length in the District (in Km)	Place of origin (Entry point in the district)	Altitude at Origin (In Mtr.)
1	Mahanadi	80	Rajnagar	120
2	Tel	58	Karlamuhan	130
3	Suktel	28	Kumundal	142
4	Ong	47	Phatamunda	140
5	Nibrutijore	20	Kayapadar	140
6	Hariharjore	33	Sagjuri	133
7	Surubalijore	15	Sahajlata	112

Sl. No.	Portion of the River or stream recommended for Mineral Concession	Length of area recommended for mineral concession (in Km.)	Average width of area recommended for mineral concession (In meter)	Area recommended for mineral concession in Sq. meter	Mineable mineral potential (In CuM)(60 % of total mineral potential)	Total Mineral Potential (Sand)
1	2	3	4	5	6	7
1	Village- Sonepur Town, H.No.1, Plot No.1, Kisam- Nadi,	0.499	110	49998	51600	86000
2	Village- Baldapali, H.No.73, Plot No.390, Kisam- Nadi,	0.499	100	49998	24000	40000

3	Village- Panisiali, H.No.97, Plot No.543, Kisam- Nadi,	0.499	200	49998	21252	35420
4	Village- Dhaurakhaman, H.No.115, Plot No.1/746, Kisam- Nadi,	0.499	200	49998	18000	30000
5	Village- Baidyanath, H.No.368, Plot No.668/1721, , Kisam- Nadi,	0.499	220	49998	31590	52650
6	Village- Kharjhura, H.No.380, Plot No.1590, Kisam- Nadi,	0.499	200	49998	30360	50600
7	Village- Kirtipur, H.No.334, Plot No.151/3282, Kisam- Nadi,	0.499	200	49998	21252	35420
8	Village- Kirtipur, H.No.1, Plot No.32, Kisam- Nadi	0.499	200	49998	0	0
9	Viillage- Lachhipur, H.No.1, Plot No.6, Kisam- Nadi	0.499	160	49998	24288	40480
10	Village- Lakarma, H.No.139, Plot No.1199, Kisam- Nadi	0.499	160	49998	18000	30000
11	Village- Malisirgidi, H.No.298, Plot No.1860, Kisam- Nadi,	0.499	120	49998	30000	50000

12	Village- Matikod, H.No.227, Plot No.1496,Kisam- Nadi	0.499	200	49998	20790	34650
13	Village- Tarva NAC, H.No.4, Plot No.4, Kisam- Nala	0.25	50	51960	0	0
14	Village- Ghatkaintara, H.No.1, Plot No.1, Kisam- Suktel Nadi	0.17	60	50580	42478	50778
15	Village- Dilkhuspur, H.No.74, Plot No.1, Kisam- Suktel Nadi	0.17	60	50580	14530	20107
16	Village- Tulunda, H. No.299, Plot No.1, Kisam- Jore	0.5	100	83280	0	0
17	Village- Basashankar, H.No.72, Plot No.528, Kisam- Nadi	0.16	50	50580	24617	24617
18	Village- Arda, H.No.372, Plot No.2557,Kisam- Nadi	0.2	50	60700	8000	12000
19	Village- Ranisarda, H.No.434, Plot No.1604, Kisam- Suktel Nadi	0.17	50	50580	24500	48200
20	Village- Kumunde, H.No.216, Plot No.1597, Kisam- Nadi	0.17	50	50580	24500	48200

21	Village- Bhurad, H.No.173, Plot No.1014, Kisam- River	0.15	50	52610	19635	52609
22	Village- Bankeda, H.No.184, Plot No.1034, Kisam- Nadi	0.18	50	52200	22291	52205
23	Village- Kankeda, H.No.156, Plot No.515, Kisam- Nadi	0.17	60	49980	24900	24900
24	Village- Deulpadar, H. No.602, Plot No.2203, Kisam- Nadi	0.17	50	50580	7034	50586
25	Village- Kutmenda, H.No.251, Plot No.1156, Kisam- Jore	0.15	25	4046	5544	12138
26	Village- Raxa, H. No.515, Plot No.3684 & 3685, Kisam- Jore	0.91	38	17563	5548	12138
27	Village- Sindurpur, H. No.1, Plot No.57, Kisam- Mahanadi 'A'	0.16	50	8094	7325	7325
28	Village- Surubalijore, H.No.1, Plot No.23, Kisam- Surubalijore Sand	0.332	485	89270	1944	3240
29	Village- Jatesingha, H.No.55, Plot No.43, Kisam- Hariharjore Sand	0.429	383	62920	1936.8	3228

30	Village- Durdura Mahanadi- Ga, H.No.02, Plot No.291 & 294, Kisam- Nadi	0.201	217	40400	63000	105000
31	Village- Durdura Mahanadi- Ga, H.No.02, Plot No.291, Kisam- Nadi	0.201	233	48500	68076	113460
32	Village- Janakpur, H.No.01, Plot No.12, Kisam- Nadi	0	0	8090	0	0

14. Annual Deposition

Sl No	River or Stream	Portion of the river or stream recommended for mineral concession (Name of the sand Quarry)	Length of area recommend ed for mineral concession (In Kilometer)	Average width of area recommend ed for mineral concession (In meters)	Area recommen ded for mineral concession (In square meter)	Mineable mineral potential (in Cum) (60 % of total mineral potential)
1	Mahanadi	Pansiali Sand Quarry	0.499	200	49998	21252
		Kutmenda Sand Quarry	0.15	25	4046	5544
		Sindurpur Sand Quarry	0.16	50	8094	7325
		Durdura Sand Quarry- A	0.201	217	40400	63000
		Durdura Sand Quarry-B	0.201	233	48500	68076
		Total	1.211	725	151038	165197
	Tel	Telnadi Sand Quarry, Sonapur	0.499	110	49998	51600
		Baldapali Sand Quarry	0.499	100	49998	24000
		Baidyanath Sand Quarry	0.499	220	49998	31590

2	Tel	Lakarma Sand Quarry	0.499	160	49998	18000
		Kharjhura Sand Quarry	0.499	200	49998	30360
		Malisirgidi Sand Quarry	0.499	120	49998	30000
		Basashankar Sand Quarry	0.16	50	50580	24617
		Bhurad Sand Quarry	0.15	50	52610	19635
		Bankeda Sand Quarry	0.18	50	52200	22291
		Kankeda Sand Quarry	0.17	60	49980	24900
		Total	3.654	1120	505358	276993
3	Suktel	Matikod Sand Quarry	0.499	200	49998	20790
		Ghatkaintara Sand Quarry	0.17	60	50580	42478
		Dilkhushpur Sand Quarry	0.17	60	50580	14530
		Arda Sand Quarry	0.2	50	60700	8000
		Ranisarda Sand Quarry	0.17	50	50580	24500
		Kumunde Sand Quarry	0.17	50	50580	24500
		Deulpadar Sand Quarry	0.17	50	50580	7034
		Total	1.549	520	363598	141832
4	Ong	Kirtipur Sand Quarry	0.499	200	49998	21252
		Dhaurakhman Sand Quarry	0.499	200	49998	18000
		Ongnadi- Kha Sand Quarry	0.499	200	49998	0
		Ongnadi- Ka Lachhipur Sand Quarry/	0.499	160	49998	24288
		Total	1.996	760	199992	63540

5	Nibrutij ore	Nibrutijore Sand Quarry (Cluster)	0.25	50	51960	0
		Tulunda Sand Quarry	0.5	100	83280	0
		Total	0.75	150	135240	0
6	Hariharj ore	Hariharjore Jatesingha Sand Quarry	0.429	383	62920	1936.8
7	Surbalij ore	Surubalijore Sand Quarry	0.332	485	89270	1944
		Janakpur Sand Quarry	0	0	8090	0
		Total	0.332	485	97360	1944
8	Kulthijore	Raxa (Kulthijore) Sand Quarry	0.91	38	17563	5548
Total for the District		Grand Total	9.282	3661	1169471	515158.8

District Survey Report, Subarnapur, Odisha for River Sand (Minor Mineral) is prepared in accordance with Appendix- X Para-7(iii) of S.O.141(E) dtd.15th January, 2016 and S.O. No.3611(A) dtd.25th July, 2018 of Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi.

Approved

[Signature]
Collector, Subarnapur
COLLECTOR & CHAIRMAN
DEI AA, SUBARNAPUR