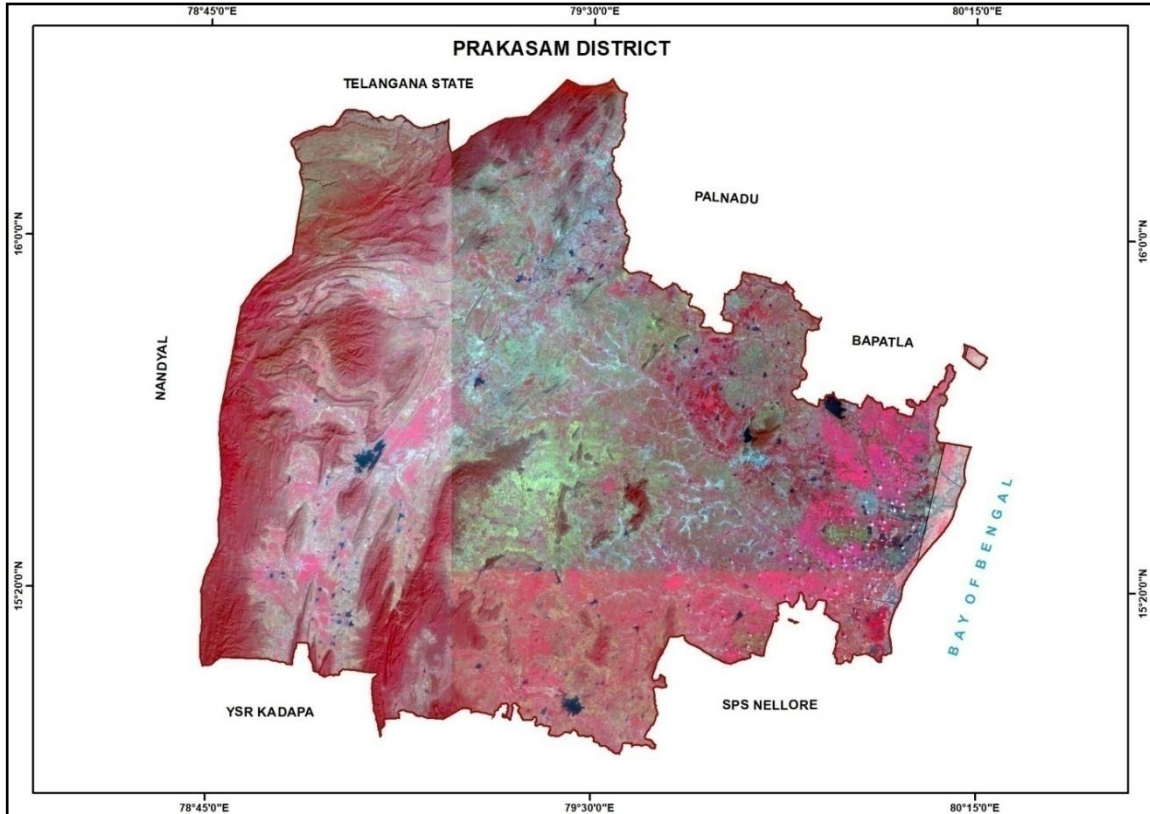


DISTRICT SURVEY REPORT FOR SAND AND OTHER MINOR MINERALS PRAKASAM DISTRICT, ANDHRA PRADESH

(FOR THE DEPARTMENT OF MINES AND GEOLOGY, GOVT. OF AP)

As per Notification No. S.O. 141 (E), 15.01.2016, S.O. 3611(E), 25.07.2018, & Enforcement & Monitoring Guidelines for Sand Mining 2020 of MOEF&CC, GoI



Prepared by



ANDHRA PRADESH SPACE APPLICATIONS CENTRE (APSAC)
ITE&C Department, Govt. of Andhra Pradesh

Submitted to



DEPARTMENT OF MINES AND GEOLOGY
Government of Andhra Pradesh

December 2023

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PREFACE

The Natural resource inventory is the assessment of the status of a given natural resource of an area at a given point in time. Population pressure results in over-exploitation of resources. The baseline information on the resources would help the administration for better planning and decision making. The main purpose of the report is to disseminate data on the natural resource up to the lowest administrative functionary to facilitate micro level planning and development. The efforts have been made to assess and document the information on land use/land cover, crop, surface water resource, soils, slope, groundwater prospects, groundwater quality, geological information, and minerals resources in Prakasam district, Andhra Pradesh, based on the satellite remote sensing data and socioeconomic information.

The Department of Mines and Geology (DMG), Government of Andhra Pradesh (AP) requested the Andhra Pradesh Space Applications Center (APSAC) to update the district survey reports with availability of sand mineral information, major and minor mineral details, and river morphology for all the districts in the State. The District Survey report emphasizes and updated the major and minor minerals in the districts of AP. The District Survey reports are updated following the "Sustainable Sand Mining guidelines" issued in 2016 and 2020 and SO 741 of 2016 of the Ministry of Environment, Forests and Climate Change provided by the DMG. The comments received from the public, if found fit, shall be incorporated in the report. A list of leases in the district will be provided by the concerned Assistant Directors of Mines and Geology.

The report is an outcome of the efforts of the Scientists and Project Associates at APSAC. I heartily congratulate the team for compiling the report.

(Dr.Sundar Balakrishna, IFS)
Vice-Chairman
APSAC

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Our sincere gratitude to **Sri Kona Sasidhar, IAS, Secretary to Government**, Information Technology, Electronics and Communications (ITE&C), Govt. of Andhra Pradesh and the **Chairman**, APSAC Governing Body, for his constant encouragement.

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We are grateful to the **Sri. V.G. Venkata Reddy, Director**, Department of Mines and Geology, Govt. of Andhra Pradesh for entrusting the work for the preparation of District Survey Reports of Andhra Pradesh.

We owe a great deal to **Sri. P Raja Babu, Joint Director**, Department of Mines and Geology for his overall support and guidance during the execution of this work.

We are very much thankful to **Dr.M.J.Ratnakanth Babu, Royalty Inspector (Head Office)**, Mines and Geology for his support to complete the work successfully.

We are also thankful to the **District Mines and Geology Officer**, Prakasam District for their support in providing information

Our sincere thanks are due to the scientific staff of APSAC who has generated all the thematic maps for District Survey Reports.

APSAC

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List of Abbreviations

APSAC	: Andhra Pradesh Space Applications Centre
APMMC	: Andhra Pradesh Minor Mineral Concession
AMSL	: Above Mean Sea Level
AWiFS	: Advanced Wide Field Sensor
APWALTA	: Andhra Pradesh State Water, Land and Trees Authority
APMDC	: Andhra Pradesh Mineral Development Corporation
Bgl	: Below ground level
BT Road	: Bituminous Road
Cl	: Chlorine
CC Road	: Cement concrete
CRZ	: Coastal Regulatory Zone
CPSU	: Central Public Sector Undertaking
CGWB	: Central Ground Water Board
cu.m/day	: Cubic meter per day
DSR	: District Survey Report
DMG	: Directorate of Mines and Geology
DM&GO	: District Mines and Geology Officer
DES	: Directorate of Economics and Statistics
DEM	: Digital Elevation Model
dS/m	: Decisiemens per meter
EIA/EMP	: Environmental Impact Assessment
F	: Fluorine
FAC	: Full Additional Charge
FASAL	: Forecasting Agricultural output using Space, Agrometeorology and Land-based observations
Fe	: Iron
Ft	: feet
GD	: Geosciences Division
GIS	: Geographical Information System
GSI	: Geological Survey of India
Ha	: Hactar
Km	: Kilometer
IRS	: Indian Remote Sensing Satellite
ITE and C	: Information Technology Electronics and Communications
LISS	: Linear Imaging Self Scanning
LULC	: Land Use / Land Cover
Lps	: Litres per second

M	: meter
Mi	: mile
mm	: millimetre
MT	: Million Tonne
MoEF	: Ministry of Environment and Forests
MSL	: Mean Sea Level
NIRD	: National Institute of Rural Development
NH	: Natinal Highway
NaNO ₃	: Sodium nitrate
NRSA	: National Remote Sensing Agency
NRSC	: National Remote Sensing Centre
PESA	: Panchayats Extension to Scheduled Areas
pH	: Power of hydrogen
PSD	: Performance Security Deposit
PSU	: Public sector Undertakings
R2	: ResourceSat-2
RGNDWM	: Rajiv Gandhi National Drinking Water Mission
RWS and S	: Rural Water Supply and Sanitation
SAR	: Synthetic Aperture Radar
SEB	: Special Enforcement Bureau
SO ₄	: Sulfate
Sq.Km	: Square Kilometre
Sq.m	: Square metre
TA	: Tantalum
TIN	: Triangular Irregular Network
TGA	: Total Geographical Area
TIS	: Tank Information System
TTD	: Tirumala Tirupati Devasthanams
WBM	: Water Bound Macadam

Chapter I – Introduction & General Profile

1.1 Administrative Setup

Prakasam district is one of the twelve districts in the Coastal Andhra region of the Indian state of Andhra Pradesh. The district is reorganized on 4th April 2022. Its administrative headquarters are located at Ongole. It is located on the western shore of Bay of Bengal.

Geographically, Prakasam district is bounded north by Bapatla and Palnadu districts, south by Y.S.R.Kadapa and S.P.S.Nellore districts, on the west by Nandyal districts and on the east by Bay of Bengal. The total geographical area of the district is 14,322 Sq.km. It is covered with 3 Revenue divisions namely Kanigiri, Markapur and Ongole: 38 Revenue mandals and 869 Revenue villages. Kanigiri mandal is having maximum number of villages (40) and KothaPatnam mandal is having minimum number of villages (7). Out of 38 mandals of the district, the maximum area (1299.52 Sq.km) is occupied by Giddalur mandal and minimum area in Singarayakonda mandal (112.45 Sq.km).

The mandals covered in each Revenue division are shown in Table-1 and its spatial distribution is shown in the Figure-1. The satellite view of the district is shown in Figure-2.

Table 1: List of mandals covered in each Revenue division

Kanigiri Division	Markapur Division	Ongole Division
Chandrasekhara Puram	Ardhaveedu	Chimakurthi
Darsi	Bestawaripeta	Kondapi
Donakonda	Cumbum	KothaPatnam
Hanumanthunipadu	Dornala	Maddipadu
Kanigiri	Giddalur	Mundlamuru
Konakanamitla	Komarolu	Naguluppalapadu
Kurichedu	Markapur	Ongole
Marripudi	PedaAraveedu	SanthanuthalaPadu
Pamur	Pullalacheruvu	Singarayakonda
PedacherloPalle	Racherla	Tangutur
Podili	Tarlupadu	Thallur
Ponnaluru	Tripuranthakam	Zarugumilli
Veligandla	Yerragondapalem	

Data Source: APSAC, Vijayawada.

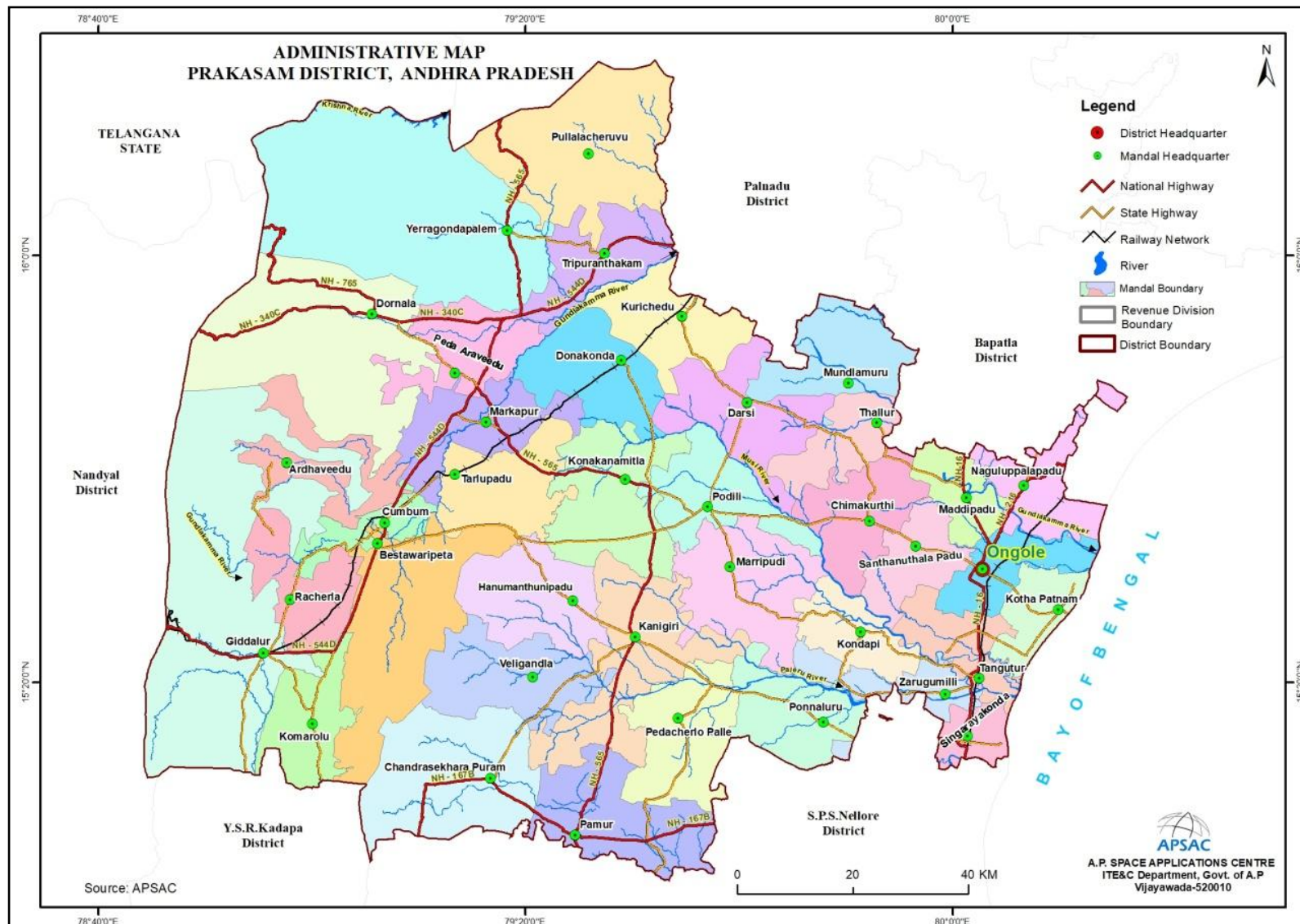


Figure-1: Administrative Map of Prakasam district, Andhra Pradesh

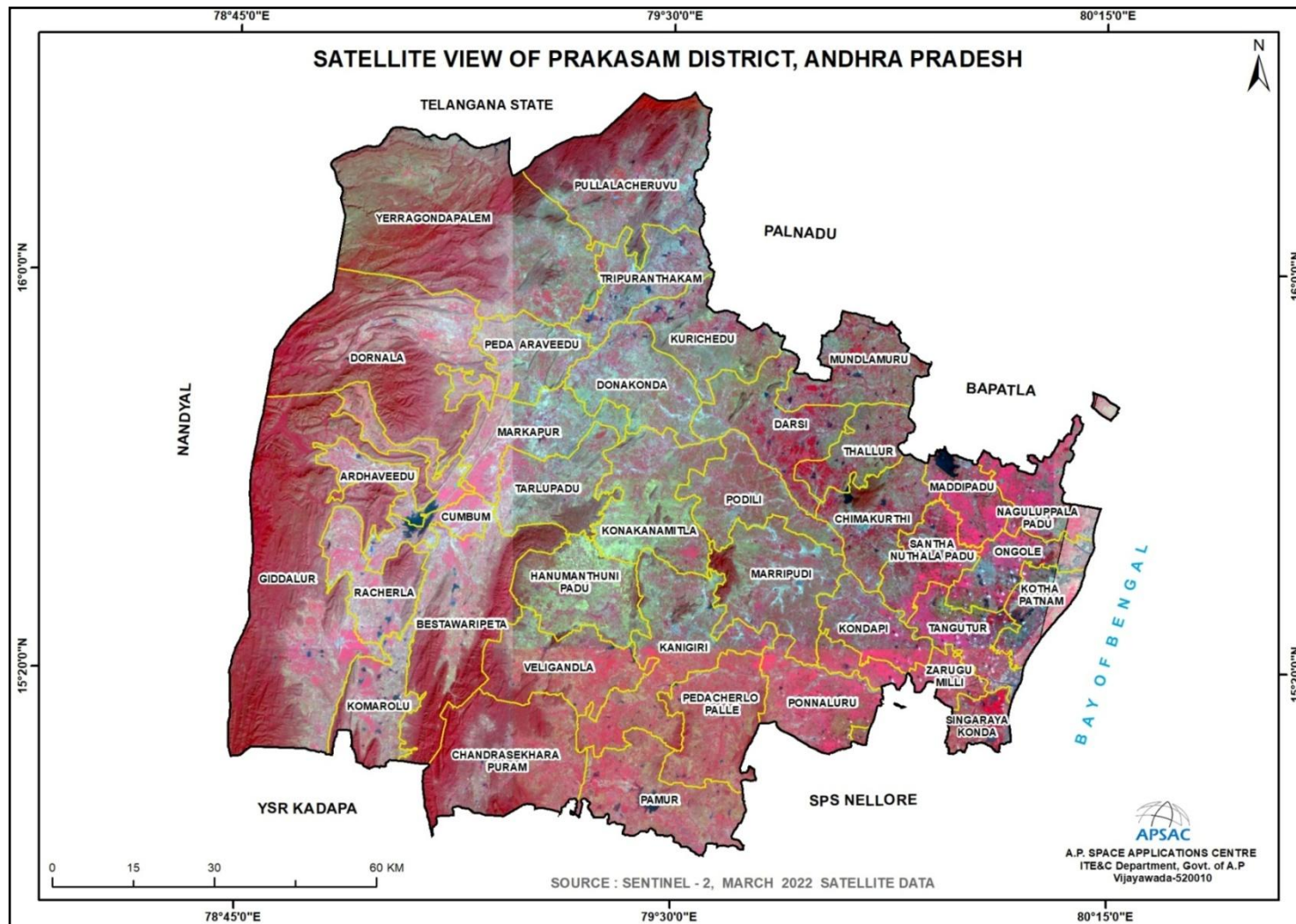


Figure-2: Satellite View of Prakasam District

1.2 Physiography

1.2.1 Physiography

Physiographically, Prakasam District is nearly plain for most parts of the district. It is a part of coastal plains of Andhra Pradesh. Most of the area is recent alluvium with isolated hilly terrains. The western part of the district consists of eastern ghat ranges with high mineral potential.

1.2.2 Relief

The slope distribution demonstrates that most of the district has an irregular landscape with several hill ranges. The slope varies from nearly level to very steep slopes (Figure-3). From the slope map, about 30% of the district area is under level to nearly level slope. The nearly level-sloping area is represented in yellow colour. It is found in the eastern and central parts of the district, along with very gently sloping areas. These are found in the areas of Ongole, KothaPatnam, Maddipadu, Dornala, Marripudi, etc. About 36% of the land is under very gentle slopes ranging from 1-3%. Most of the gently sloping areas are distributed along the foothill zones and forest fringes. Gently sloping areas are observed in parts of Pullacheruvu, Kurichedu, Komarolu, and Giddalur. Strongly sloping areas are found in the forest areas ranging from 10-15%. Moderate and Very steep slopes are observed at the peak of the hills and are concentrated more in the forest areas, ranging from 15-35% and more than 35%. Very steep sloping categories are found in the western, northwestern, and southwestern parts of the district.

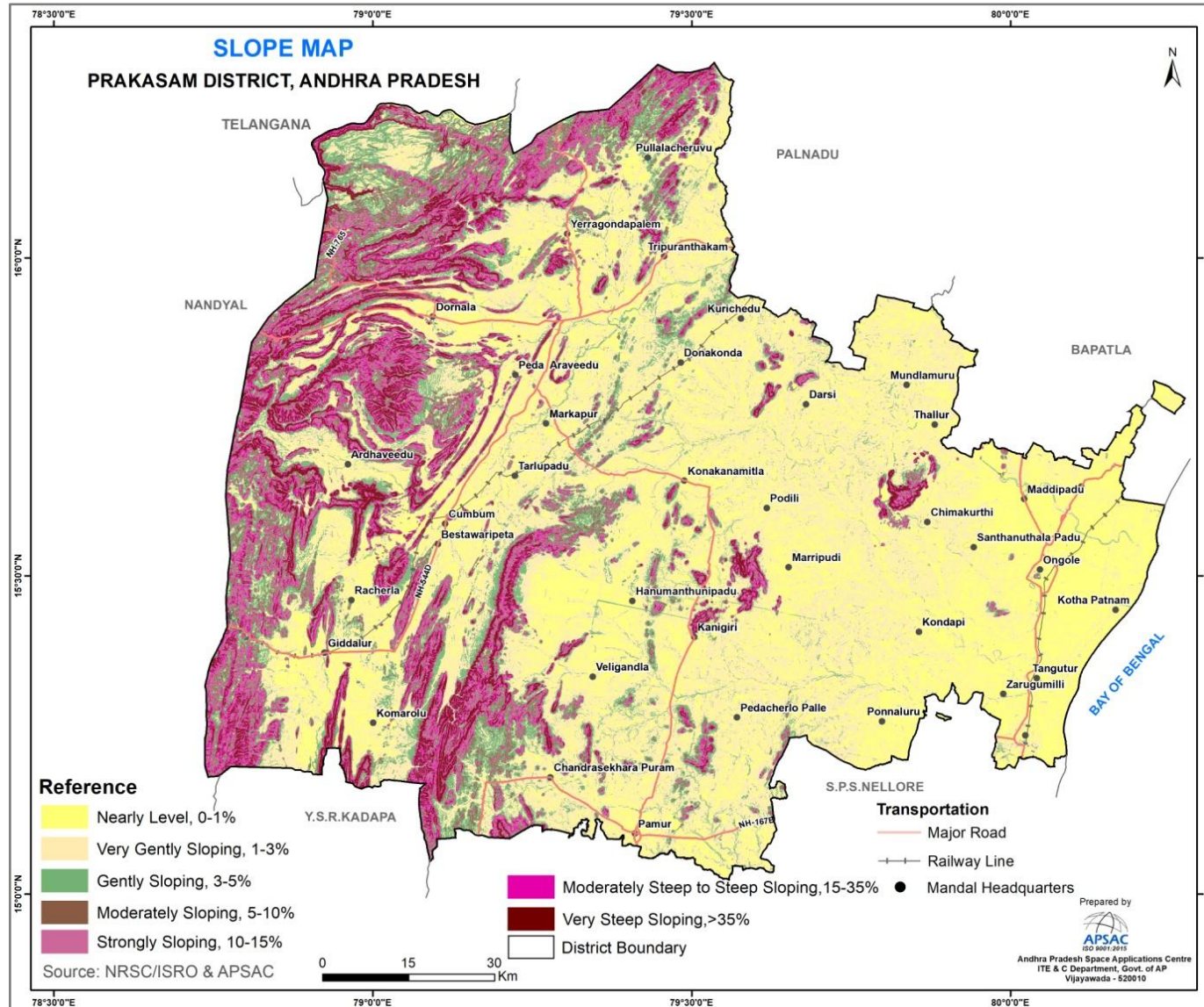


Figure-3: Slope Map of Prakasam District

1.2.3 Climate & Rainfall

1.2.3.1. Climate:

In the Prakasam district, the sea breeze renders the climate moderate, both in winter and summer especially in the coastal areas of the district. In the non-coastal areas of the district, the heat in the summer is severe, especially in the tracts of upland areas. The district is frequently affected by drought and cyclones. The maximum and minimum normal temperature recorded in the district is 38.2°C and 19.7°C, respectively. Generally, the maximum temperature is recorded during the summer months, especially in May and June.

The climate is characterized by humidity. Though the summer is repressive, the seasonal rainfall is moderately good. The South-west monsoon that follows the summer season lasts up to the second week of October. The retreating Northeast monsoon starts from mid-October to the end of November. February appreciates for the most part a fine climate. The mean most extreme temperatures are generally high in the sweltering climate time frame i.e., from April to June (35.7°C to 37.5°C).

The mean most extreme temperature is generally low in the long periods of December and January (15°C and 12°C). From July to November, the mean greatest temperature, for the most part, fluctuates from 39.5°C to 29.5°C. In general, low sunshine prevails in October, which coincides with the flowering period of rice crops grown in the district. The low sunshine with a cloudy atmosphere usually depletes rice grain yields. The locations of Automatic Weather Stations (AWS) in Prakasam District shown in Figure-4.

1.2.3.2. Rainfall:

The average annual rainfall of the district is 751.33 mm, of which 360.16 mm falls as South-West (June-September) monsoon and 305.02 mm as North-East (October-December) monsoon. The mean minimum and maximum temperatures recorded in the district are 38.2°C and 19.7°C in May, January respectively. The average rainfall for the last 25 years is used for the analysis. The average annual rainfall is shown in Figure-5 and details is given in Table-2.

Table 2: Average Annual Rainfall (mm) in the district, during the year 1997-2021

S.No	Month	Average Annual Rainfall (mm)
1	January	6.73
2	February	7.13
3	March	12.21
4	April	16.89
5	May	43.21
6	June	61.25
7	July	83.12
8	August	97.00
9	September	118.78
10	October	161.70
11	November	119.67
12	December	23.65
	Total	751.33

Data source: AWS & APSDPS, Vijayawada

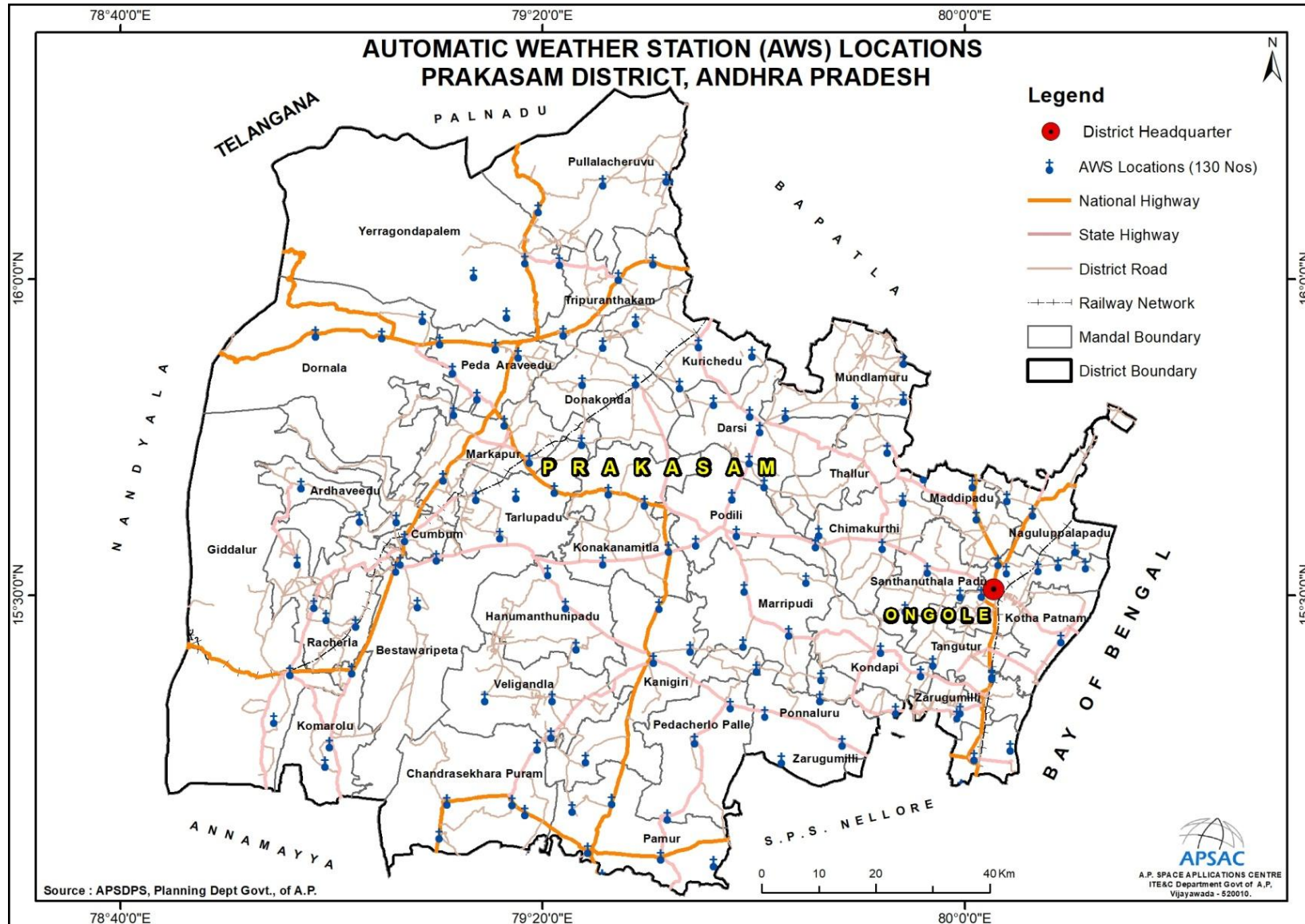


Figure-4: Locations of Automatic Weather Stations (AWS) in Prakasham District

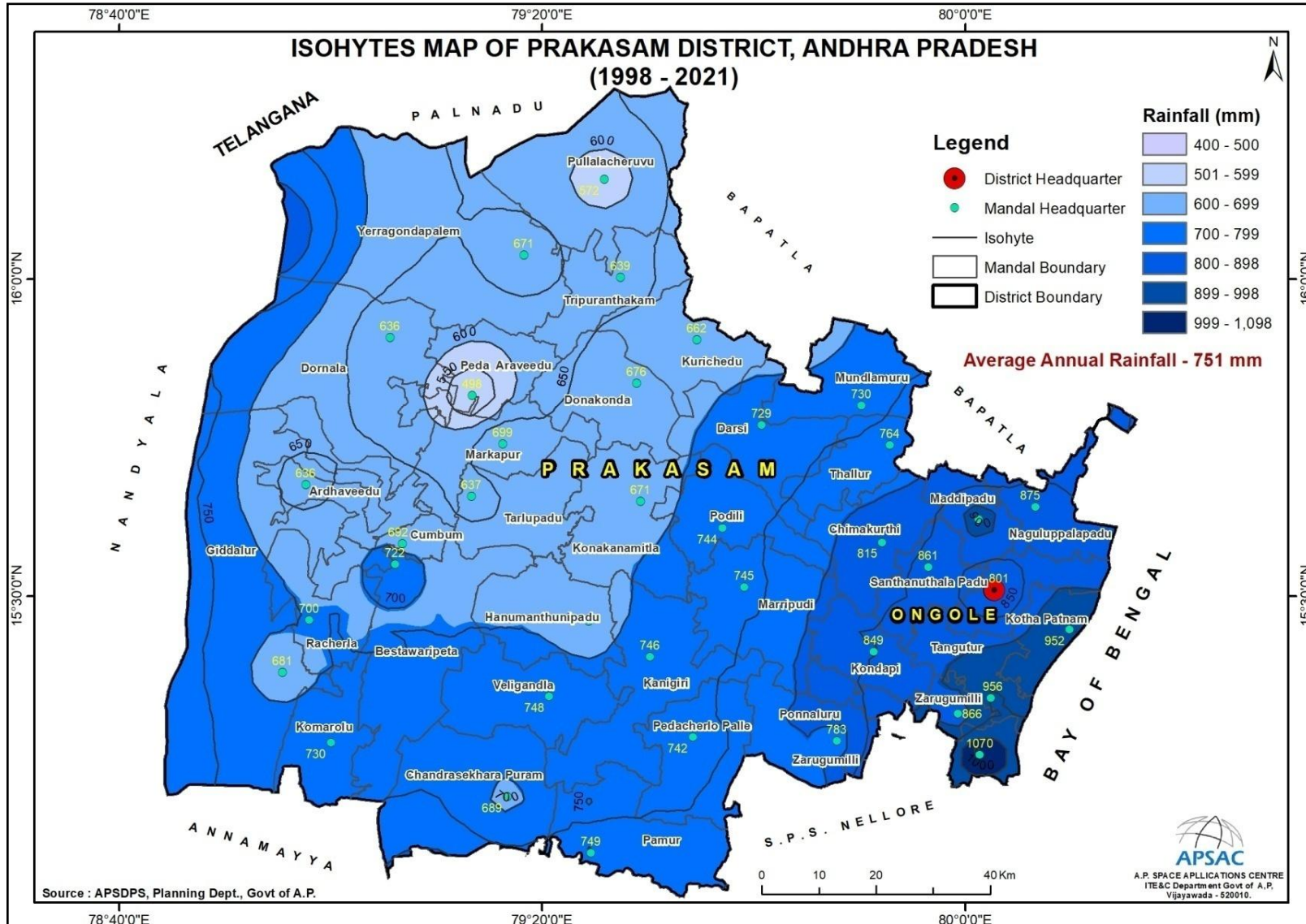


Figure-5: Rainfall distribution in Prakasam District

1.2.4 Drainage

Gundlakamma, Musi, Maneru, Paleru are the major rivers flowing in the district. The Gundlakamma river rises near Gundla Konda in Nandyal district at an elevation of 971 m from the Eastern slopes of the Nallamala hills and flows in a southeast direction for a total length of 200 km to join the Bay of Bengal at Devarampadu in Prakasam district.

1.3 Population and Literacy

1.3.1. Population:

The total population of the district is 22,88,026; of which male and female are 11,60,628 and 11,27,398 respectively as per the 2011 census of India. Among all mandals, Ongole Mandal is having maximum population of 2,53,122; whereas Hanumanthunipadu Mandal is having minimum population of 30,964.

The total schedule caste(SC) population in the district is 5,37,159; of which male and female are 2,72,337 and 2,64,822 respectively. The schedule tribe (ST) population is 88,209; of which male and female are 45,009 and 43,200 respectively. The mandal wise population is shown in the Table-3. The mandal wise spatial distribution of total population is depicted in the Figure-6.

1.3.2. Literacy:

The total literacy in the district is 12,63,468; of which male and female are 7,45,733 and 5,17,735 respectively. The total illiterates are 10,24,558; of which male and female are 4,14,895 and 6,09,663 respectively, as per the 2011 census of India. The mandal wise Literacy Statistics Summary is shown in the Table-4.

1.3.3. Details of the Occupational Health issues in the District (Last five-year data of number of patients of Silicosis): No cases were reported during last 5 years due to mining activity.

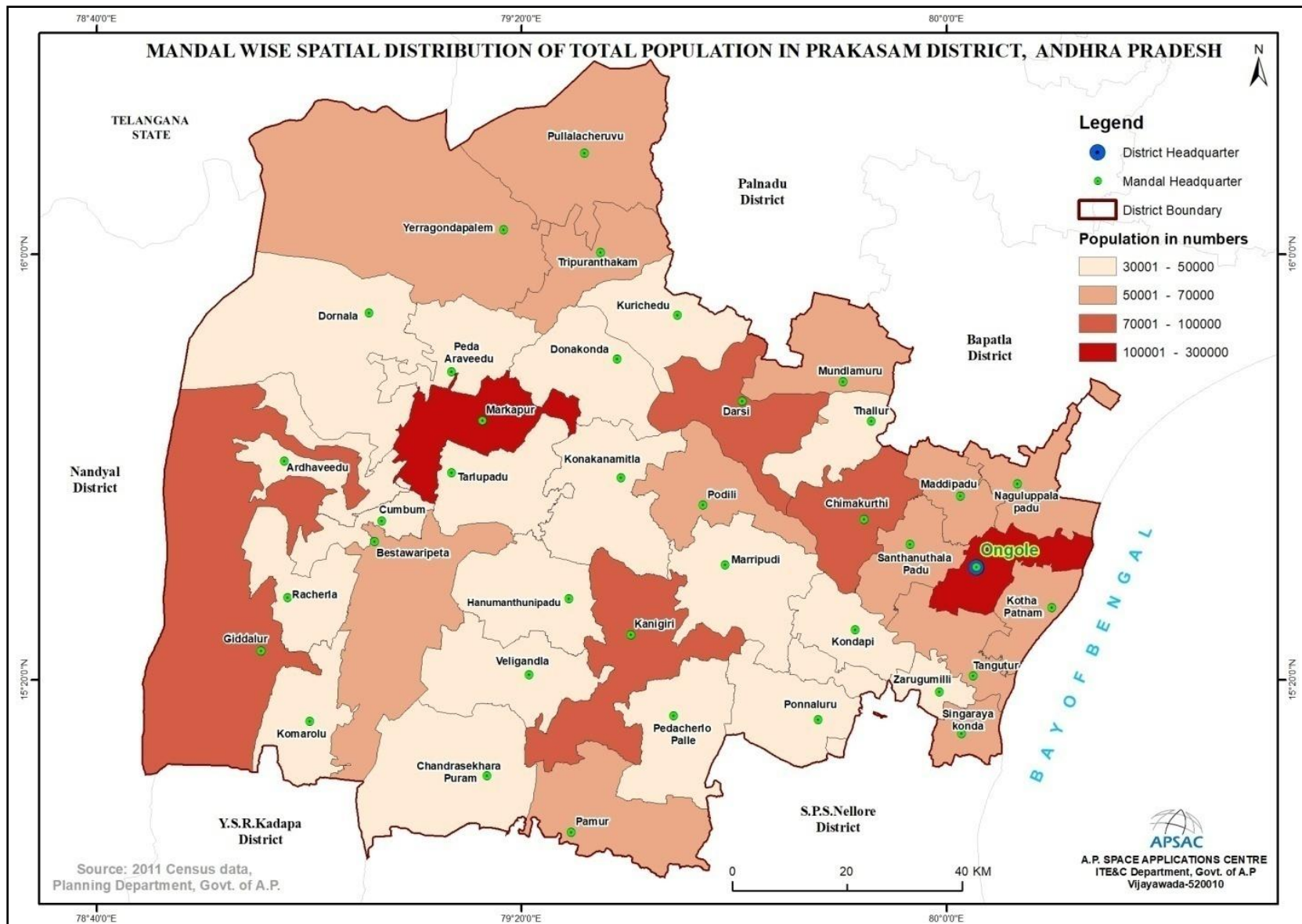


Figure-6: Mandal wise Spatial Distribution of Population in Prakasam district, Andhra Pradesh

Table 3: Population Statistics Summary of 2011 Census

S.No	Mandal Name	Total House Holds	Total Population	Total Male Population	Total Female Population	Total SC Population	Male SC Population	Female SC Population	Total ST Population	Male ST Population	Female ST Population
1	Ardhaveedu	9079	36169	18651	17518	6302	3436	2866	2524	1286	1238
2	Bestawaripeta	12967	51062	26119	24943	9423	4859	4564	323	164	159
3	Chandrasekhara Puram	10777	44953	23142	21811	7750	3989	3761	1257	653	604
4	Chimakurthi	19333	79343	40115	39228	21721	10759	10962	2791	1437	1354
5	Cumbum	12563	48698	23963	24735	5902	2747	3155	628	312	316
6	Darsi	20828	86702	44508	42194	18949	9743	9206	3102	1572	1530
7	Donakonda	11416	48148	24706	23442	14701	7549	7152	382	188	194
8	Dornala	10834	44187	22504	21683	9533	4754	4779	7396	3657	3739
9	Giddalur	21881	86133	43686	42447	12172	6286	5886	4215	2214	2001
10	Hanumanthunipadu	7455	30964	15865	15099	10947	5661	5286	51	26	25
11	Kanigiri	21421	92466	47355	45111	18935	9660	9275	2697	1407	1290
12	Komarolu	10684	40517	20553	19964	6732	3496	3236	154	86	68
13	Konakanamitla	11843	49259	25417	23842	14845	7725	7120	381	207	174
14	Kondapi	10336	43004	21457	21547	13416	6685	6731	969	485	484
15	KothaPatnam	13352	50006	24987	25019	8815	4438	4377	5216	2517	2699
16	Kurichedu	9632	40801	20837	19964	8445	4371	4074	1445	747	698
17	Maddipadu	14130	52353	26155	26198	19553	9849	9704	1509	793	716
18	Markapur	29906	122984	62117	60867	21723	10881	10842	2668	1336	1332
19	Marripudi	9416	38848	19628	19220	10694	5399	5295	508	255	253
20	Mundlamuru	14112	56783	29057	27726	14757	7565	7192	2042	1065	977
21	Naguluppalapadu	18613	67733	33867	33866	23565	12005	11560	2925	1510	1415
22	Ongole	64690	253122	126983	126139	45660	22874	22786	6492	3267	3225
23	Pamur	14897	63017	32206	30811	11778	5987	5791	1992	981	1011
24	PedaAraveedu	10158	42262	21630	20632	12073	6120	5953	1215	643	572
25	PedacherloPalle	8480	36985	18842	18143	8435	4269	4166	633	322	311
26	Podili	16230	67017	34064	32953	16767	8494	8273	2026	1028	998
27	Ponnaluru	10251	43016	21844	21172	12044	6183	5861	1000	496	504
28	Pullalacheruvu	12551	53279	27258	26021	13181	6736	6445	8694	4453	4241
29	Racherla	9146	35080	17459	17621	5710	2757	2953	378	158	220
30	SanthanuthalaPadu	16616	66186	34146	32040	17975	9200	8775	1665	859	806
31	Singarayakonda	17272	65784	32495	33289	12099	5836	6263	6481	3251	3230
32	Tangutur	16290	62618	31172	31446	23667	11893	11774	1735	887	848
33	Tarlupadu	8263	34640	17789	16851	8692	4432	4260	255	138	117

34	Thallur	12028	48400	24848	23552	12833	6614	6219	1024	505	519
35	Tripuranthakam	14542	62627	31740	30887	16029	7859	8170	2535	1302	1233
36	Veligandla	8231	35951	18686	17265	11063	5742	5321	292	158	134
37	Yerragondapalem	14558	64063	33160	30903	15361	7918	7443	6910	3805	3105
38	Zarugumilli	10882	42866	21617	21249	14912	7566	7346	1699	839	860
	Grand Total	565663	2288026	1160628	1127398	537159	272337	264822	88209	45009	43200

Data Source: 2011 Census data, Planning Department & DES.

Table 4: Literacy statistics summary of 2011 Census

S.No	Mandal Name	Total Literacy	Male Literacy	Female Literacy	Total Illiterates	Male Illiterates	Female Illiterates
1	Ardhaveedu	18858	12039	6819	17311	6612	10699
2	Bestawaripeta	28648	17682	10966	22414	8437	13977
3	Chandrasekhara Puram	24376	15154	9222	20577	7988	12589
4	Chimakurthi	42301	24394	17907	37042	15721	21321
5	Cumbum	31827	18232	13595	16871	5731	11140
6	Darsi	43648	26757	16891	43054	17751	25303
7	Donakonda	20904	13210	7694	27244	11496	15748
8	Dornala	22059	13400	8659	22128	9104	13024
9	Giddalur	52866	31888	20978	33267	11798	21469
10	Hanumanthunipadu	15642	9673	5969	15322	6192	9130
11	Kanigiri	53471	31894	21577	38995	15461	23534
12	Komarolu	22513	14113	8400	18004	6440	11564
13	Konakanamitla	21615	13877	7738	27644	11540	16104
14	Kondapi	23665	13318	10347	19339	8139	11200
15	KothaPatnam	26492	15203	11289	23514	9784	13730
16	Kurichedu	18117	11328	6789	22684	9509	13175
17	Maddipadu	30406	17295	13111	21947	8860	13087
18	Markapur	73318	42935	30383	49666	19182	30484
19	Marripudi	16589	10072	6517	22259	9556	12703
20	Mundlamuru	24565	15020	9545	32218	14037	18181
21	Naguluppapadu	41073	23294	17779	26660	10573	16087
22	Ongole	182682	98615	84067	70440	28368	42072
23	Pamur	37503	22391	15112	25514	9815	15699
24	PedaAraveedu	18698	11968	6730	23564	9662	13902
25	PedacherloPalle	18599	11433	7166	18386	7409	10977
26	Podili	34461	20278	14183	32556	13786	18770
27	Ponnaluru	21702	12942	8760	21314	8902	12412
28	Pullalacheruvu	22534	13630	8904	30745	13628	17117
29	Racherla	20234	12404	7830	14846	5055	9791
30	SanthanuthalaPadu	38638	22868	15770	27548	11278	16270
31	Singarayakonda	38145	20857	17288	27639	11638	16001
32	Tangutur	37534	21147	16387	25084	10025	15059
33	Tarlupadu	16856	10775	6081	17784	7014	10770
34	Thallur	23305	14228	9077	25095	10620	14475
35	Tripuranthakam	26166	16580	9586	36461	15160	21301
36	Veligandla	18833	11825	7008	17118	6861	10257
37	Yerragondapalem	30787	19207	11580	33276	13953	19323
38	Zarugumilli	23838	13807	10031	19028	7810	11218
	Grand Total	1263468	745733	517735	1024558	414895	609663

Data Source: 2011 Census data, Planning Department & DES

1.4 Land Utilization Pattern

1.4.1 Land Use / Land Cover

The Land Use / Land Cover (LULC) pattern of any region is an outcome of various physical and cultural factors and their utilization by man in time and space. Land use refers to the type of utilization to which man has put the land. It also refers to the evaluation of the land with respect to various natural characteristics. But land cover describes the vegetal attributes of the land. For a proper understanding of the influence of the various human-induced land-use practices on environmental change, it is essential to help simulate the land-use changes.

1.4.2 Spatial Distribution of Land Use / Land Cover

Using satellite data from the three seasons (Kharif, Rabi, and Zaid), various land use/land cover categories have been identified under level-3 classification. The LULC map has been generated using visual image interpretation techniques i.e. size, shape, color, tone, texture, association, and pattern (NRSA, 2006). This information is used for general planning purposes at district/mandal level. The broad categories are built-up, agricultural, forest, wastelands, wetlands, and water bodies. The spatial distribution of land use / land cover of the Prakasam district is shown Figure-7 and area statistics are presented in Table-5.

The major common LULC categories, such as built-up (238 sq. km), agriculture (7623 sq. km), forest (4058.86 sq. km), wastelands (1725.79 sq. km), wetlands (37.54 sq. km), and water bodies (638.82 sq. km), were identified and delineated. The study area has been classified into 41 LULC classes of level-III. Agriculture land is the predominant category, followed by forests.

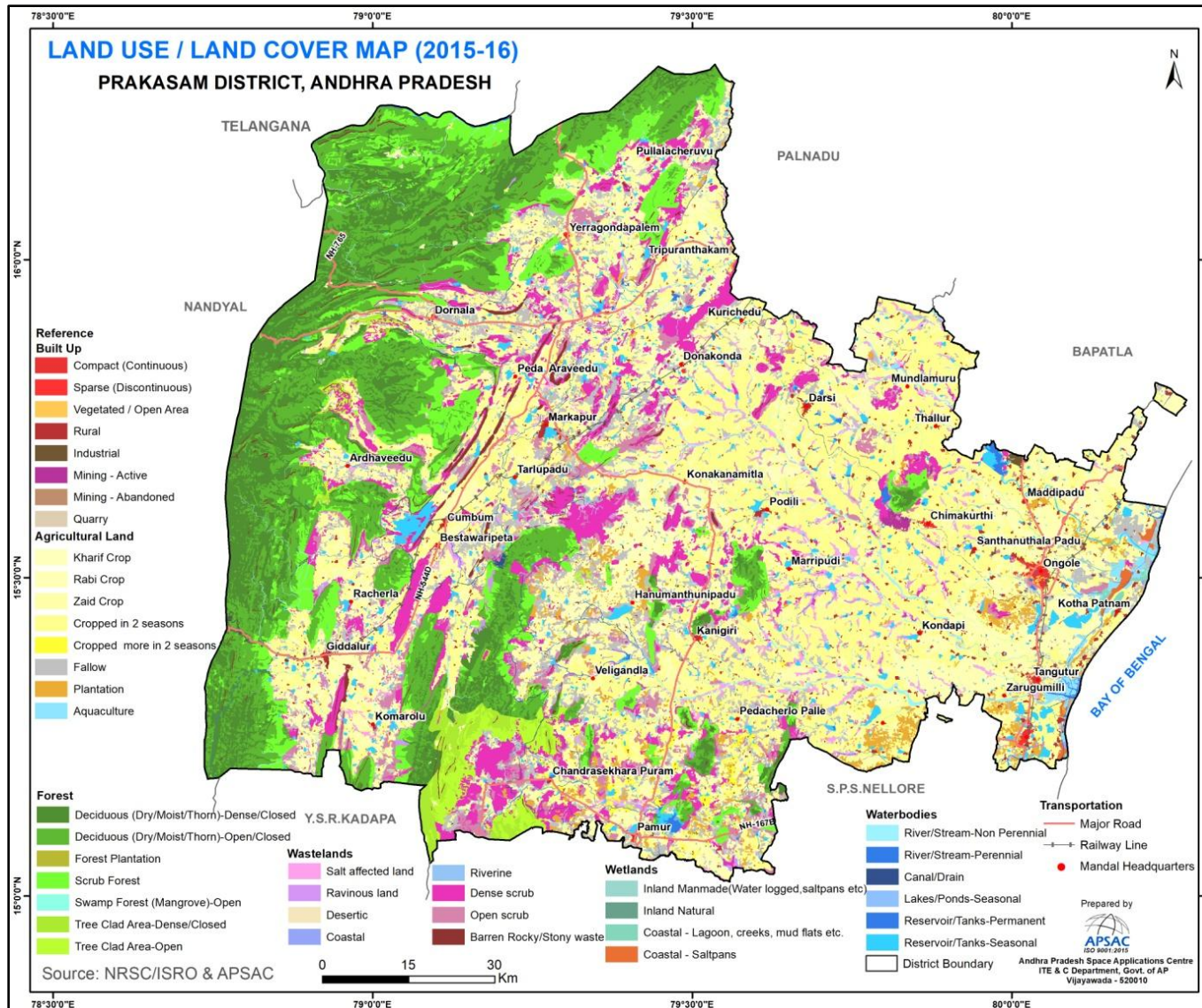


Figure-7: Land use / land cover map of Prakasam District 2015-16

Table 5: Category-wise distributions of Land Use/Land Cover during 2015-16

S. No	LULC categories	Area in sq. km	% to total
Built up		238.00	1.66
1	Compact (Continuous)	16.67	0.12
2	Sparse (Discontinuous)	8.38	0.06
3	Vegetated / Open Area	5.53	0.04
4	Rural	166.84	1.16
5	Industrial	9.75	0.07
6	Mining - Active	10.03	0.07
7	Mining - Abandoned	0.34	0.00
8	Quarry	20.46	0.14
Agricultural Land		7623.00	53.23
9	Kharif Crop	1755.43	12.26
10	Rabi Crop	957.34	6.68
11	Zaid Crop	3.99	0.03
12	Cropped in 2 seasons	3497.99	24.42
13	Cropped more in 2 seasons	51.32	0.36
14	Fallow	1014.35	7.08
15	Plantation	289.84	2.02
16	Aquaculture	52.74	0.37
Forest		4058.86	28.34
17	Deciduous (Dry/Moist/Thorn)-Dense/Closed	1110.05	7.75
18	Deciduous (Dry/Moist/Thorn)-Open/Closed	1781.11	12.44
19	Forest Plantation	1.27	0.01
20	Scrub Forest	894.09	6.24
21	Swamp Forest (Mangrove)-Open	1.02	0.01
22	Tree Clad Area-Dense	127.97	0.89
23	Tree Clad Area-Open	143.36	1.00
Wastelands		1725.79	12.05
24	Salt affected land	215.70	1.51
25	Ravinous land	22.37	0.16
26	Dense scrub	884.44	6.18
27	Open scrub	481.81	3.36
28	Desertic	3.06	0.02

29	Coastal	5.94	0.04
30	Riverine	0.06	0.00
31	Barren Rocky/Stony waste	112.41	0.78
Wetlands		37.54	0.26
32	Inland Natural	0.04	0.00
33	Inland Manmade (Water logged, saltpans etc.)	2.26	0.02
34	Coastal - Lagoon, creeks, mud flats etc.	18.17	0.13
35	Coastal - Saltpans	17.07	0.12
Water bodies		638.82	4.46
36	River/Stream-Perennial	49.77	0.35
37	River/Stream-Non Perennial	176.92	1.24
38	Canal/Drain	43.32	0.30
39	Lakes/Ponds-Seasonal	0.56	0.00
40	Reservoir/Tanks-Permanent	33.93	0.24
41	Reservoir/Tanks-Seasonal	334.32	2.33
Total		14322.00	100.00

Data source: NR Census 3rd cycle mapping, NRSC/ISRO & APSAC, GoAP

1.4.2.1. Built-up

Built-up land includes educational, health, and socioeconomic facilities such as game/sport viewing centers and shops, among other things. These characteristics are distinguished by their dark bluish-green tone in the core and bluish tone on the periphery. They have a typical coarse and molted texture. The network of highways and railroads is also connected to these areas. The study area contains urban areas, rural settlements, and tiny towns. The built-up area occupies an area of 238 sq. km, which is about 1.66% of the district's total area.

1.4.2.2. Built-up - Compact (Continuous)

Most of the land is covered by buildings, roads, and artificially surfaced areas and covers almost all the ground. The built-up-compact class is assigned where the impermeable surfaces such as the transportation network and urban structures take up more than 80% of the surface area. This category occupied 16.67 sq. km, which is found in urban areas like Ongole, Markapur, and other small towns.

1.4.2.3. Built up - Sparse (Discontinuous)

Most of the land is covered by structures like buildings, roads and artificially surfaced areas associated with vegetated areas and bare soil, which occupy discontinuous but significant surfaces. Between 10 to 40 % of the total surface should be impermeable. Scattered blocks of residential flats, hamlets and small villages are delineated under this category. It contributes an area of 8.38 sq. km, which is found in peri-urban areas.

1.4.2.4. Vegetated / Open Area

These are vegetated areas within the urban agglomeration (situated within or in contact with urban areas). The vegetation cover of trees, shrubs, and herbs covers the surface area, and it has been delineated. Open areas used as Parks, sports and leisure facilities, camping grounds, sports grounds, leisure parks, golf courses, and racecourses, including formal parks, etc are considered in this category. This category occupies an area of 5.53 sq. km. These areas are found along the fringe area and outskirts of the urban areas.

1.4.2.5. Built-up – Rural

These are the lands used for human settlements of a smaller size than urban settlements, with more than 30% of the population engaged in primary agricultural activity and associated with non-commercial and allied classes, and are classified as built-up (rural). About 167 sq. km of rural built-up area were mapped.

1.4.2.6. Industrial Area

This class includes non-linear impervious surfaces related to trade, manufacturing, distribution, and commerce. These are areas where human activity can be seen in the form of manufacturing as well as other maintenance-related establishments. The industrial area encompasses 9.75 sq. km and can be found in and around towns.

1.4.2.7. Mining – Active

Mining areas encompass areas under surface operations. It is easy to spot these activities' effects on the landscape because they have left behind enormous giant pit mines. Currently, extensive surface operations are being conducted in the active mining areas to remove economically significant ores. A total of 10.03 sq. km. is contributed by the active mining area.

1.4.2.8. Mining – Abandoned

These are the locations where extensive surface operations to remove economically significant ores were once conducted but are currently being left unfinished for a variety of reasons, including economic, operational, viability, disturbances, etc. Only about 0.34 sq. km. has been contributed under this category.

1.4.2.9. Quarry

These are signs of small-scale surface mining operations, which involve the surface of the land being excavated for sand, gravel, clay-phosphate mines, limestone quarries, etc. They are primarily distinguished by their proximity to urban areas. It contributes to an area of about 20.46 sq km.

1.4.2.10. Agricultural Land

This category is devoted primarily to growing crops for commercial and horticultural purposes as well as those for food, fiber, and other commodities. Most of the population depends on agriculture for livelihood. Cropland, fallow land, agricultural plantations, and aquaculture are all included in this category. The agricultural land is a major category, accounting for 7623 sq. km (53.23% of the district's total area). It is also found that cropped in two seasons i.e. double-cropped area is about 24.42% of the district total. The major crops in the district are Rice, Jowar, Turmeric, Maize, Cotton, Sugar Cane, Sesame, Chillies, and Horticultural crops like Mango, Papaya, Banana, Lemon, and Oranges.

1.4.2.11. Kharif Crop

The Kharif crop is defined as any agricultural area that is grown from June/July to September/October, which coincides with the Southwest monsoon season. It is linked to rain-fed crops in dryland farming with little or no irrigation, as well as areas of rain-fed paddy and other dry crops. Rice, sugarcane, jowar, maize, red gram, cotton, castor, and other crops are commonly grown, and an area of 1755.43 sq. km (12.26%) has been mapped under the Kharif cropland.

1.4.2.12. Rabi Crop

These areas are cultivated from November/December to February/March. It is associated with areas under assured irrigation irrespective of the source of

irrigation. However, Rabi-cropped areas also exist in rain-fed areas, particularly in black soil regions with high rainfall during the Kharif season and under conditions of residual soil moisture. Mainly irrigated crops are grown during the Rabi season by utilizing canals, tanks and groundwater resources. In some places, lift irrigation is also practiced in the district. The total area cultivated under the Rabi season is about 957 sq. km (6.68%).

1.4.2.13. Zaid Crop

These are the areas that are planted with crops during the summer (April to May), and they are primarily connected to fertile, irrigated plains and delta regions. The Zaid crop areas cover an area of 3.99 sq. km during 2015-16.

1.4.2.14. Cropped in two seasons

These are the areas that are cropped during two cropping seasons that are often seen associated with irrigated areas. Three combinations are possible in this category viz., - Kharif + Rabi, Kharif + Zaid and Rabi + Zaid. It is found that this is the major agricultural category with an extent of 3497.99 sq. km (24.42%). These are found in areas that have reliable irrigation facilities such as canals, tanks, and groundwater.

1.4.2.15. Cropped in more than two seasons

These are the areas that are cropped in more than two cropping seasons. It includes triple-cropped areas (Kharif, Rabi, and Zaid) under multiple cropping. Long-duration crops like sugarcane, cotton, banana, and tobacco are considered under this category. This category accounts for 51.32 sq. km of the district's total geographical area.

1.4.2.16. Fallow land

The term "fallow land" refers to agricultural land that is actively being farmed but is occasionally allowed to rest or un-cropped for one or more seasons, but not for less than a year and not for more than five years. The fallow land occupies an area of 1014.35 sq. km (7.08%), which is found in the central parts of the district comprising the areas of Bestawaripeta, Cumbum, Markapur, Dornala, PedaAraveedu, etc.

1.4.2.17. Agricultural Plantation

These are areas where agricultural tree crops have been planted using agricultural management techniques. These also include the regions of land

use systems and practices where the cultivation of herbs, shrubs, and vegetable crops is purposefully combined with crops, primarily in irrigated conditions, for ecological and financial reasons. These areas can be distinguished from cropland, particularly when using data collected during the Rabi/Zaid season. Plantations have irregular and sharp edges and appear in dark red to red tones in a variety of sizes, indicating that a fence surrounds them. Plantation crops cover 289.84 sq. km (2.02%) of the total geographical area of the district.

1.4.2.18. Aquaculture

These are the areas where fish and shrimp are bred and reared for commercial purposes. Aquaculture ponds are located mostly along the coast or in lakes, rivers, and estuaries. This also includes Breeding and rearing of freshwater or marine fish in captivity. The aquaculture category occupies an area of 52.74 sq. km. It is found along the coastal belt of the district.

1.4.2.19. Forest

Land with a tree canopy cover of more than 30 percent and an area of more than 0.5 ha is referred to as a forest. Forest is determined both by the presence of trees and the absence of other predominant land uses within the notified forest boundaries. Within the notified forest boundaries, trees should be able to grow to a minimum height of 5 meters. About 4059 sq. km (28.34%) of the land is under forest cover. The forest cover is found in the west, north-west, south-west, and central parts of the district, where several forest species grow. The important species are teak, nalla maddi, rosewood, devadari, sanders, etc.

1.4.2.20. Deciduous (Dry/Moist/Thorn)-Dense

This category is predominantly composed of species, which shed their leaves once in a year, especially during summer. These are mostly broad-leaved tropical forests with a tendency to shed their leaves annually. This category includes all the areas where the canopy cover/density is more than 40% and contributed 1110.05 sq. km. In the district, most of the forests are deciduous forests and are found along the Eastern Ghats hill range, which is parallel to the Bay of Bengal coast.

1.4.2.21. Deciduous (Dry/Moist/Thorn)-Open

Most of the species in this category only lose their leaves once in a year, usually in the summer. The majority of these tropical forests are broad-leaved and have a yearly leaf-falling tendency. All forest areas that fall into this category have a canopy cover/density of between 10 - 40%. These forests contain a wide range of fauna, including tigers, leopards, wolves, bears, etc in addition to the timber. This category is attributed to 1781.11 sq. km (12.44%) of the total land area.

1.4.2.22. Forest Plantation

These are the areas where important tree species for forestry are grown and managed, particularly in notified forest areas. Most of these are located in uplands and foothill areas. Many of these can be identified based on the sharp boundaries exhibited by them. The distribution of forest plantations is 1.27 sq. km, which are found in the fringe areas of the notified forests. Forest plantations mainly teak, bamboo, casuarinas, etc have been delineated.

1.4.2.23. Scrub Forest

These are the forest areas that are generally seen on the fringes of dense forest cover and settlements, where there is biotic and abiotic interference. Most times they are located closer to habitations. Forest blanks which are the openings amidst forest areas, devoid of tree cover, observed as openings of assorted sizes and shapes as manifested in the imagery, are also included in this category. It is spread over an area of 894.09 sq. km (6.24%).

1.4.2.24. Swamp Forest (Mangrove)-Open

These are the areas with plants evergreen in nature, halophytic, dense or woody in nature, occurring along tidal waters/creeks, estuaries and along the delta in coastal areas. They are densely colonized in coastal areas on tidal flats, estuaries salt marshes etc. This category includes all the forest areas where the canopy cover/density ranges between 10% - 40%. It is found that 1.02 sq. km (0.01%) is under this category in the district.

1.4.2.25. Tree Clad Area-Dense

Areas with tree cover lying outside the notified forest area with a woody perennial plant with a single, well-defined stem carrying a more-or-less-defined crown and being at least 3 m tall. Plants essentially herbaceous but with a woody appearance (e.g. Bamboo and ferns) are also classified as

trees if the height is more than 5 m and as shrubs if the height is less than 5 m. This category includes all the areas where the canopy cover/density is more than 40%. The dense tree-clad area contributes an area of 127.97 sq. km, which is found along with forest areas.

1.4.2.26. Tree Clad Area-Open

Areas with tree cover lying outside the notified forest area with a woody perennial plant with a single, well-defined stem carrying a more-or-less-defined crown and being at least 3m tall. Plants essentially herbaceous but with a woody appearance (e.g. Bamboo and ferns) are also classified as trees if the height is more than 5m and as shrubs, if the height is less than 5 m. This category includes all the forest areas where the canopy cover/density ranges between 10 – 40%. The tree-clad open category has been mapped with an area of 143.36 sq. km.

1.4.2.27. Wastelands

Wasteland is described as degraded land which can be brought under vegetative cover with reasonable effort, which is currently underutilized and land which is deteriorating due to lack of appropriate water and soil management or on account of natural causes. Wastelands can result from inherent/imposed disabilities such as location, environment, chemical and physical properties of the soil, or financial or management constraints. The area under this category is 1725.79 sq. km (12.05%). These are the areas found entire district, mostly concentrated in the central parts of the district.

1.4.2.28. Salt-affected land

Salinization can be caused by inadequate canal irrigation water management, which causes the water table to rise and, as a result, salts to build up in the root zone in arid, semi-arid, and sub-humid (dry) conditions, as well as by seawater intrusion in coastal regions and/or the use of groundwater with high salt content. They also turn salty when ground water is salty, or soils have grown on salty parent materials. The area of these lands is 215.70 sq. km.

1.4.2.29. Ravinous land

The word ravine is usually associated not with an isolated gully but an intricate network of gullies formed generally in deep alluvium and entering a nearby river, flowing much lower than the surroundings. Ravines are

extensive systems of gullies developed along the river course. It covers an area of 22.37 sq. km.

1.4.2.30. Dense scrub

The scrub is typically restricted to topographically elevated areas, on the slopes of hills that are typically surrounded by agricultural lands. These regions are characterized by extreme slopes, severe erosion, shallow and skeletal soils, sometimes chemically degraded soils, and lands subjected to excessive aridity with scrubs predominating the landscape. It is found with varying sizes of small to large areas having a contiguous or dispersed pattern. The dense scrub is mostly identified on the hills with gentle to steep sloping areas and occupies an area of 884.44 sq. km.

1.4.2.31. Open scrub

This category has a similar description as mentioned in the dense scrub except that they possess sparse vegetation or devoid of scrub and have thin soil cover. The open scrub is found in the foothills surrounded by agricultural lands. The open scrub mapped an area of 481.81 sq. km.

1.4.2.32. Desertic sand

Desertic sands are those confined to arid environments where the rainfall is scanty. These lands are characterized by the accumulation of sand developed in situ or transported by Aeolian processes. It occupies an area of 3.06 sq. km.

1.4.2.33. Coastal sand

Coastal sands are the sands that are accumulated as a strip along the sea coast. Very high reflectance exhibited by this category, especially in the NIR region of the spectrum enables their separation with the salt-affected land. It contributes an area of 5.94 sq. km.

1.4.2.34. Riverine sand

Riverine sands are the accumulations of sand that are seen as sheets in the flood plain as a result of river flooding. The sandy areas occurring within or in continuity to the river course are to be excluded from this category. These occupy a tiny 0.06 sq. km of the district area.

1.4.2.35. Barren Rocky/Stony waste

The barren rock exposures are especially confined to hilly terrain with down slopes with rock outcrops, stony waste, and fragments. Barren rocky areas have been observed as rocky outcrops in the forest and scrubland. The area under this category is 112.41 sq. km and it occupies 0.78% of the district. It is found that most of the barren rocky areas are being quarried for various construction activities in the district.

1.4.2.36. Water Bodies

This category comprises areas with surface water, either impounded in the form of ponds, lakes, and reservoirs or flowing as streams, rivers, canals, etc. These are seen clearly on the satellite image in blue to dark blue or cyan colour depending on the depth of water. The water body category occupies an area of about 638.82 sq. km with 4.46% of the district total. The Gundlakamma, Musi, and Paleru Rivers flow through the district.

1.4.2.37. River/Stream-Perennial

Rivers/streams are the natural course of water flowing on the land surface along a definite channel/slope regularly or intermittently towards a sea in most cases or a lake or an inland basin in desert areas or a marsh or another river. These are the rivers/streams that flow continuously throughout the year as considered perennial. It contributes an area of 22.38 sq. km. The important river that drains through the district is Gundlakamma.

1.4.2.38. River/Stream-Non Perennial

The water covers the surface for less than nine months in each year considered as non-perennial. This also includes the dry part of the river generally characterized by the presence of sand or exposed rocks. It is found that most of the streams are under the non-perennial category and contribute an area of 176.92 sq. km (1.24%). The small rivers like Thammileru, Sagileru, and Gudisileru and streams like Ogeruvagu, Nallavagu, and Vedimangalavagu, etc are delineated under the non-perennial category.

1.4.2.39. Canal/Drain

Drains and canals are man-made waterways that are built for irrigation, navigation, or to remove extra water from agricultural lands. It is found mostly in plains with the outlet of reservoirs like Gundlakamma, NSP Major

Canal, Kunderu, Velugonda project eastern main canal, etc. This category contributed an area of 43.32 sq. km.

1.4.2.40. Reservoir/Tanks-Permanent

The reservoir is an artificial lake created by the construction of a dam across the river specifically for hydel power generation, irrigation, and water supply for domestic/ industrial needs, flood control, either singly or in combination. Tanks are small lakes of impounded waterways constructed on land surface for irrigation. They are associated with croplands, lowlands and reservoirs surrounded by hills without vegetation. This includes all reservoirs/tanks with water spread seen at least during one season in a year is considered under the permanent category. The major reservoirs under this category are Gundlakamma, Velugonda and Cumbum. This category occupies an area of 33.93 sq. km.

1.4.2.41. Reservoir/Tanks-Seasonal

Dry reservoirs/tanks are those, which do not have water spread throughout the year, and are considered as seasonal. The tanks under the seasonal category are spread over an area of 334.32 sq. km and this category is predominant among the water bodies.

1.4.3 Forest Cover Distribution

The interpretation of various topographical maps from different sources and IRS R2 LISS III satellite data (2015-16) were used to create the forest cover maps. Land with a tree canopy cover of more than 10% and a size of more than 0.5 ha is referred to as a forest. The notified forest boundaries are considered to contain a forest if there are both trees and no other dominant land uses there. The trees should be able to reach a minimum height of 5 m within the notified forest boundaries. Major forest areas of the district fall under Dry deciduous and Scrub forests. The spatial distribution of forest cover and its statistics of the Prakasam district are presented in Figure-8 and Table-6. As per the Forest Department, Government of Andhra Pradesh the Forest boundary map is presented in Figure-9 and the Wildlife Sanctuary boundary map of Nandyal District is shown in Figure-9A.

Table 6: Forest cover distribution in Prakasam District

S. No	Forest Category	Area in sq. km	% to district total
1	Deciduous (Dry/Moist/Thorn)-Dense/Closed	1110.05	7.75
2	Deciduous (Dry/Moist/Thorn)-Open/Closed	1781.11	12.44
3	Forest Plantation	1.27	0.01
4	Scrub Forest	894.09	6.24
5	Swamp Forest (Mangrove)-Open	1.02	0.01
6	Tree Clad Area-Dense	127.97	0.89
7	Tree Clad Area-Open	143.36	1.00
	Total	4058.86	28.34

Data source: NR Census 3rd cycle mapping, NRSC/ISRO & APSAC, GoAP

The district has a variety of vegetation types rich in flora and fauna. Its varied topography ranging from the hills of Eastern Ghats and plains supports varied ecosystems. The total forest area in the district is 4058.86 sq. km, accounting for 28.34% of the total geographical area of the district. The forest cover extends over the western, northwest, southwest and central parts of the district. The forest cover vegetation is largely dry deciduous type with a mixture of Teak, Bamboo, Devadharu, etc. A small area (1.02 sq. km) of open mangrove swamp forest has been mapped along the coast to the east. It is observed that the tree-clad areas are found in the western parts of the district.

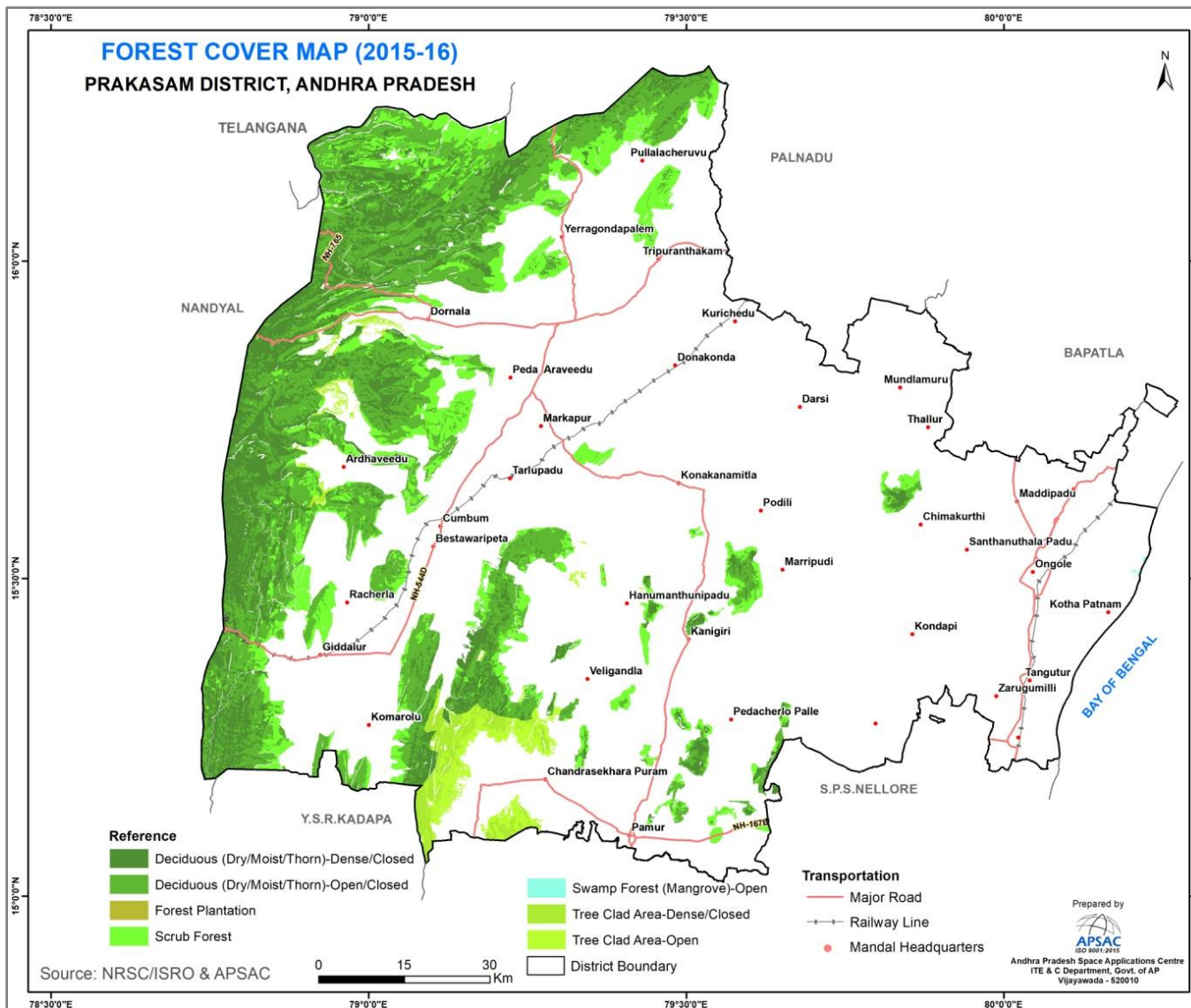


Figure-8: Forest cover map of Prakasam District

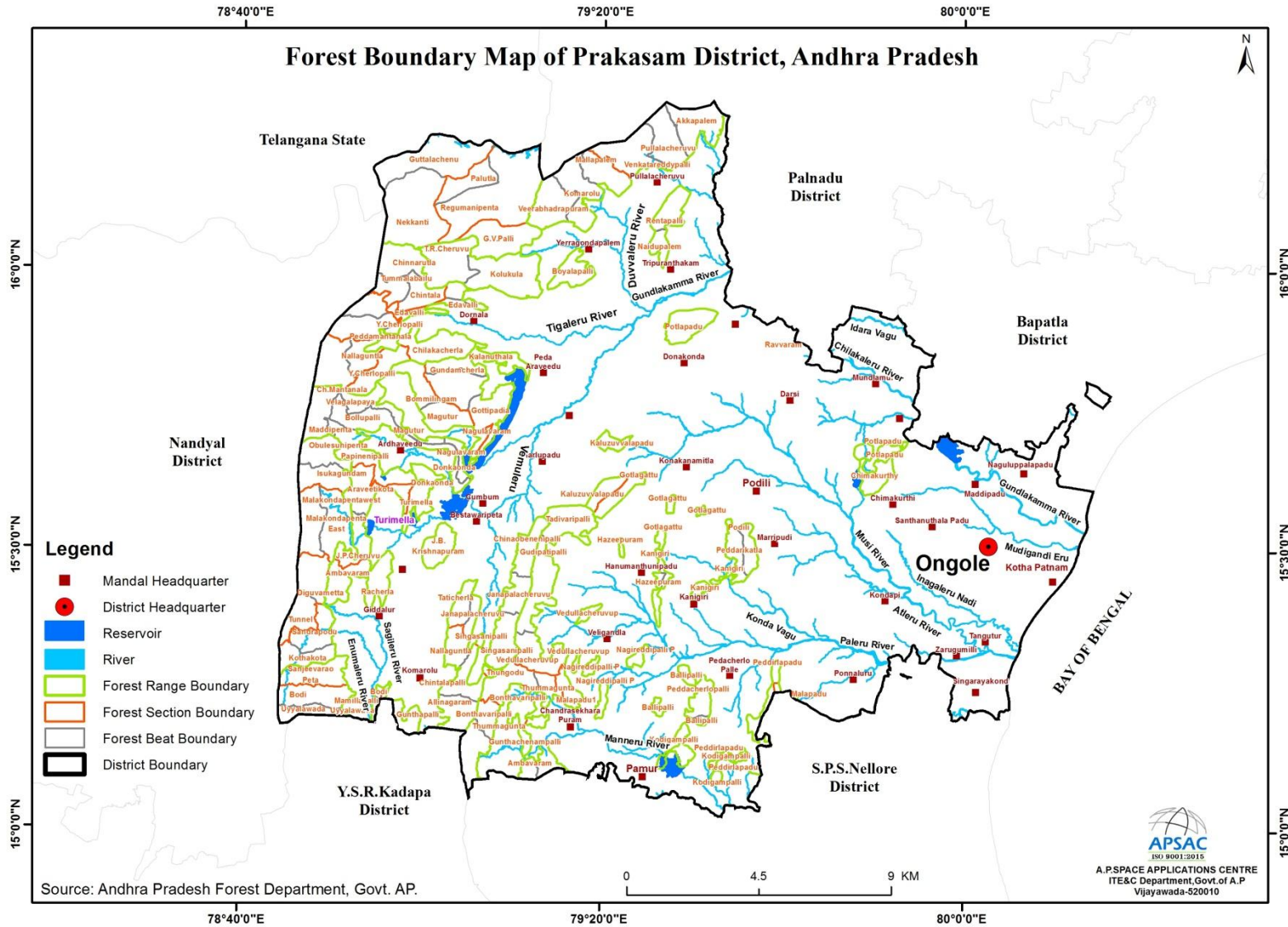


Figure-9: Forest boundary map of Prakasam District

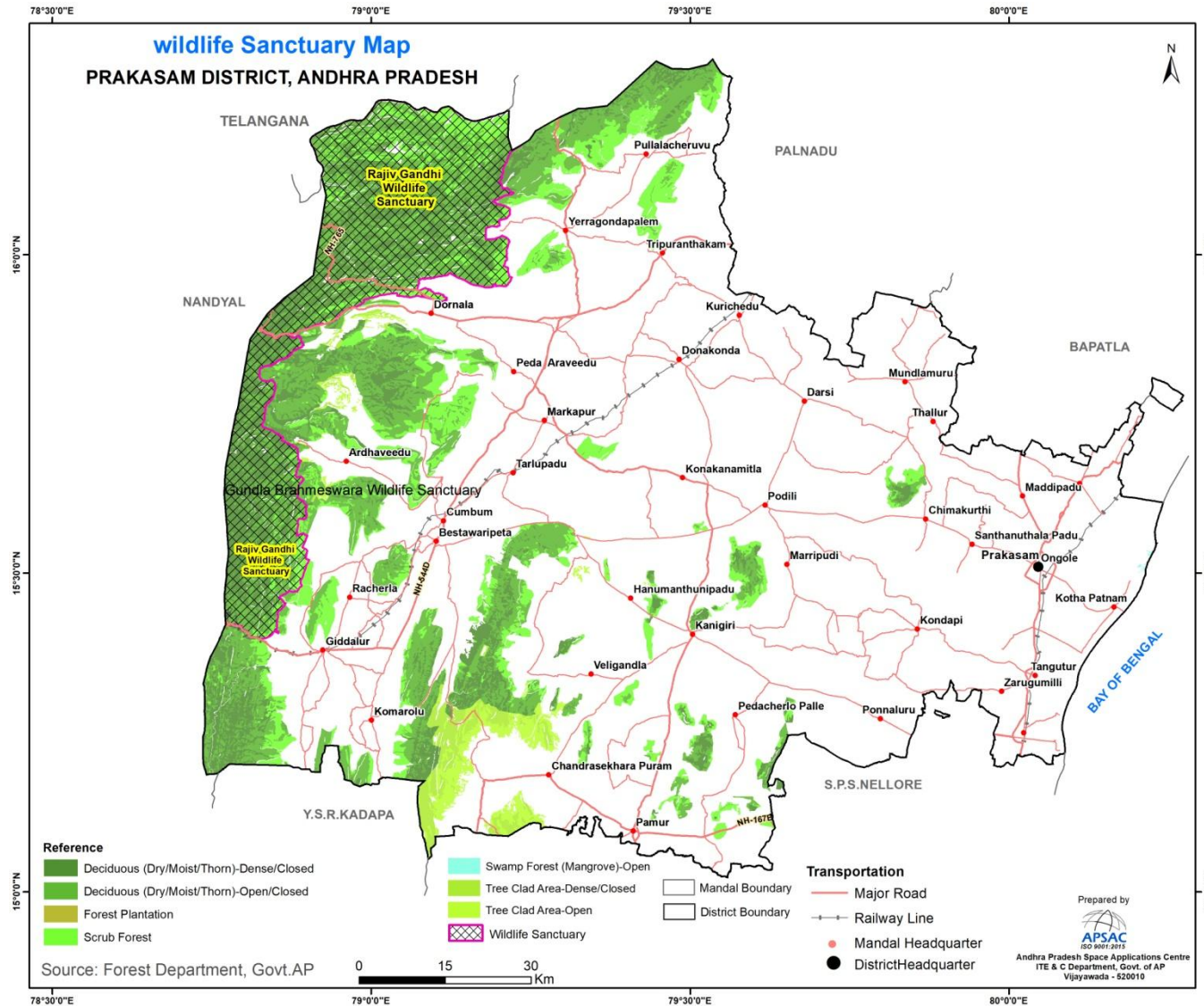


Figure-9A: Wildlife Sanctuary boundary map of Prakasam District

1.4.4 Agricultural Resources in Prakasam District

Over the past two decades, APSAC has effectively employed remote sensing technology in agriculture, encompassing both spatial and temporal dimensions across various projects. The continuous evolution of satellite remote sensing technology has facilitated systematic monitoring of crop conditions and vigor across extensive regions. Within the realm of spectral vegetation indices derived from remote sensing data, the Normalized Difference Vegetation Index (NDVI) stands out as the most widely utilized for operational drought assessment. Its popularity stems from its straightforward calculation, ease of interpretation, and the capacity to mitigate the impacts of atmospheric conditions, illumination geometry, and other variables.

APSAC conducted in-season crop condition assessments at the Mandal level in Andhra Pradesh. This initiative aimed to provide administrators and planners with crucial insights for strategic decision-making regarding drought management, import-export policies, and trade negotiations. The NDVI is calculated using the formula $(NIR - Red) / (NIR + Red)$, where NIR and Red represent the reflectance in the visible and near-infrared channels, respectively. Water, clouds, and snow exhibit higher reflectance in the visible region, causing NDVI to assume negative values for these features. Bare soil and rocks, with similar reflectance in both visible and near-infrared regions, yield index values close to zero. NDVI values for vegetation typically range from 0.2 to 0.6, with higher values associated with greater green leaf area and biomass. The Shortwave Infrared (SWIR) band is sensitive to soil and crop canopy moisture. Early in the cropping season, when soil background dominates, SWIR is sensitive to top 12 cm soil moisture. As crop growth progresses, SWIR becomes sensitive to leaf moisture content, providing surface wetness information.

The Normalized Difference Wetness Index (NDWI), computed using SWIR data, complements NDVI for drought assessment, especially in the early cropping season. NDWI is derived as follows: $NDWI = (NIR - SWIR) / (NIR + SWIR)$, where NIR and SWIR represent reflected radiation in the Near-Infrared and Shortwave Infrared channels. Higher NDWI values indicate increased surface wetness.

For satellite-based crop condition anomalies indicating agricultural drought, the Vegetation Condition Index (VCI) of both NDVI and NDWI can be computed. When combining VCI values of NDVI and NDWI, the minimum of the two can be considered. For instance, if at least one is categorized as

severe, the overall category is considered severe. If at least one is moderate, the overall category is taken as moderate. The vegetation conditions and corresponding ranges are detailed in Table-7.

Table 7: Vegetation condition and range in percentage

VCI range (%)	Vegetation Condition	Description
60-100	Normal	Crop condition is Normal
40-60	Moderate	Crop condition is Moderate
0-40	Severe	Crop condition is Severe

Data Source: Drought Manual-2016

1.4.4.1 Kharif Crop Condition Assessment

Andhra Pradesh Space Applications Centre (APSAC) conducted a crop condition assessment in Prakasam district during Kharif 2022-23 utilizing MODIS (Moderate Resolution Imaging Spectroradiometer) satellite data. The assessment revealed that out of the total mandals in the district, 13 were categorized as having a normal crop condition, 07 were classified as moderate, and 18 were identified as severe. Notably, urban and forest cover mandals were excluded from the vegetation condition assessment. This comprehensive evaluation provides valuable insights into the agricultural landscape of Prakasam district, aiding in targeted interventions and resource allocation to mitigate the impacts of varying crop conditions.

1.4.4.2 Rabi Crop Condition Assessment

During Rabi 2022-23, The assessment identified 36 mandals with normal crop conditions, and 02 mandals categorized as moderate. Notably, mandals predominantly covered by urban or forest areas were excluded from the vegetation condition assessment. This evaluation provides valuable insights into the agricultural status of Prakasam district during the Rabi season, facilitating informed decision-making and resource allocation to support agricultural sustainability and productivity.

1.4.5 Soil Resources of the Prakasam District

In the Prakasam district of Andhra Pradesh, a variety of soil types are encountered, each influencing the agricultural productivity and land use patterns in the region. The predominant soil type is gravelly clayey shallow dark brown soils, covering 3131.6 sq. km (22.21%). This is closely followed by loamy to clayey skeletal deep reddish brown soils, which span 3105.96 sq. km (22.02%). Clayey to gravelly clayey moderately deep dark brown

soils cover 2230.23 sq. km (15.81%), while shallow gravelly red soils extend over 2065.72 sq. km (14.65%). Additionally, gravelly clayey moderately deep red soils are found over an area of 1264.18 sq. km (8.96%), and moderately deep calcareous black soils cover 942.88 sq. km (6.69%). Gravelly loamy dark brown moderately deep soils span 801.96 sq. km (5.69%), while gravelly loam to gravelly clayey shallow dark brown soils cover 269.84 sq. km (1.91%). Other notable soil types include loamy to gravelly clay deep dark reddish brown soils (90.54 sq. km, 0.64%), moderately deep black clayey soils (86.21 sq. km, 0.61%), and moderately deep calcareous moist clayey soils (50.98 sq. km, 0.36%). Shallow loamy to gravelly clay red soils cover 22.63 sq. km (0.16%), gravelly clayey moderately deep desert soils span 21.5 sq. km (0.15%), and deep black clayey soils are found over 18.07 sq. km (0.13%). The soil resource map of the district is shown in Figure-10 and the soil category with areas shown in Table-8.

Table 8: Soil classes in Prakasam district

S.No	Classification	Area in Sq.km	Percentage (%)
1	Clayey to gravelly clayey moderately deep dark brown soils	2230.23	15.81
2	Deep black clayey soils	18.07	0.13
3	Gravelly clayey moderately deep desert soils	21.5	0.15
4	Gravelly clayey moderately deep red soils	1264.18	8.96
5	Gravelly clayey shallow dark brown soils	3131.6	22.21
6	Gravelly loam to gravelly clayey shallow dark brown soils	269.84	1.91
7	Gravelly loamy dark brown moderately deep soils	801.96	5.69
8	Loamy to clayey skeletal deep reddish brown soils	3105.96	22.02
9	Loamy to gravelly clay deep dark reddish brown soils	90.54	0.64
10	Moderately deep black clayey soils	86.21	0.61
11	Moderately deep calcareous black soils	942.88	6.69
12	Moderately deep calcareous moist clayey soils	50.98	0.36
13	Shallow gravelly red soils	2065.72	14.65
14	Shallow loamy to gravelly clay red soils	22.63	0.16
	Total [#]	14102.3	100.00

[#]Excluding the Urban and Water bodies area

Data Source: APSAC, Vijayawada

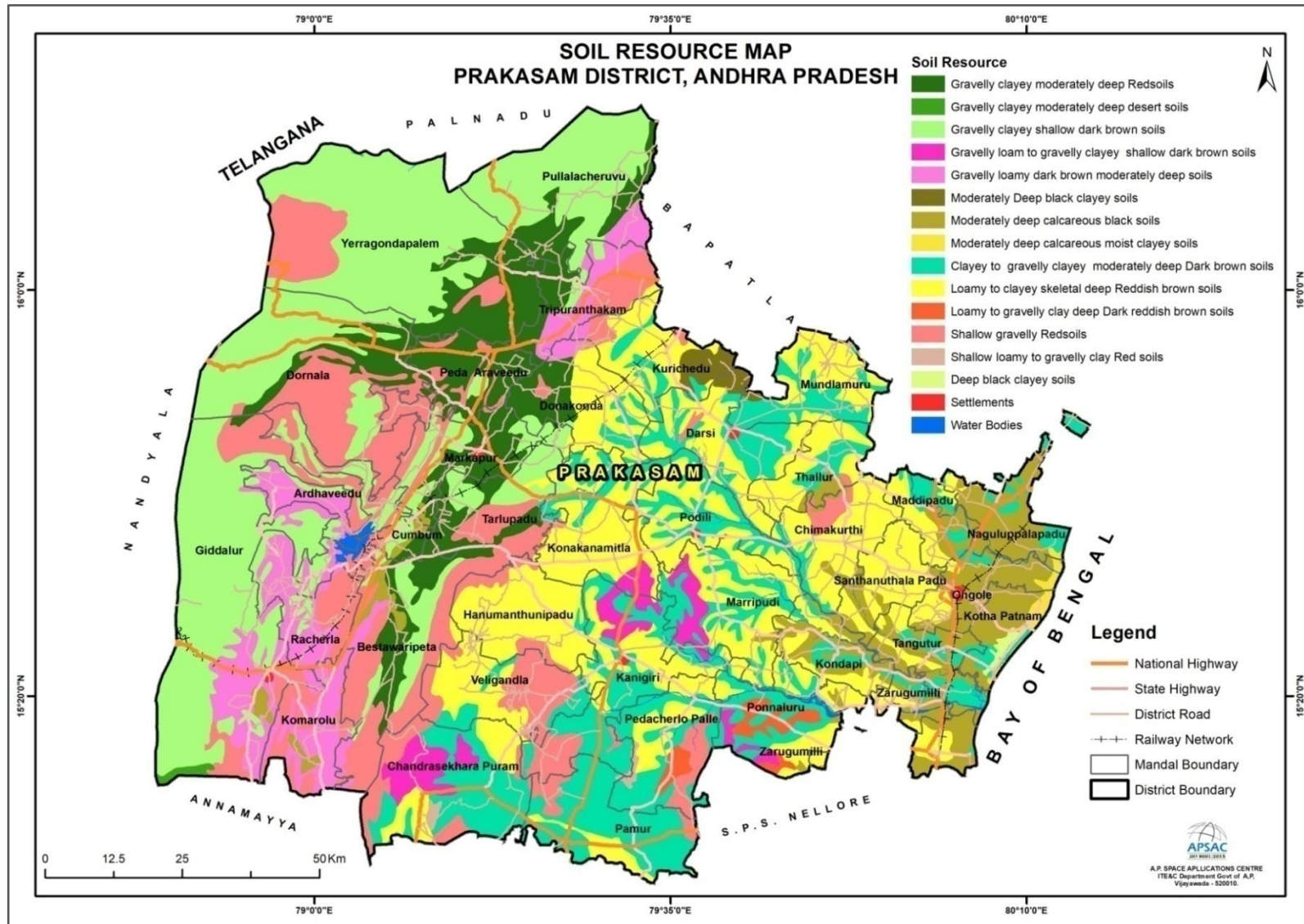


Figure-10: Soil resource map of Prakasam District

1.4.6 Horticulture

Horticulture is a science, as well as, an art of production, utilization and improvement of horticultural crops, such as fruits and vegetables, spices, ornamental, plantation, medicinal and aromatic plants. It also includes plant conservation, landscape restoration, landscape, garden design, construction, maintenance, arboriculture, ornamental trees and lawns.

In the Prakasam district, Sweet Orange is the major horticulture crop, cultivated in an area of 636.41 ha. followed by Acid Lime (206.19 ha.), Guava (77.51 ha.), Pomegranate (72.34 ha.), and Mangoes (54.95 ha.). The total area under horticulture crops is 1147.67ha. The horticulture crop-wise detail is shown in the Table-9.

Table 9: Area of horticultural crops in Prakasam district

S.No	Crop	Area in ha
1	Lime/Lemon/Citrus	37.43
2	Dragon Fruit	12.41
3	Papaya	8.92
4	Banana	13.96
5	Custard Apple	5.65
6	Sweet Orange	636.41
7	Sweet Lime	12.26
8	Strawberry	7.18
9	Ber	0.5
10	Mangoes	54.95
11	Guava	77.51
12	Pomegranate	72.34
13	Acid Lime	206.19
14	Coconut	0.8
15	Mulberry	1.16
	Total Area	1147.67

Source: Government of Andhra Pradesh Rashtriya Krishi Vikas Yojana-2022-23.

1.4.7 Salt-Affected Land

The term 'salt-affected soil/land' refers to soils in which salts interfere with normal plant growth. Salt-affected soils can be divided into saline, saline-sodic and sodic, depending on salt amounts, type of salts, the amount of sodium present, and soil alkalinity. (Reference FAO Soils Portal)

These lands contain an excessive concentration of salts (soluble salts or exchangeable saline or both). Salinization can result from improper management of canal irrigation water, resulting in the rise of the water table and consequent accumulation of salts in the root zone in arid, semi-arid, and sub-humid (dry) conditions and ingress of seawater in coastal regions and/or use of high salt containing groundwater. They also become saline when soils have developed salt-containing parent materials or have saline groundwater. Coastal saline soils may be with or without ingress or inundation by seawater. The salt-affected soil/ land area in the Prakasam district is 28,362 hectares. Figure-11 illustrates the spatial distribution of salt affected soil in Prakasam district.

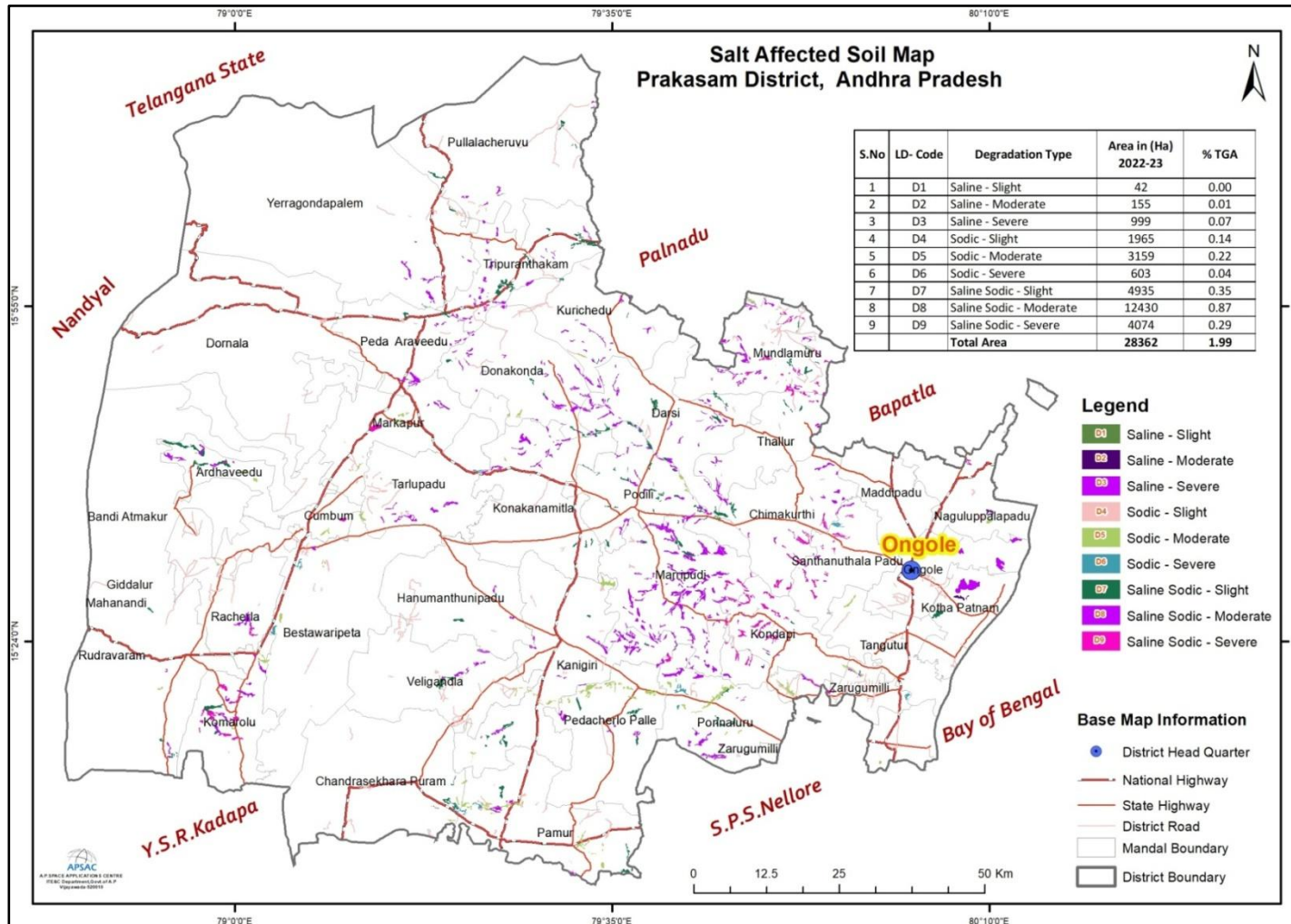


Figure-11: Salt affected soil map of Prakasam District

1.4.8 Shoreline Change Status of Prakasam District

The shoreline change estimation was conducted along the entire Prakasam coast, which spans approximately 48.85 km. In this study, shorelines were extracted from satellite images taken in 1989, 1999, 2005, 2010, and 2012 through visual interpretation. The coastline rate of change was calculated using the Digital Shoreline Analysis Software (DSAS) along with two different statistical techniques: End Point Rate (EPR) and Linear Regression Rate of Change (LLR). Baselines were established seaward and parallel to the general trend of the shorelines. Transects spaced 200m apart were utilized for DSAS analysis. Rates of shoreline change were computed at each transect using linear regression. The analysis revealed significant changes along the Prakasam Coast. Summary statistics for the rate of change are presented in Table-10, with a focus on shoreline erosion, which is a critical natural coastal risk particularly affecting coastal wetlands. The table summarizes rates of shoreline change as averages of all changes, including both erosion and accretion. Coastal land loss primarily stems from natural coastal system changes, as well as human activities such as agriculture, irrigation, reclamation, and fisheries (Figure-12).

Table 10: Shoreline Characteristics and statics for Prakasam Coast

Classification of Coast	Extent (km)	Percentage of Coast (%)	Cumulative (%)
Length of coastline Including River Mouth and Ports	48.85		
High Erosion	2.80	5.73	
Moderate Erosion	1.96	4.01	
Low Erosion	5.69	11.65	*21.39
Stable	19.88	40.70	40.70
Low Accretion	9.52	19.49	
Moderate Accretion	7.95	16.27	
High Accretion	1.05	2.15	§37.91
Number of port/Harbour	0	0.00	
Number of Breakwater / Groyne /Seawall	0	0.00	

Data Source: APSAC, Vijayawada.

* (Sum of High Erosion% + Sum of Medium Erosion%+ Sum of Low Erosion %)

§(Sum of High accretion% + Sum of Medium Accretion%+Sum of Low Accretion %)

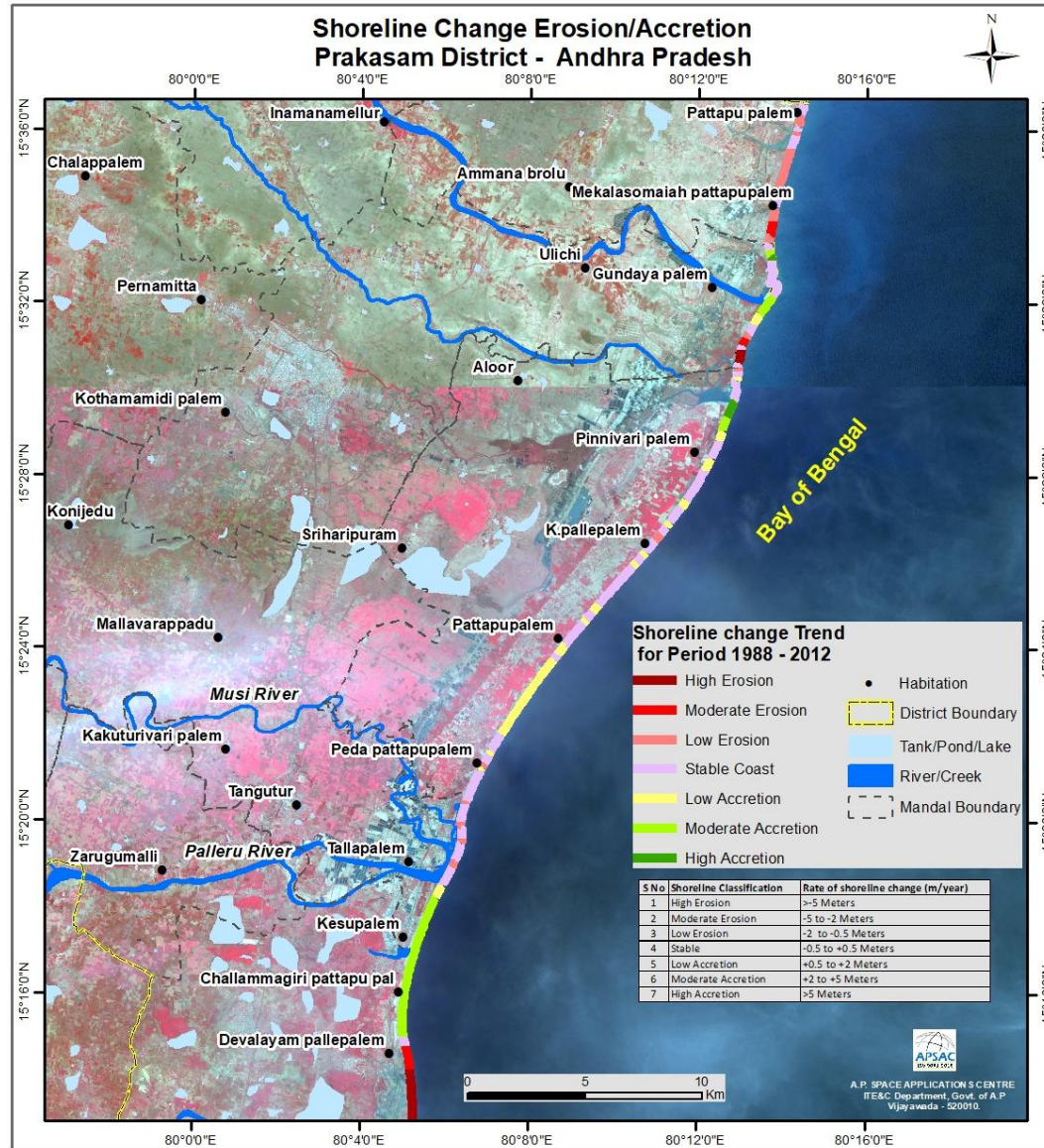


Figure-12: shoreline changes along the coastline of Prakasam district

1.5 Ground Water Prospects in the District:

The district is broadly divided into six zones based on hydrological characteristics. The western part falls into zone IV, characterized by quartzite, shale, and dolomite of the Cuddapah Super Group. The quartzite and sandstone of the Cuddapah Super Group exhibit a permeability of 0.01-15 m/day, with a specific yield ranging from 0.005 to 0.055 m/day and fairly good yield prospects of 25 m³/hr. Zone III encompasses the slate and phyllite of the Cumbum Formation and schists of the Dharwar Supergroup. These formations have very low permeability (0.01-10), low specific yield (0.005-0.025), and a yield prospect of 10 m³/hr. The central part, represented by granite gneiss, charnockite, and khondalite, is grouped into zones II and I. These formations exhibit low permeability, moderate yield prospects (15 m³/hr), and a specific yield ranging from 0.005 to 0.040 m/day. Of these, zone II demonstrates a better specific yield. The older alluvium and laterite grouped under zone V demonstrate high permeability (2.00 to 6.0 m/day), a high specific yield of 0.010-0.150 m/day, and good yield prospects of 25 m³/day. The recent alluvium, grouped under zone VI, is highly permeable (2.00-75 m/day) with a high specific yield of 0.050-0.200 m/day and very high yield prospects of 100 m³/hr. The Groundwater Prospects map of Prakasam District is shown in Figure-13.

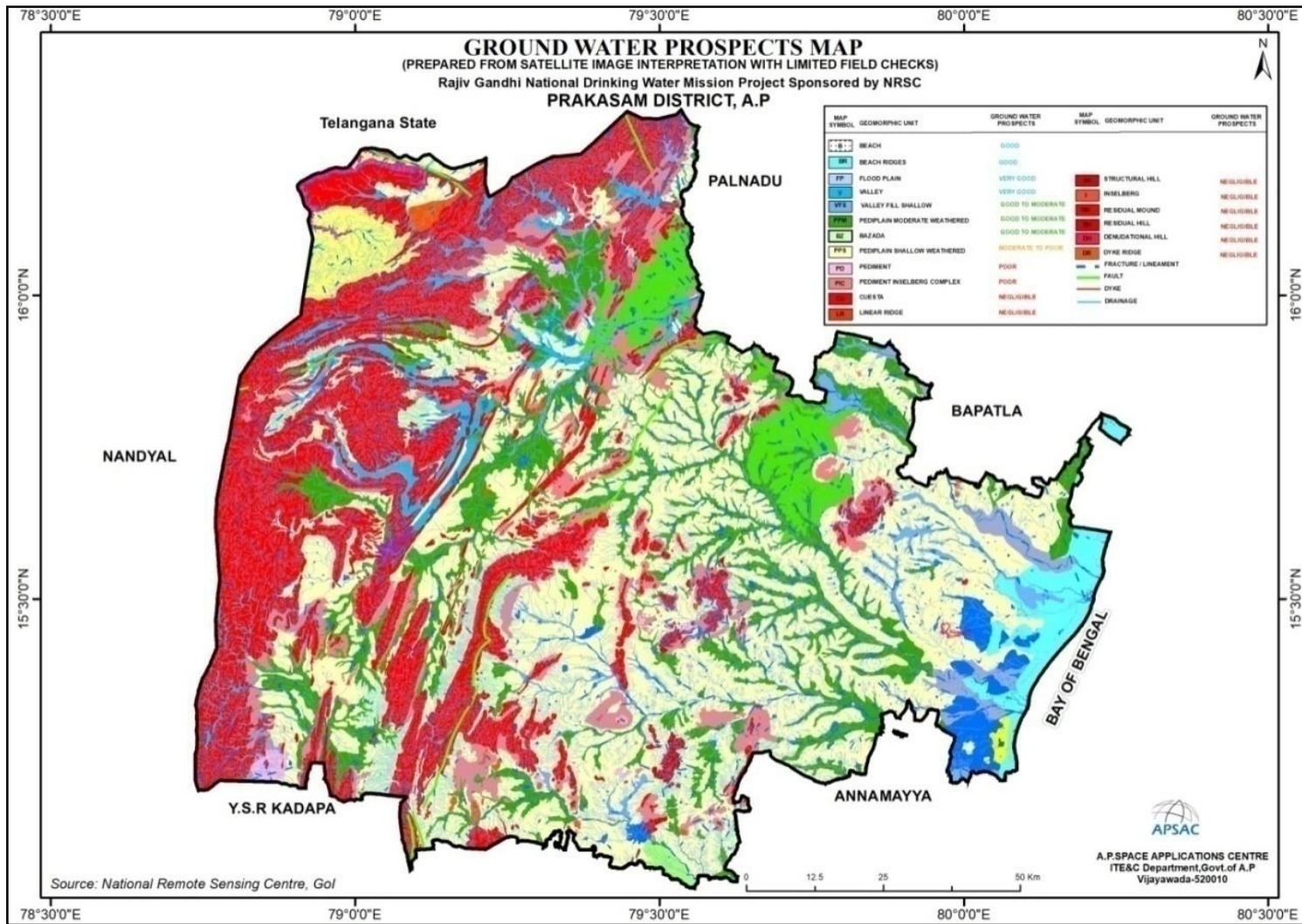


Figure-13: Ground Water prospects in Prakasam District, Andhra Pradesh

1.6 Infrastructure

1.6.1 Transport Network

Prakasam district has a well-connected by various modes of transportation such as road, rail and air. The connectivity of each category is also depicted in Figure-14. The details of each transport network distribution in the district is given below.

1.6.1.1. Road Transport : The road network of the district has been delineated by using high resolution satellite data under Space Based Information Support for Decentralized Planning (SIS-DP) project and arrived the lengths of the each type of road network. It can be observed that Prakasam district has a well-developed road network that facilitates connectivity to all towns within the district, and to other major cities and towns of nearby districts. The major road network includes National Highways (NH), State Highways (SH), and District Roads (DR). The rural areas of the district also good connectivity by Panchayat Raj roads / village roads.

The total length of the road network in the district is about 25,271.84 km of which, the length of the National Highways is about 522.52 km, State Highways is having a length of about 719.65 km connecting all major towns and cities in the district. The district roads are connecting all towns and mandals and having a length of 2440.12 km. The length of each road category covered in the district are shown in Table-11.

Table 11: Road Category wise Lengths

S.No	Road Type	Length in Km
1	National Highway	522.52
2	State Highway	719.65
3	District Road	2440.12
4	Village Road	10401.09
5	Cart Track	6852.17
6	Foot Path	4321.95
7	City Road	14.35
Total Length		25271.84

Data Source: R&B Department & APSAC, Vijayawada.

Prakasam district is traversed by Seven National Highways. The traverse and description of each highway is as given below:

1.National Highway 565(NH565):National Highway 565, is a National Highway in India, which was formed as a new National Highway by up-gradation and passes through the state of Andhra Pradesh. It starts at Nakrekal of Telangana and ends at Yerpedu of Andhra Pradesh. It starts at Nakrekal and passes through Nalgonda on the Nagarjuna Sagar road until Telangana border and enters in Palnadu district covers Prakasam, S.P.S.Nellore and Tirupati districts. It traverse through Prakasam district and passes through the mandals Yerragondapalem, Markapur, Konakanamitla, Kanigiri and Pamur before terminating at National Highway 71 at Yerpedu in Andhra Pradesh.

2.National Highway 544D (NH544D):It is a spur road of National Highway 44 and it traverses the state of Andhra Pradesh. It starts at Rayadurg mandal in Anantapuramu and ends at Guntur. The Highway passes through the districts Anantapuramu, Nandyal, Prakasam, Palnadu and Guntur districts. It traverse through Prakasam district passes through the mandals Giddalur, Bestawaripeta, Cumbum and Tripurantakam before terminating at Guntur in Andhra Pradesh.

3.National Highway 167B (NH167B):National Highway 167B is a spur road of National Highway 67 and traverses through the state of Andhra Pradesh. It starts at S.Mydukur in Y.S.R.Kadapa district and ends at Singarayakonda in Bapatla district. It traverse through Prakasam district and passes through the mandals Chandrashekarapuram, Pamur and terminates at Singarayakonda mandal in Bapatla District.

4.National Highway 16 (NH16): The NH16 is a major National Highway in India that runs along east coast of West Bengal, Odisha, Andhra Pradesh and Tamil Nadu states. The NH starts at Odisha border which passes through the coastal districts in Andhra Pradesh via Srikakulam, Vizianagaram, Visakhapatnam, Anakapalli, Kakinada, East Godavari, Eluru, Prakasam, Guntur, Palnadu, Bapatla, S.P.S. Nellore and Tirupati districts. It traverse through Prakasam district and passes through the mandals Maddipadu, Ongole, Tangutur and Singarayakonda which connects to Tamil Nadu Border at Tada in Tirupati District.

5.National Highway 340C (NH340C): National Highway 340C is a spur road of NH 40. It traverses the state of Andhra Pradesh. It starts at Kurnool and ends at Dornala in Prakasam district. It traverse through the mandals Kurnool, Nandikotkur, Atmakur and terminates at Dornalamandal, Prakasam District which connects NH544D.

6. National Highway 765 (NH765): National Highway 765 was formed as a new National Highway by up-gradation and passes through the states of Telangana and Andhra Pradesh. It starts at Hyderabad of Telangana and ends at Tokapalle road of Andhra Pradesh. It starts at the junction of Hyderabad in Telangana and passes through Kalwakurthy, Srisailam, Dornala and terminates at Tokapelle road in Prakasam District of Andhra Pradesh.

7.National Highway 216 (NH216): It is a National Highway in the Indian state of Andhra Pradesh. The former highways of NH 214 and 214A were merged and renumbered as NH 216. It starts from NH 16 junction at Kattipudi and passes through Kakinada, Amalapuram, Digamarru, Narasapuram, Machilipatnam, Repalle, Cherukupalle, Bapatla, Chirala, Naguluppalapadu before it junctions NH 16 again at Ongole, Prakasam district.

Some important State Highway segments are covered in the district are given below:

- Ongole – Nandyal Road (SH039)
- Ollapalem – Vemulapadu Road (SH035)
- Tangutur – Podili Road (SH037)
- Podili - Vinukonda road (SH042)
- P.A Padu – Kambaladinne Road (SH396)
- Kanigiri - Darsiguntapeta Road (SH307)
- Darsi - Chimakurthy (SH295)
- Cumbum – Giddalur Road (SH382)

1.6.1.2. Railways : The Indian Railway line traversing from various stations to cater the transportation needs of the people. The length of Rail network in the district is about 179.28 km covering 21 railway stations. Among these important Railway stations are Ammanabrolu, Cumbum, Duguvametta, Donakonda, Giddalur, Gudimetta, Kurichedu, Markapur, Ongole, Singarayakonda, Tanguturu, Tarlapadu; and the train stations are Gajjelakonda, Jaggambhotlantrpuram, Karavadi,

NtrmsettyPalle, Potlapadu, Raparla Halt, Somidevipalle, Surareddipalem and Yadavalli.

Prakasam district is traversed by a significant railway line that connects various parts of the district and provides connectivity to neighbouring regions. Howrah-Chennai Main Line which is a major trunk route that connects Howrah (Kolkata) in West Bengal to Chennai in Tamil Nadu and also facilitating passenger and freight transportation across the region. It passes through Prakasam district, serving important railway stations such as Ammanabrolu, Ongole, Tanguturu and Singarayakonda

In addition to the main line, there are various branch lines and spur lines namely Nallapadu–Nandyal branch line which connects Nallapadu of Nandyal district and Guntur districts, that extend from the main line to connect specific towns with in Prakasam district serving important railway stations such as Diguvametla, Giddalur, Gudimetta, Cumbum, Tarlupadu, Markapur and Kurichedu. These lines provide local connectivity and transportation services to different parts of the district.

1.6.1.3. Air Transport : Donakonda Airport is a small airport located in the Prakasam district of the Indian state of Andhra Pradesh. It is located at a distance of about 96km from the district headquarter Ongole. It was originally a World War II-era airfield and was later converted into a civilian airport. Donakonda Airport primarily serves as a domestic airport for regional flights within India. It is a defunct airstrip planned for redevelopment and is owned by the Airports Authority of India.

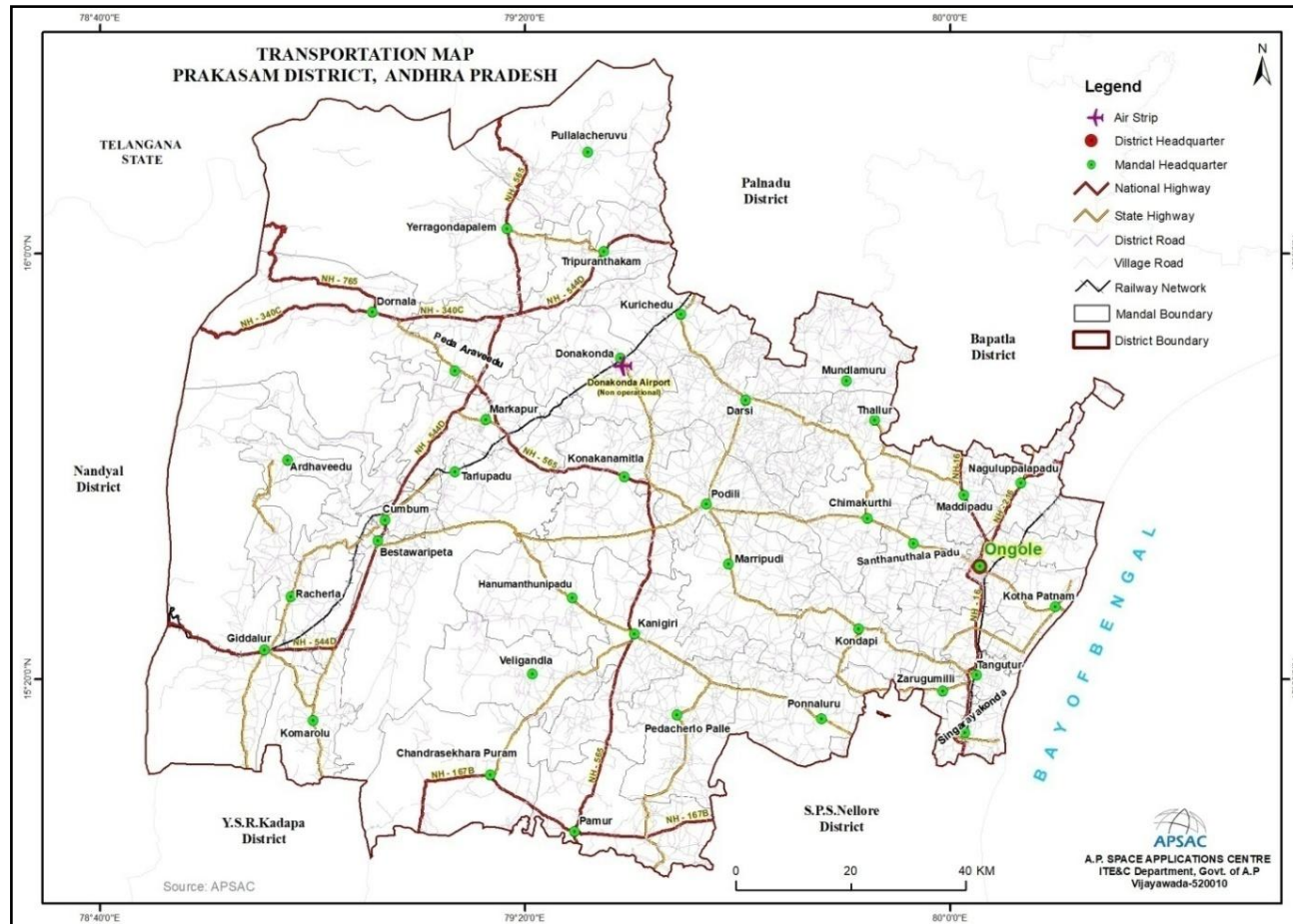


Figure-14: Transport Network of *Prakasam* District

1.6.2 Irrigation

Irrigation has assumed an increasing significance in agriculture in the context of new technology, where high yielding varieties and multiple cropping are being practiced. The main reasons for low yields are inadequate rainfall, uneven and uncertain rains during the period of crop growth. It is generally found that the introduction of irrigation is associated with changes in the cropping pattern. The shift from a traditional cropping pattern to the most advantageous cropping pattern is possible only in the presence of irrigation facilities. The new agricultural technology is highly based on sufficient moisture conditions. Thus, the development of irrigation is crucial for increasing agricultural production. The irrigation projects are classified as major, medium and minor irrigation details are shown in Table-12 and Figure-15.

1.6.2.1. Major Irrigation Projects:

In Prakasam district there are three major irrigation projects i.e., Poola Venkata Subbaiah Veligonda Project, Kandula Obula Reddy Gundlakamma Reservoir Project and Nagarjunasagar Jawahar Canal (NSRC). The Poola Venkata Subbaiah Veligonda Project an extent of 3,36,100 Ac ayacut, Nagarjunasagar Right Canal (NSRC-Ongole Branch) an extent of 2,59,873 Ac and Kandula Obula Reddy Gundlakamma Reservoir Project (Combined District) an extent of 80,060 Ac ayacut.

1.6.2.2. Medium Irrigation Projects:

In Prakasam district there are five medium irrigation projects i.e., Paleru Bitragunta Anicut, Sri Pothula Chenchiah Paleru Reservoir, Cumbum Tank, Mopagu Reservoir Project (Combined District) and YCR Korisapadu LIS.

There are 194 minor lift irrigation schemes in the district under Andhra Pradesh State Irrigation Development Corporation Limited (APSIDC), covered an ayacut of 43,641 Ac. And also 798 Nos of minor irrigation tanks covered in the district (MI and PR Tanks) an extent of 1,06,318 Ac ayacut.

Table 12: Major and Medium Irrigation Projects in Prakasam District

S.No	Project Type	Name of the Project	Status	Ayacut in Ac
1	Major	Nagarjunasagar Jawahar Canal (NSRC)	Completed	2,59,873
2		MSR Ramatheertham Balancing Reservoir (<i>Stabilisation of NSRC ayacut -</i>		-

		72,824 Ac)		
3		Poola Venkata SubbaiahVeligonda Project	Ongoing	3,36,100
4		KandulaObula Reddy Gundlakamma Reservoir Project (Combined District)		80,060
5	Medium	PaleruBitragunta Anicut (PB-Anicut)	Completed	7,318
6		Mopagu Reservoir Project		8,154
7		Cumbum Tank		6,944
8		Sri PothulaChenchaiahPaleru Reservoir	Ongoing	9,500
9		YCR Korisapadu LIS		6,000
10	Minor	Minor Lift Irrigation Schemes under APSIDC (194Nos)	Ongoing	43,641
11		Minor Irrigation Tanks - 798Nos (MI above 100Ac & PR bellow 100Ac of ayacut tanks)	Completed	1,06,318
			Total	8,63,908

Data source: WRD, APWRIMS, Govt. of A.P.

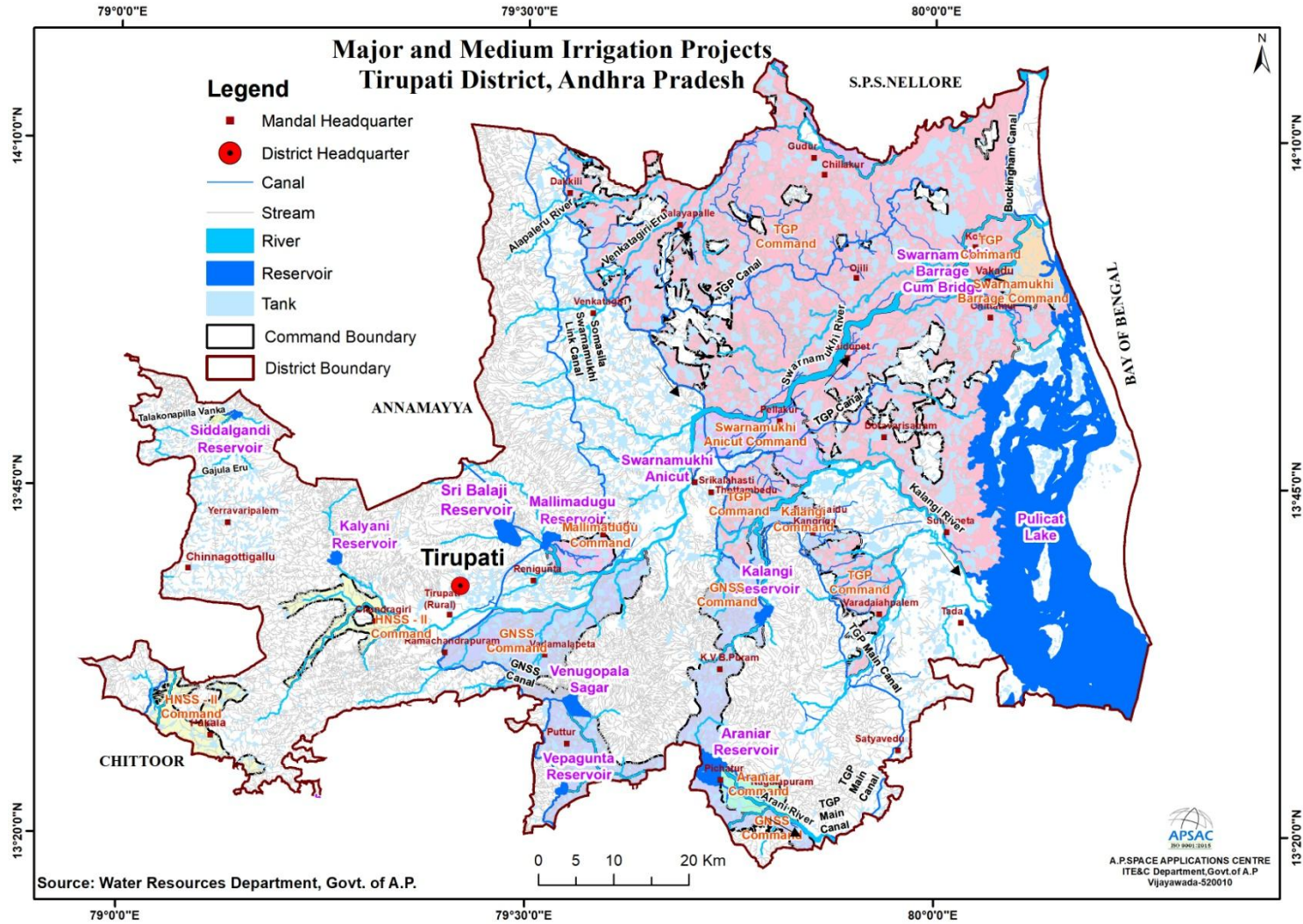


Figure-15: Major and Medium Irrigation Projects of Prakasam District

1.6.2.3. Tank Information System

As per the information of Water Resources Departmental portal, Andhra Pradesh Water Resources Information & Management System (APWRIMS) and the URL: <https://apwrims.ap.gov.in/> in Prakasam district has 739 minor irrigation tanks. The Designed Storage Capacity of minor irrigation tanks in Prakasam district is 14,023.38 mcft and Current Storage Capacity is 4,313.99 mcft. The mandal wise minor irrigation tanks details of Prakasam district are shown in Table-13.

Table 13: Mandal wise Minor Irrigation Tanks details of Prakasam district

S.No	Mandal	No.of MI Tanks	Designed Storage Capacity (mcft)	Current Storage Capacity (mcft)
1	ARDHAVEEDU	37	347.6	17.65
2	BESTAVARIPETA	29	383.65	84.54
3	CHADRASEKARAPURAM	34	373.07	193.49
4	CHIMAKURTHI	14	174.92	124.41
5	CUMBUM	4	119.4	8.81
6	DARSI	22	162.84	93.43
7	DONAKONDA	46	325.37	123.41
8	DORNALA	18	1,986.31	38.19
9	GIDDALURU	26	338.91	0
10	HANUMANTHUNIPADU	10	527.36	292.63
11	KANIGIRI	30	465.81	281.99
12	KOMAROLU	32	268.51	18.02
13	KONAKANAMITLA	27	348.11	83.1
14	KONDAPI	11	131.92	90.67
15	KOTHAPATNAM	4	146.61	102.13
16	KURICHEDU	31	182.56	94.94
17	MARKAPUR	28	828.83	272.7
18	MARRIPUDI	33	1,889.42	500.48
19	MUNDLAMURU	20	180.66	93.68
20	NAGULUPPALAPADU	4	54.17	54.17
21	ONGOLE	2	29.27	20.42
22	PAMUR	14	308.34	152.25
23	PEDAARAVEEDU	19	161.98	2.82
24	PEDACHERLOPALLE	23	281.23	148.72
25	PODILI	22	915.02	195.98

26	PONNALURU	18	281.83	151.28
27	PULLALACHERUVU	33	571.08	170.11
28	RACHERLA	27	195	6.18
29	SANTHANUTHLAPADU	9	55.51	55.51
30	SINGARAYAKONDA	10	116.63	93.83
31	TANGUTUR	4	287.21	278.17
32	TARLAPADU	25	104.39	0.29
33	THALLUR	7	71.91	54.55
34	TRIPURANTHAKAM	17	312.63	99.53
35	VELIGANDLA	21	486.77	292.45
36	YERRAGONDAPALEM	24	563.71	0
37	ZARUGUMILLI	4	44.85	23.48
TOTAL		739	14,023.38	4,313.99

Data source: WRD, APWRIMS, Govt. of A.P.

1.6.3 Eco-sensitive areas and Important places

Prakasam district is blessed with several tourist attractions that offer a mix of historical, cultural, and natural wonders. The important popular tourist, religious and cultural places to visit in the Prakasam district are shown in the Table-14 and the geographical location of each place is depicted in Figure-16.

Table 14: Important places of Tourism in Prakasam district

S.No	Name	Village	Mandal
1	ChadalavadaRaghunayaka Swamy	Chadalawada	Naguluppalapadu
2	GundlakammaReservior	Annangi	Maddipadu
3	JMB Church	Ongole (M)	Ongole
4	Kasi Visweswarayalaam	Ongole (M)	Ongole
5	Kotapatnam Beach	AlluruKothaPatnam	KothaPatnam
6	Mopadu Reservoir	Inimerla	Pamur
7	Nallamala Forest	Forest	Yerragondapalem
8	Narasimha Swamy Temple	Singarayakonda	Singarayakonda
9	Narayana Swamy Temple	KovilamPadu	Chandrasekhara Puram
10	Pakala Beach	Pakala	Singarayakonda
11	RangarayuduCheruvu	Ongole (M)	Ongole
12	Saibaba Temple	Ongole (M)	Ongole
13	Sri Bala Tripura SundariTripurathekesvara	Tripuranthakam	Tripuranthakam

	Temple		
14	Sri Chennakesava Swamy Temple	Markapur (M)	Markapur
15	SrigiriVenkateswara Swamy	Ongole (M)	Ongole

Data Source: Tourism Department, Government of Andhra Pradesh.

A brief description of certain tourist places is given below:

1.6.3.1. Gundlakamma Reservoir: Gundlakamma Reservoir is located at a distance of about 26 km from the district headquarter Ongole. The primary purpose of the Gundlakamma Reservoir is to store and manage water for various uses, including irrigation, drinking water supply, and industrial purposes. It is a seasonal waterway that flows through the east-central part of the state of Andhra Pradesh. It arises in the Nallamala Hills, an offshoot of the Eastern Ghats. Numerous mountain streams join it as it descends down the thickly forested hills through a series of curves and tight bends.

(Ref: <https://prakasam.ap.gov.in/tourist-places/>)

1.6.3.2. Kothapatnam Beach: Kothapatnam Beach is located at about 17 km from the district headquarter Ongole. It is one amongst the top attractions in Ongole. The beach is a great source of entertainment for local people and tourists. The clear blue waters of the sea, the long stretches of sand and the gentle breeze mesmerize. Boating is available here.

1.6.3.3. Mopadu Reservoir: Mopadu Reservoir is located at a distance of about 54 km from the district headquarter Ongole. It is a medium-sized project. Mopadu Reservoir is situated nearby to the town Pamuru mandal. It was built by Britishers. The reservoir's breathtaking sight coupled with the flora and fauna surrounding the waters is a huge attraction for tourists.

1.6.3.4. Nallamala Forest: Nallamala Forest is located at a distance of about 180 km from the district headquarter Ongole. Nallamala Forest is one of the largest undisturbed stretches of forest in South India. It is located in the Nallamala Hill which is a part of the Eastern Ghats. The forest has a good tiger population, and a part of the forest belongs to the Nagarjunsagar-Srisailem Tiger Reserve. One can often see leopards in these forests.

1.6.3.5. Pakala Beach: Pakala Beach is located at about 39 km from the district headquarter Ongole. Pakala is a village located in Singarayakonda Mandal, Prakasam district. Pakala Beach offers a scenic coastline, serene surroundings, and is a popular destination for both tourists and locals. Visitors can enjoy the sun, sand, and sea at this beach, making it a great place for relaxation and leisure.

1.6.3.6. RangarayuduCheruvu:RangarayuduCheruvu park is located at about 1.7 km from the district headquarter Ongole. This route has an elevation gain of about 105 ft. It is Well maintained and looks like clean and green. People coming here for walking purpose and gets fresh air in the early mornings. There is a lake inside the park.

1.6.4 Places of Religious and Cultural importance

1.6.4.1. Sri Chennakesava Swamy Temple: Sri Chennakesava Swamy Temple is located at a distance of about 850 metres from the district headquarter Ongole. This temple is dedicated to Lord Chennakesava Swamy, who is an incarnation of Lord Vishnu. The temple is known for its beautiful architecture and is an important religious and cultural site in the region. Sri Chennakesava Swamy Temple include its intricate carvings and sculptures, which are typical of South Indian temple architecture. Devotees visit the temple to offer prayers, seek blessings, and participate in various religious rituals and festivals.

1.6.4.2. Saibaba Temple: Saibaba Temple is located at a distance of about 1.7 km from the district headquarter Ongole. Sai Baba is known for his teachings on love, tolerance, and the unity of all religions. Devotees visit the temple to offer prayers, seek blessings, and participate in various religious and charitable activities associated with Sai Baba's teachings.

1.6.4.3. Narayana Swamy Temple:Narayana Swamy Temple is located at a distance of about 51 km from the district headquarter Ongole. 'Sri MittapalemNarayanaSwami' the Indian Nostradamus Saint, a Hindu mystic, from Mittapalem Village, Prakasam district. He was a man with extraordinary intelligence and a spiritual bent of mind. Considered a God-man by many people who witnessed his divinity. He is one of the Hindu saints who had disciples from other castes than Hindu.

1.6.4.4. Narasimha Swamy Temple: Narasimha Swamy Temple is located at a distance of about 350 metres from the district headquarter Ongole. It is also called by DakshinaSimhachalam. It is believed that Sage Narada did penance for Lord Narasimha who appeared before him in Varaha Narasimha Avatar.

1.6.4.5. Kasi Visweswarayalaam: Kasi Visweswarayalaam is located at a distance of about 850 metres from the district headquarter Ongole. The Temple is one of the important shrines in Ongole. The presiding deity is Lord Shiva. Addala Mandapam, the hall of mirrors forms the chief attraction here.

1.6.4.6. Sri ChadalawadaRaghunayaka Swamy Temple: Sri ChadalawadaRaghunayaka Swamy Temple is located at a distance of about 15 km from the district headquarter Ongole. It is situated in Naguluppalapadu Mandal, Prakasam District. It is on the banks of Gundlakamma River. At the day of Sriramanavamikalyanotsavam an eagle will round the temple.

1.6.4.7. SrigriviVenkateswara Swamy Temple: SrigriviVenkateswara Swamy temple is located at a distance of about 1.3 km from the district headquarter Ongole. It is one of the famous temples dedicated to Lord Venkateswara Swamy in Andhra Pradesh. It is Well maintained and peaceful temple on the hill top. It have immense pleasure to look the temple and at the main deity. It is constructed with great idea of balanced plan to accommodate the sanctum sanctorum of Lord Sri Venkateswara as a replica of Tirumala idol. The statue of the Lord gives a great feeling that Lord at Tirumala on first sight. Opposite to this Garuda temple is seen as a peculiar one.

1.6.4.8. Sri Bala Tripura Sundari Temple: Sri Bala Tripura Sundari Temple is located at about 10 km from the district headquarter Ongole. It is one of the famous and historical town located at a Prakasam district. Sri balatripurasundari devi temple has old history and the real idol of balatripurasundari devi in temple. It is difficult to saw the idol because it is very terrible. The locations of town is very nice. NSP canal is main benefit of this town.

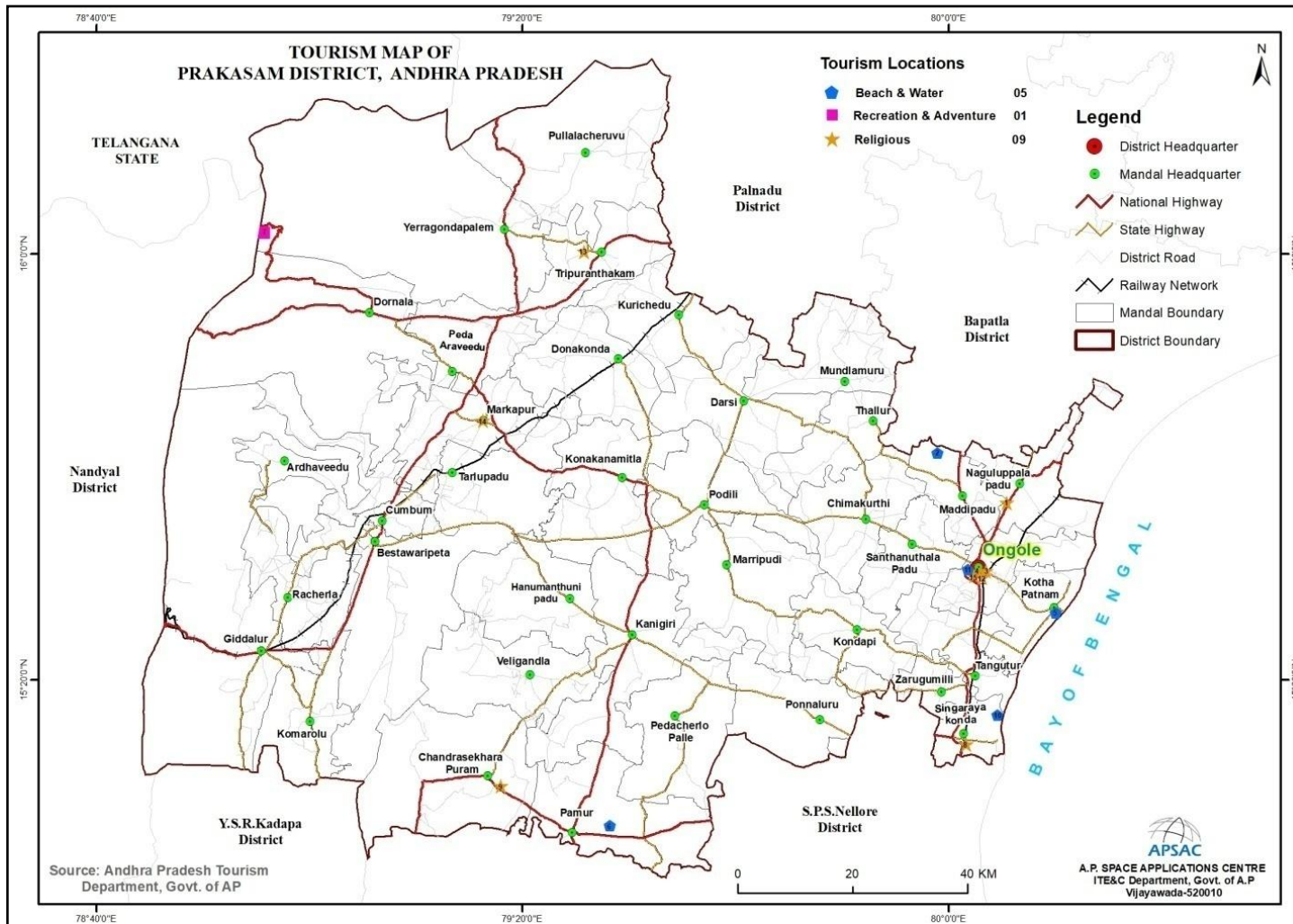


Figure: 16 Tourism Map of Prakasam district, Andhra Pradesh

1.7 Drainage Pattern

1.7.1 Drainage

Gundlakamma, Musi, Maneru, Paleru are the major rivers flowing in the district. The Gundlakamma river rises near Gundla Konda in Nandyal district at an elevation of 971 m from the Eastern slopes of the Nallamala hills and flows in a southeast direction for a total length of 200 km to join the Bay of Bengal at Devarampadu in Prakasam district.

The Prakasam river enters North-west part of the district near Srisailam and leaves the district near Allatam village, Markapuram mandal. The PoolaSubbaiahVeligonda ongoing major irrigation command is covered with western part of the district and source of the water from Prakasam river at foreshore area of Srisailam Dam.

The Maneru rivers, Paleru River are the life-giving sources of this district for drinking water and irrigation purposes. Veligonda, Gundlakamma, Cumbum, and Mopadu reservoirs are built for irrigation and drinking purposes on the major rivers in the district. There are also other minor rivers like the MudigandiEru and Sagileru that flow in limited parts of the district.

The district is bounded on the north by Palnadu and Bapatla districts, on the west by Nandyal district, on the south by SPSR Nellore and YSR Kadapa Districts, on the east by Bay of Bengal. Figure-17 Illustrates the drainage system and the surface water bodies.

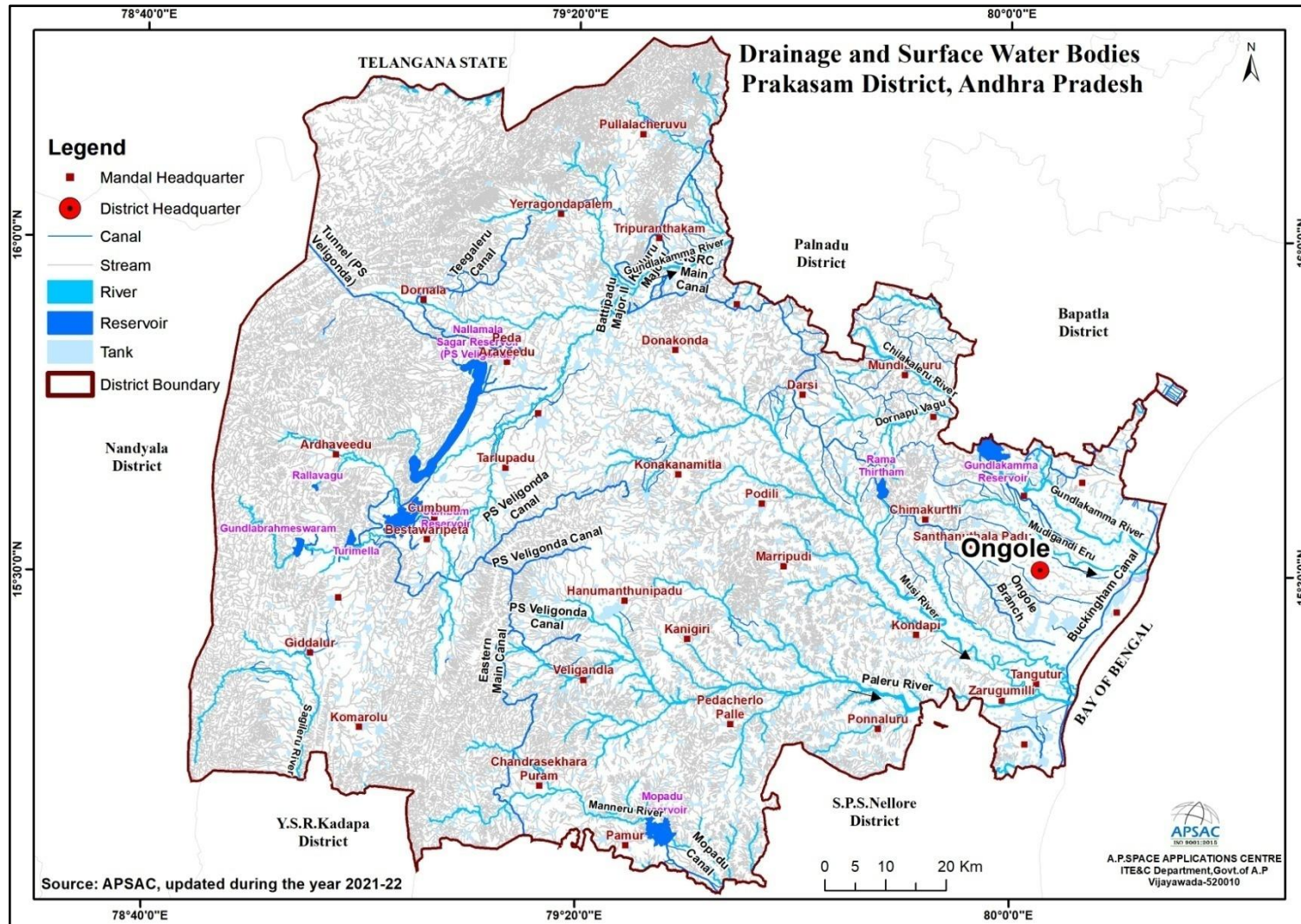


Figure - 17: Drainage Network and Surface Water Bodies of the Prakasam District

1.7.2 Geomorphology of the District:

Using IRS satellite data and GIS, a detailed geological, geomorphological, and structural map of Prakasam District was generated according to the guidelines of the Rajiv Gandhi National Drinking Water Mission (RGNDWM) at a scale of 1:50,000. The objective of this endeavor is to map the lithology, geomorphology, and structural characteristics of the area at a scale of 1:50,000, and to integrate this information to identify potential groundwater prospect zones and recommend suitable structures for groundwater recharge. Various hydrogeomorphic units are delineated, and suitable recharge structures are proposed for villages affected by drinking water scarcity under this project. The Geomorphology map of Prakasam District is depicted in Figure-18.

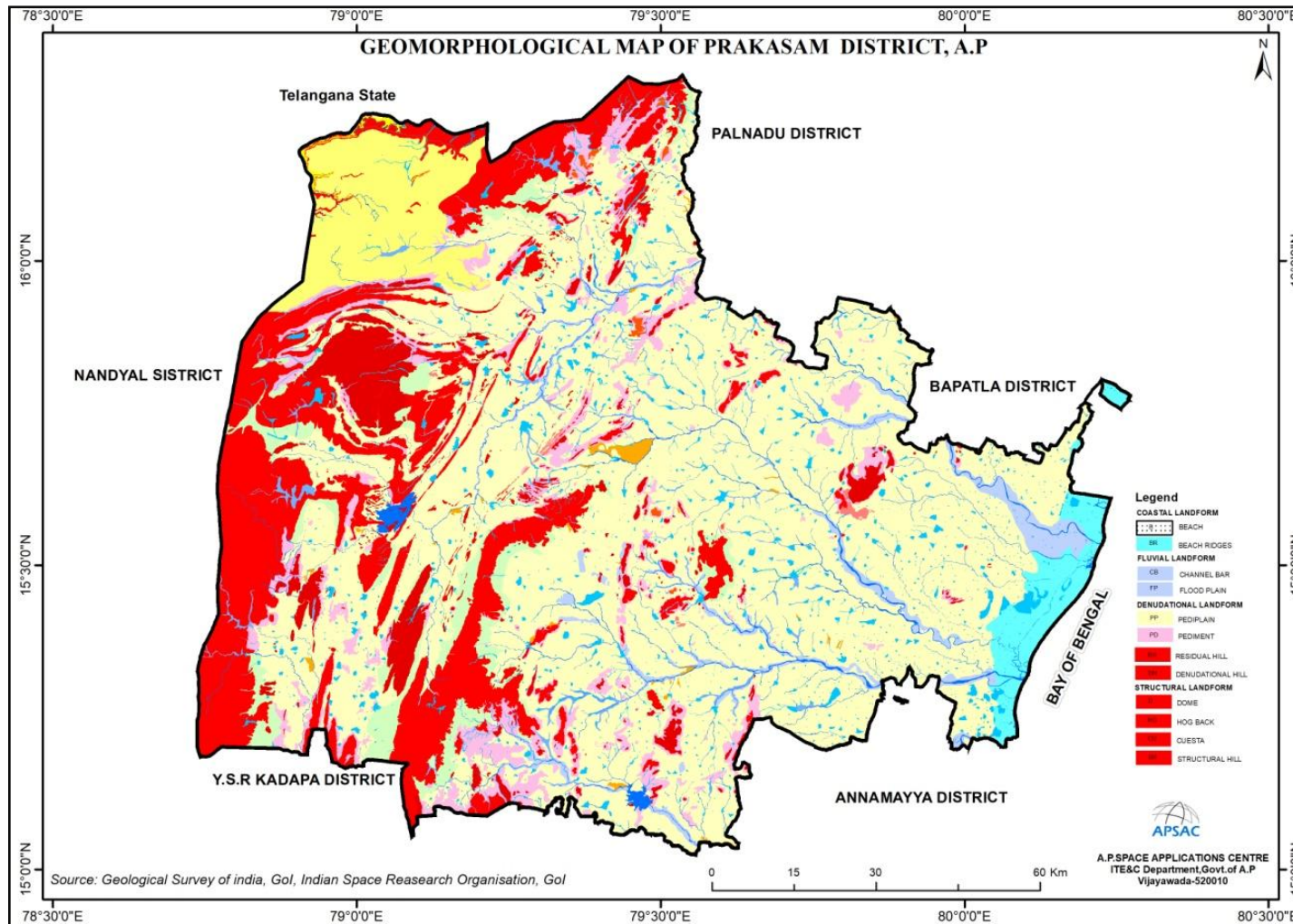


Figure 18: Geomorphology of Prakasam District, Andhra Pradesh

1.7.3 Landforms of Fluvial origin

The term 'fluvial' is used in Earth science to refer to processes and landforms created by the flow of water. Like other surface processes, running water can either erode material from the Earth's landscape or deposit layers of sediment. The resulting landforms can be classified as either erosional or depositional. The incredible power of running water in shaping various erosional and depositional landforms is well known. Although the quantity of water in a stream may be small at certain times of the year, very large volumes move through the channel, forming an important component of the hydrological cycle. Fluvial dissection of the landscape consists of valleys and their associated channel ways, organized into a drainage network. These networks exhibit various types of quantitative regularity that are useful for analyzing both fluvial systems and the terrains they dissect (NRSA, 2007).

1.7.3.1. Alluvial plain: A level or gently sloping tract, or slightly undulating land surface, formed by extensive deposition of alluvium, typically adjacent to a river that periodically overflows its banks. It may be situated on a floodplain, delta, or alluvial fan. This landform is predominantly observed in the district.

1.7.3.2. Palaeochannel: Deep valleys cut into the bedrock terrain, now largely filled with alluvium, glacial outwash gravels and sands, or tills. These serve as a significant source of underground water.

1.7.3.3. Floodplain: The surface or strip of relatively smooth land adjacent to a river channel, constructed or in the process of construction by the present river's existing regimen. It becomes submerged during times of high water when the river overflows its banks. The floodplain is built of alluvium carried by the river during floods and deposited in the slow-moving water beyond the influence of the swiftest current.

1.7.3.4. Point bar: These are the deposits found inside the meander bend in the concave curvature zones

1.7.4 Landforms of Coastal Origin

Coasts serve as the stage for a unique array of erosional and depositional processes, predominantly shaped by ocean waves. Wave action generates some of the world's most spectacular erosional landforms, while areas

with reduced wave energy give rise to depositional features like beaches. The primary source of energy driving coastal erosion and sediment transport is wave action. Waves possess both potential energy, derived from their position above the wave trough, and kinetic energy from water motion within the wave. This energy is generated by wind friction over the ocean surface, with higher wind speeds and longer fetches producing larger waves with greater energy. Long swells, traveling vast distances, can have wave periods of up to 20 seconds, distinguishing them from shorter, locally generated sea waves upon reaching the coast.

As waves encounter shallower water, their motion becomes increasingly influenced by the ocean floor. The wave height rapidly increases and the wavelength decreases as ocean depth decreases, culminating in the wave breaking as it approaches the shore. When waves break, their potential energy is converted into kinetic energy, driving significant shoreline processes. Transportation of eroded rock particles across a coastline relies on waves and currents, with wave refraction playing a key role. The lateral movement of beach material, known as beach drift, occurs due to the oblique angle of wave action.

In addition to beach drift, longshore currents and tidal currents contribute to sediment transport and deposition along coasts. Longshore drift, propelled by lateral movement of water, operates offshore, distinct from beach drift which operates on land at the beach. The combined movement of sediment via longshore drift and beach drift is termed littoral drift. Tidal currents, alternating in direction with incoming and outgoing tides, also play a role in sediment transport, resulting in a net one-way transport of sediment.

The interplay of longshore drift, longshore currents, and tidal currents dictates the overall direction of sediment transport and areas of deposition along coastlines. Utilizing multi-temporal satellite data can provide valuable insights into the dynamic nature of coastal processes (NRSA, 2007).

1.7.4.1. Beach: A gently sloping zone, typically with a concave profile, consisting of unconsolidated material that extends landward from the low-water line to the point where there is a distinct change in material or physiographic form, such as a cliff, or to the line of permanent vegetation, usually marking the effective limit of the highest storm waves.

1.7.4.2. Beach ridge: A low, essentially continuous mound of beach or beach and dune material (such as sand, gravel, or shingle) formed by the action of waves and currents on the backshore of a beach, beyond the current limit of storm waves or ordinary tides. Beach ridges occur singly or as part of a series of approximately parallel deposits, roughly aligned with the shoreline, representing successive positions of an advancing shoreline.

1.7.4.3. Coastal plain: A low, generally broad but sometimes narrow plain that borders a large body of water, especially the ocean. The strata of the coastal plain are typically horizontal or very gently sloping towards the water. Coastal plains usually represent recently emerged sea floor or continental shelf.

1.7.4.4. Dune and Swale complex: A large complex consisting of parallel wetland swales and upland beach ridges (dunes) found in coastal embayments and on large sand spits along the shorelines of the Great Lakes. The upland dune ridges are typically forested, while the low swales support various herbaceous or forested wetland types, with open wetlands more common near the shoreline and forested wetlands more prevalent further from the lake.

1.7.4.5. Tidal flat: An extensive, nearly horizontal, marshy or barren tract of land that is alternately covered and uncovered by the rise and fall of the tide. Tidal flats consist mainly of unconsolidated sediment, primarily mud and sand, and may form the upper surface of a deltaic deposit.

1.7.4.6. Tidal creek network: A network of natural watercourses smaller than a river but larger than a brook, formed within tidal flats and marshes.

1.7.5 Landforms of Structural Origin

Landforms of structural origin are closely linked to the geological structure of the area. These landforms predominantly emerge from the underlying geological framework. Structural elements play a pivotal role in weakening rock resistance, giving rise to a diverse array of geomorphic features. These variations span from minor to large-scale formations, with the latter exerting significant influence on landform development. Mapping such extensive features indirectly unveils the structural configuration of the region. Major structural aspects such as faults and

folds, depending on their nature, profoundly shape the creation of structural landforms. The impact of geological structures on landscape evolution and appearance is substantial, ranging from vast features molding entire landscapes to smaller ones affecting individual landforms and the geomorphic processes they undergo. Structural influence can be attributed to active features whose form directly shapes the contemporary landscape, or ancient structural components whose effect on modern landscapes primarily stems from differential erosion (NRSA, 2007).

1.7.5.1. Structural Hills: Hills and valleys originating from tectonic processes and highly dissected by drainage lines. They can be further classified as highly, moderately, or lowly dissected depending on the density of joints and drainage. Interpretation is typically conducted using planimetric satellite data, and the classification is subjective.

1.7.5.2. Intermontane Valley: A relatively large, elongated, gently sloping depression situated between two mountains or ranges of hills, often containing a stream with an outlet. It is usually formed by stream erosion but may also result from faulting.

1.7.5.3. Dome: A general term for any dome-shaped landform or rock mass, resembling the rounded shape of a building's dome.

1.7.5.4. Hogback: A long, narrow ridge or series of hills, structurally controlled by the presence of homoclinal sedimentary strata dipping steeply (> 500). Hogbacks develop best in sediments with hard and soft layers of marked contrast. Due to their steep dips, hogbacks remain relatively fixed in the landscape and do not retreat like Cuestas.

1.7.5.5. Cuesta: A hill or ridge with a gentle slope on one side and a steep slope on the other. Specifically, an asymmetric ridge with one face (dip slope) long and gentle, conforming to the dip of the resistant bed or beds forming it, and the opposite face (scarp slope) steep or even cliff-like, formed by the outcrop of the resistant rocks. The formation of the ridge is controlled by the differential erosion of gently inclined strata.

1.7.6 Landforms of Denudational Origin

Landforms of denudational origin are shaped where the denudation process predominates over others. These landforms typically result from the combined effects of mechanical and chemical weathering. Denudation

involves the removal of material by erosion and weathering, directly influencing the relief of an area and often reducing it to base level. The primary agents of denudation include water, ice, and wind, with major factors affecting it being geology, climate, tectonics, and anthropogenic effects.

All rocks and minerals at or near the surface are subject to physical and chemical processes. The effects of these processes vary due to rocks' differing resistance to change. Consequently, weathering and erosion produce various landforms with typical shapes and forms. Weathering is an integral part of the rock cycle, where parent material or rock undergoes disaggregation to form smaller fragments, with some minerals dissolved and removed by water. This removal of material, known as erosion, is accomplished by running water, wind, glaciers, etc. Weathering provides raw material for sedimentary rock and soil formation (NRSA, 2007). Specific denudational landforms include:

1.7.6.1. Denudational Hill: A highly dissected hill resulting from the predominant action of denudation, which has obliterated the original structures.

1.7.6.2. Residual Hill: A small remnant hill that has undergone various forms of denudation over time.

1.7.6.3. Inselberg: A prominent, isolated, steep-sided residual knob, hill, or small mountain of circumdenudation, rising abruptly and surrounded by an extensive, nearly level, lowland erosion surface in hot, dry regions (such as the deserts of southern Africa or Arabia). Typically bare and rocky, though partially buried by debris derived from its own slopes, it is characteristic of arid or semiarid landscapes in a late stage of the erosion cycle.

1.7.6.4. Pediment: A broad, flat or gently sloping erosion surface or plain of low relief, typically formed by subaerial agents (including running water) in arid or semiarid regions. Located at the base of an abrupt, receding mountain front or plateau escarpment, it is underlain by bedrock (occasionally by older alluvial deposits) and may be bare or partly covered by a discontinuous veneer of alluvium from upland masses.

1.7.6.5. Pediment-Inselberg Complex: Pediments dotted with numerous small inselbergs, making it difficult to distinguish from the

pediments alone. Hence, it is referred to as a complex of pediments and inselbergs.

1.7.6.6. Colluvial Fan: If the fan material consists of an accumulation of heterogeneous material at the lower part of slopes, mostly transported by gravity.

1.7.6.7. Pediplain: An extensive, multi-concave erosion surface formed by the coalescence of two or more adjacent pediments and occasional desert domes. It represents the end result (the 'peneplain') of the mature stage of the erosion cycle. Further classified based on the thickness of weathering into shallow, moderate, and deep pediplains

1.7.7 Structural Features of Prakasam District

Prakasam District is characterized by consolidated formations, which include crystalline rocks such as Khondalites, Charnockites, and granitic gneisses, as well as meta-sediments like dolomites, shales, phyllites, and quartzites. These formations date back to the Archaean and Pre-Cambrian periods, respectively.

The Khondalite Group of rocks forms prominent hill ranges known as strike ridges, situated south of Vijayawada and extending towards the north and northeast. These rocks, along with those of the Charnockite groups and layered complexes, predominantly exhibit foliation trending N-S, with local variations towards NE-SW and NW-SE (GSI, 2000).

Semi-consolidated formations in the district are represented by Tertiary formations, including Rajahmundry and Gollapalli sandstones, while unconsolidated formations consist of deltaic alluvial deposits from the Quaternary period (CGWB, 2013). The structural map of Prakasam District is depicted in Figure 19

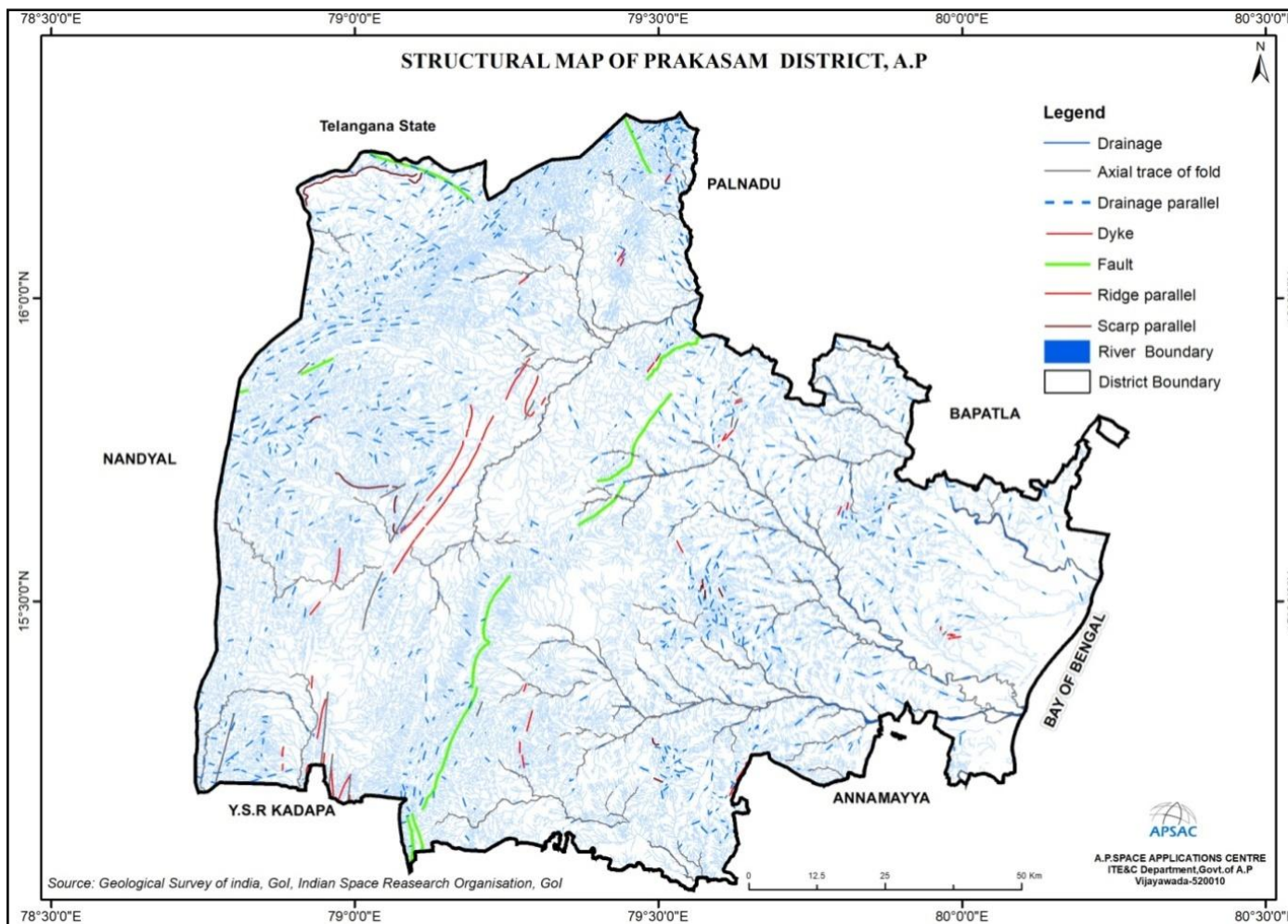


Figure-19 : Structural Map of Prakasam District, Andhra Pradesh

1.7.8 Ground Water Quality in Prakasam District

The groundwater quality laboratory analyzed physico-chemical parameters such as Total Dissolved Solids, Total Hardness, Chlorides, Nitrate, pH, Fluoride, Iron, Alkalinity, and Sulphate using standard techniques. Groundwater quality samples were collected for two seasons - post-monsoon and pre-monsoon - from December 2017 to June 2019 by the Rural Water Supply and Sanitation Department (RWS&S). These samples were then compared with the Bureau of Indian Standards, 2015 Groundwater Quality standards, categorized as desirable, permissible, and non-potable. In the comparison, blue, yellow, and red colors represent pre-monsoon quality, while the symbols '+' and '-' indicate post-monsoon quality for desirable and non-potable classes, respectively. The groundwater quality map of the district is shown in Figure 20.

Analysis revealed that approximately 45% of the area is classified as non-potable during both pre-monsoon and post-monsoon seasons due to high concentrations of Fluoride, Nitrate, Total Hardness, and Alkalinity. Around 25% of the area falls under the potable category, while the remaining 30% comprises hills and water bodies throughout the district. The occurrence and movement of groundwater in an area are influenced by several factors, including topography, lithology, geological structure, depth of weathering, extent of fractures, drainage patterns, and climate conditions. The interrelationship between these factors further shapes groundwater dynamics

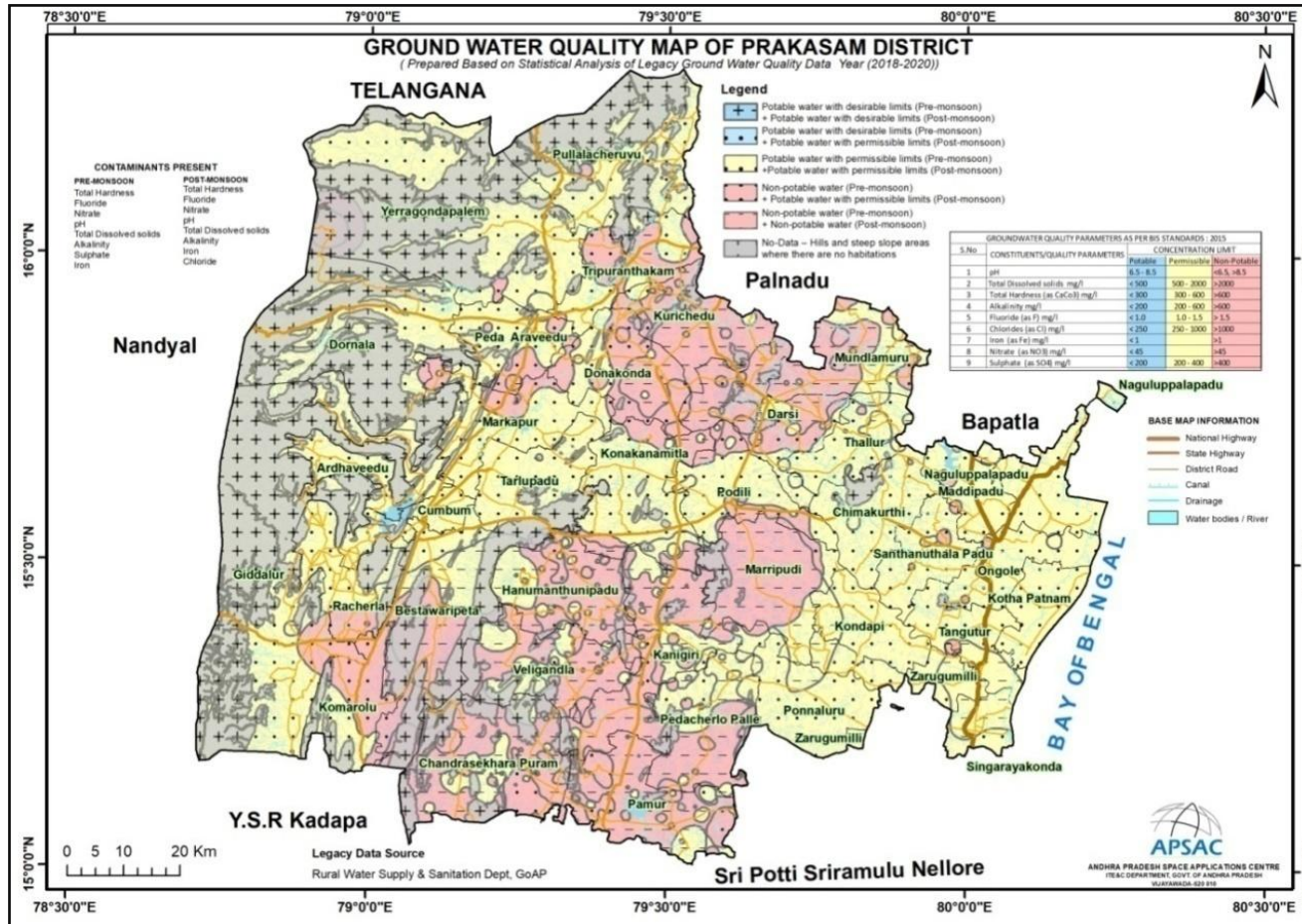


Figure-20: Ground Water Quality Map of Prakasam District

Chapter – II Minor Minerals

2.1 Overview of Mining Activity

The following leases exist in this Prakasam office jurisdiction. Mineral Regulatory, the important functioning of this office in these aspects are:-

- i. Achievement of Targets of Mineral Revenue collections being fixed to this office annually
- ii. Receiving and processing of the Mineral Concession Applications duly conducting the technical inspection, Survey and demarcation of the Mineral bearing applied areas
- iii. Execution and Regulation of the operations of the Mining / Quarry leases in accordance with the Acts and Rules
- iv. Issuing of dispatch permits duly collecting the Advance Royalty / Seig.fee from the lease holders on the minerals produced and intend to dispatch from their leased areas through online permit system
- v. Controlling the illegal Mining / Quarrying and transportation by conducting the periodical inspections of the Mines and Quarries and also conducting the surprise vehicular checking and imposing the penalties
- vi. Finalisation of Demand, Collection and Balance statements of the leases on annual basis

2.2 Geology of the District

Generalized Litho-stratigraphic Succession of Andhra Pradesh

Geological Time (a)	Supergroup (b)	Group (c)	Formation (d)
Holocene sands and soils	-	-	Alluvium, river terraces, beach
Pleistocene	-	-	Laterite and Gravel
Mio-Pilocene	-	-	Rajahmundry Fm.
Late Cretaceous Eocene	-	-	Deccan Trap with infra-and inter-trappeans
Lower Cretaceous	Gondwana	Upper Gondwana	Godavari Valley (Fluviatile) Chikiala Fm. Gangapur Fm.
to			Coastal Area (Fluvio-marine) Tirupati Fm. (Vejendla Fm) Raghavapuram Fm. (Vemavaram), Kandukuru,
Upper Carboniferous			

	Lower Gondwana	Kota Fm. Maleri Fm.	Sriperambadur Fms) Gollapalle Fm. (Satyavedu Fm.) Kamthi Fm. Barren Measures, Barakar Fm. Talchir Fm.
Cuddapah Basin Pakhal Basin			
Sullavai Sandstone			
Middle to Upper Proterozoic (980-500 m.y)	Kurnool	Nandyala Shale Koilkuntla Limestone Panyam Quartzite Owk Shale Narji Limestone Banaganapalli Quartzite	Putnur Limestone Penganga Group Takalapalle Arkose
Middle Proterozoic (1600-1300 m.y.)	Cuddapah	Nallamalai Chitravathi Papagbni	Srisailam Quartzite Cumbum Fm. Mulug Group Bairankonda Quartzite Gandikota Quartzite Tadipatri Fm. Pulivendula Quartzite Mallampalli Group Vempalle Fm. Gulcheru Quartzite
			Alabaka Sandstone Lankavaram Shale Pattipalle Quartzite Polavaram Fm. Jakaram Arkose Pandikunta Shale Gunjeda Dolomite Bayyaram Quartzite Bolapalle Fm.

EPARCHAEAN INTERVAL

Middle Proterozoic to Late Archean (2600-970 m.y)	Eastern Ghats	Charnockite Khondalites	Charnockite with megacrystic k-feldspar charnockite Two pyrozone granulite /
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				amphibolite
				Calc-silicate / granulite, Garnet-sillimanite-quartz-graphite gneiss (biotite-k-feldspar (Khondalite)
				Quartzite (gernet, sillimanite)
Late Archaean (2700 m.y)	Dharwar	Ramagiri-Penakacherla, Kadiri, Narayanpet, Jonnagiri, VeligalluPeddavuru Schist Belts &W.Part of Nellore Belt.		Pyroclastic Rocks, local conglomerate / event conglomerate Metabasalt (Pillowed), Acid volcanics, minor andesite, dacite, rhyodacite, amphibolites, metaultramafics, minor quartzite, calcsilicates, phyllites, intrusives of basic rocks and granites, rare lamprophyres.
Middle Archaean (3100-2900 y.m)	Older Supracrustals (Sargur)	Eastern Southern parts of Nellore.	and parts of	High Grade schists include garnet, staurolite, kyanite, sillimanite, cordierite (rarely sapphirine-kornuopine as in Karimnagar) Mica schists, calcilicate rocks, crystalline limestone (minor). BIF, fuchsite quartzite, hornblende granulite, amphibolite, migmatite streaky biotite gneiss.
Gneissic Complex				Banded Tonalite-Trondhjemite Gneiss.

Geologically, the State of Andhra Pradesh forms a part of peninsular India and is one of the most ancient land masses. The geological formations of Andhra Pradesh range from the oldest to the recent.

The Sargur Supracrustals are the oldest rocks in Southern India, mostly present as enclaves within the migmatitic gneiss. They are predominantly found in the eastern and southern parts of the Nellore Schist Belt. The lithology of the Sargur Supracrustals mainly comprises garnet, staurolite, kyanite schists, Banded Iron Formations (BIFs), quartzites, granulites, and amphibolites.

The gneissic complex includes banded tonalite-trondhjemite gneiss, which forms the basement rock of the study area, along with migmatitic gneiss and biotite granite gneiss. Tonalite-trondhjemite gneisses (TTGs) are sodic, quartz-bearing granitic (plutonic) rocks, with plagioclase as the most common feldspar and K-feldspar ranging from subordinate to nearly absent.

In Andhra Pradesh, the Dharwarian rocks are exposed in the western part of the Nellore Belt and various other areas like Anantapur, Ramagiri-Penakacherla, Kolar, Kadiri, Gadwal-Narayanpet, Jonnagiri, Veligallu-Peddavuru Schist Belts, and the western part of the Nellore Belt. The lithology mainly comprises metabasalt (pillowed), acid volcanics, minor andesite, dacite, rhyodacite, amphibolites, metaultramafics, minor quartzite, calcsilicates, phyllites, intrusives of basic rocks and granites, rare lamprophyres, as well as some pyroclastic rocks and local conglomerates. Hiatus in stratigraphy is observed in the study area.

Middle Proterozoic to late Archaean rocks are exposed in the Eastern Ghats Mobile Belt, characterized by extremely high-grade metamorphism falling under the granulite facies. These rocks mostly include khondalites and charnockites. The metamorphic facies of the Eastern Ghats rocks extends up to the granulite facies, including charnockite with megacrystic K-feldspar, two pyroxene granulite/amphibolite, calc-silicate/granulite, and garnet-sillimanite-quartz-graphite gneiss (biotite-K-feldspar), along with quartzite (garnet, sillimanite), exposed in most parts of the state

The Cuddapah Basin is part of the Dharwar Craton and is the second largest Purana basin of Peninsular India. It marks the profound Eparchaean unconformity in early literature. The formation of the Cuddapah Basin exposes rocks ranging from late Proterozoic to upper Proterozoic. The basin is divided into four groups: Nallamalai, Chitravathi, Papaghni, and Kurnool. Papaghni comprises dolomite and limestones, Chitravathi comprises shale, dolomite, and quartzites, Nallamalai

comprises shale, quartzites, and arkosic sandstones, and Kurnool comprises shales, quartzites, and limestones. The Cuddapah Basin is characterized by a rhythmic pattern of quartzite-shale-carbonates cycle. Uraniferous limestone is also reported from the Cuddapah Basin. Major exposures of Purana rock formations are found in Prakasam, Kurnool, Cuddapah, Chittoor, and Nellore. The Deccan Traps are found in the East and West Godavari districts, with exposures near Rajahmundry. Outcrops of Tertiary formations are found in East and West Godavari and Visakhapatnam districts, while Quaternary sediments occur as thick blankets of alluvium in river valleys, deltas, and along the East coast.

The area comprises rock units of the Khondalite Group and Charnockite Group of the Eastern Ghats Supergroup, Unclassified Metamorphics, and Dharwar Supergroup of Archaean age, Younger Igneous Intrusives, Cuddapah Supergroup, and Kurnool Group of Proterozoic age, Upper Gondwana sequence of Upper Cretaceous age, Cainozoic laterite, and Recent Alluvium. The Khondalite Group is represented by garnet-sillimanite-cordierite gneiss, associated with minor quartzite, exposed at the periphery of basic intrusives near Chimakurti. Hypersthene gneiss, pyroxene granulite, and magnetite quartzite of the Charnockite Group are exposed near Addanki. Migmatized quartz-feldspar-mica schist associated with amphibolite, comprising the Unclassified Metamorphics, occupies the east and southeast. The rocks are intensely migmatized, especially in the south-central part. The upper unit, Kyanite-staurolite-biotite-muscovite schist with some garnet porphyroblasts of Unclassified Metamorphics, associated with ferruginous quartzite and crystalline limestone, occurs in the south-central part.

The Dharwar Supergroup of rocks, comprising quartz-chlorite-sericite schist with minor quartzite, is exposed on the eastern side of the thrust contact of the Cuddapah Basin in the west. The area exposes numerous igneous intrusives. Among these, light pink to grey gneissic granite containing quartz, potash feldspar, biotite, and hornblende, occur as large, irregular bodies around Pamuru in the south and the Kanigiri-Podile-Darsi region in the central part of the area. Greenish-pink, coarse-grained alkali granite occurs as discrete irregular bodies around Addanki, Darsi, and Podile. It is intrusive into both the Eastern Ghats and Dharwar Supergroup.

Hornblende syenite rock is exposed and appears as small, isolated outcrops around Podile. At some locations, it is cut across by nepheline-bearing pegmatite. Two small bodies of nepheline syenite are exposed

about 15 km northwest of Addanki and 12 km east of Podile. Basic to ultrabasic plutonic rocks, comprising gabbro-norite with some anorthosite and pyroxenite, are exposed as irregular, sub-elliptical bodies in a narrow zone trending NNE-SSW around Darsi-Podile and Kanigiri. These bodies show a layered structure and contain olivine. Fayalite-quartz monzonite occurs along the western periphery of a basic-ultrabasic body exposed about 18 km east of Podile. Additionally, a very small isolated occurrence of baryte in carbonatite is seen within a body of gabbro-norite, located about 8 km ENE of Podile. Basic dykes, trending NNW-SSE to NNE-SSW and E-W, occur mostly in the south. At Purimetla, they are lamprophyric.

The Nallamalai Group comprises the Bairenkonda (Nagari) Formation, Cumbum (Pullampet) Formation, and Srisailam Quartzite, representing the Cuddapah Supergroup. The Bairenkonda Formation consists of slate and quartzite, with the quartzite forming linear bodies along the western margin of the Cuddapah Basin and constituting the well-developed Iswarakuppam Dome at Dornala in the northwest. The Cumbum Formation is dominantly shale with minor phyllite and intercalations of dolomite, limestone, and quartzite. The Nallamalai Group is unconformably overlain by the Srisailam Quartzite, mainly an arenaceous unit with sub-horizontal dip. It is glauconitic, ferruginous, and forms plateaus in the northwest.

The Kurnool Group, represented by Banganapalli Quartzite and Nadi Limestone, unconformably overlies the Srisailam Quartzite. The basal unit of the Banganapalli Quartzite is diamondiferous conglomerate occurring as small bodies in the northwest, close to the Krishna River. Quartzite and shale overlie the conglomerate, and the Narji Limestone conformably overlies the Banganapalli Quartzite, comprising leggy and massive limestone.

Upper Gondwana formations of lower Cretaceous age non-conformably overlie the Archaean rocks. They occur as outliers around Idupulapadu-Punuru, Budavada-Pavuluru near Vemavaram, Uppugonduru, and around Kandukur, comprising intercalations of sandstone and shale. Several ferruginous laterite tappings occur in the east over Gondwana and Archaean rocks, at low levels around 17 m to 37 m above m.s.l.

Quaternary deposits occupy the coastal tract, classified under three environments: residual, marine, and fluvial. Residual environment is represented by residual soils, fluvial sediments include flood basin and active channel deposits, and marine environment includes paleotidal flat,

paleobeach, and active beach ridge. Buff-colored volcanic ash occurs discontinuously along T. terrace of Gundlakamma River, correlated to Toba volcanic activity. Rich haul of fossils, comprising limb bones of Bovides, Cervides, Eephus, and Equus molar, and also pre-molars of Equushorn of stag and shell of turtle, was made from the Gundlakamma river valley.

The Archaean schists and gneiss show foliation varying from NE-SW to NW-SE with moderate to steep dips on either side. The general disposition of the plutonic bodies is concordant with the axes of folds. The layering in gabbro and nepheline syenite is conformable to the regional trend of the adjacent quartz-feldspathic mica schist. The rocks of the Cuddapah Supergroup show north and south plunging broad antiforms and narrow synforms, resembling domal structures in some cases. The eastern contact of this Supergroup with the schists shows en-echelon thrusts, sub-parallel, or oblique to the basin margin, with moderate to steep dips towards the east. The Srisailam Quartzite is traversed by several WNW-ESE faults. The geological map and detailed legend with the stratigraphic sequence of Prakasam District are shown in Figure-20.

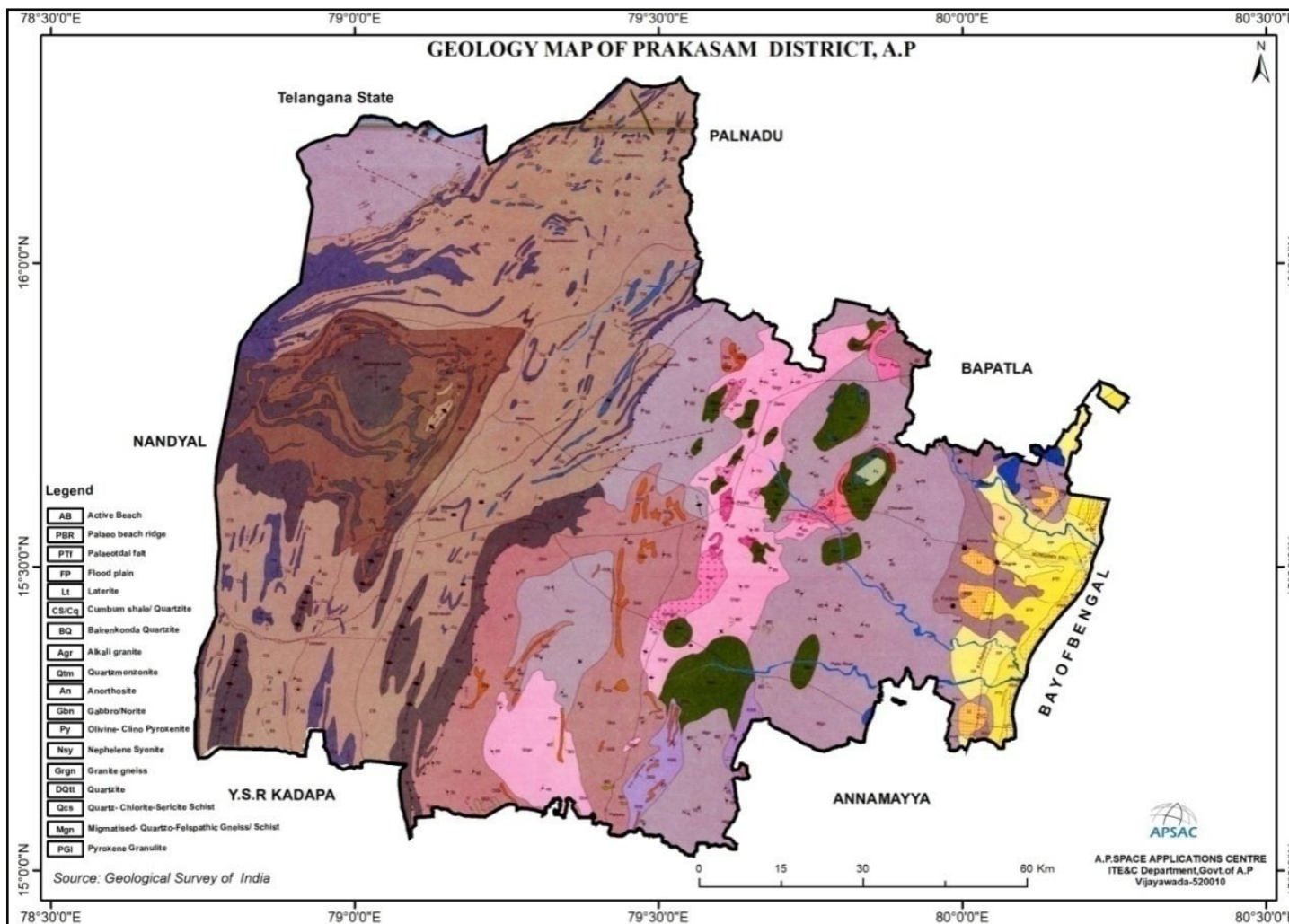


Figure 21: Geology map of Prakasam District, Andhra Pradesh (Source: GSI, 2000)

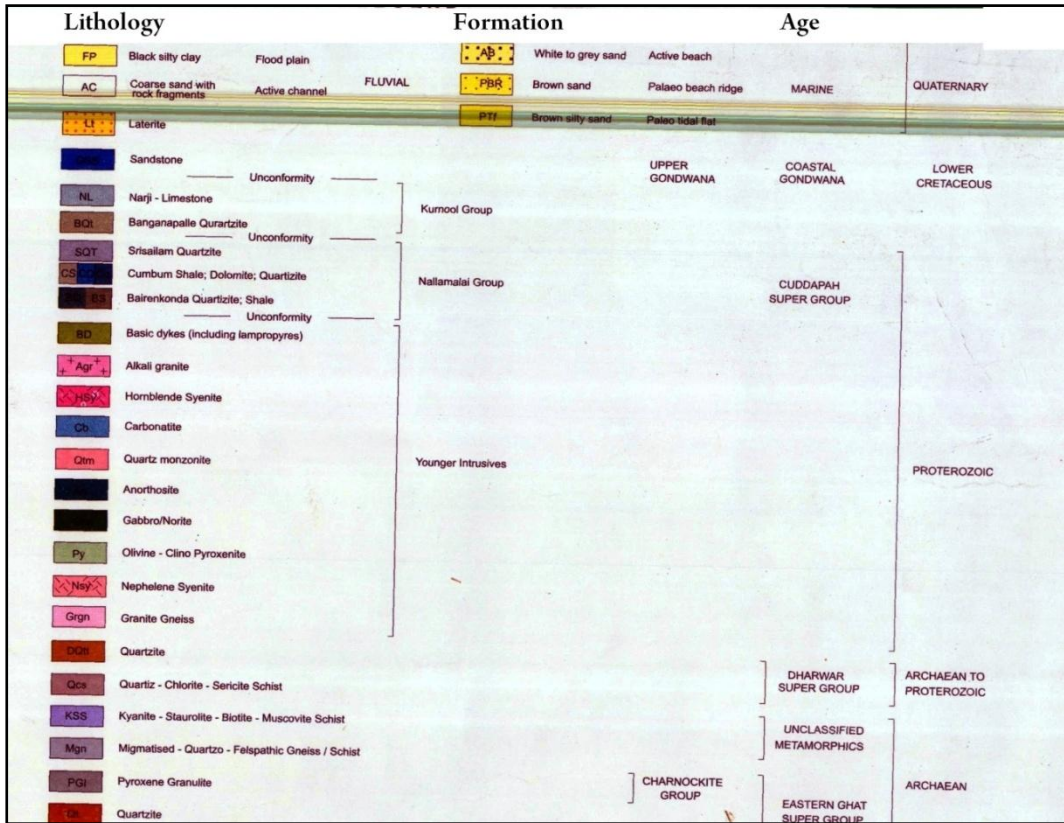


Figure-22: Detailed Legend with Stratigraphic Sequence of Prakasam District

2.3 Minor Mineral Resources of Prakasam District:

Prakasam District is endowed with Good Mineral resources belonging to Nellore Mica schist belt of Dharwar Super Group, Part of Eastern-Ghat rocks and Eastern Margin of Cuddapah group of rocks.(Data Source: Assistant Director of Mines and Geology, Prakasam District, Andhra Pradesh)

The main Mineral resources in the district are Granite (Black Galaxy / Colour) Iron Ore (Magnetite), Quartz, Silica Sand, Barytes, Slate Stone, Road Metal and Minor occurrences of Limeshell, Laterite, Rehmatti, Lime Kankar, Brick-Earth.

The following minerals are available in Prakasam District.

2.3.1. Road Metal: In Prakasam district, road metal is mainly used for construction purposes, as well as railway ballast, and is available in Kakarla village in Ardhaveedu Mandal, Budawada, Yerrakonda village in Chimakurthi Mandal, Krishnam Settypalli village in Giddaluru Mandal,

Inimerla villages in Pamur Mandal, S. Kothapalli villages in Pedaaraveedu Mandal, and Dupadu villages in Tripuranthakam Mandal.

2.3.2. Gravel: Gravel is used for the formation of kacha roads and filling low-level areas, and it is available in Kakarla village in Ardhaveedu Mandal, Krishnam Settypalli village in Giddaluru Mandal, Ammanabrolu villages in Naguluppalapadu Mandal, Errajerla villages in Ongole Mandal, S. Kothapalli villages in Pedaaraveedu Mandal, and Sanampudi villages in Singarayakonda Mandal.

2.3.3. Black Granite: Black granite, also commercially called G20, is a premium variety predominantly used for monuments and as dimension stones for flooring and wall tiling. It appears completely black and is available in Budawada, Chimakurthi, Devarapalem, Ilapavulu, Raju Palem villages in Chimakurthi Mandal, Punugodu, Sankavaram villages in Kanigiri Mandal, Thippala Devipalli villages in Marripudi Mandal, Ongole village in Ongole Mandal, Muddapadu, Thummagunta village in Pedacherlopalle Mandal.

2.3.4. Color Granite: This variety of colored granite is predominantly used for monuments and as dimension stones for flooring and wall tiling. It is available in Komatigunta village in Chadrasekarapuram Mandal, Pallamalli village in Chimakurthi Mandal, and Kuchipudi villages in Marripudi Mandal.

2.3.5. Quartz: Used in paint, ceramic tiles, and glass industries, quartz is available in Thenepalle village in Chennapanayunipalle, Musunoor, Vatlabayalu, Yekunampuram villages in Chadrasekarapuram Mandal, Darsi village in Darsi Mandal, Konareddipalli villages in Hanumanthunipadu Mandal, Baduguleru, Ballipalli, Chirladinne, Jammalamadaka, Takkellapadu, Umamaheswarapuram villages in Kanigiri Mandal, Daddawada village in Komarolu Mandal, Siddavaram village in Konakanamitla Mandal, Bodanampadu village in Kurichedu Mandal, Dubhagunta, Inimerla, Malakondapuram, Nasikatraymentambakam, Raviguntapalli, Vaggampalli villages in Pamur Mandal, Anumalapalli, Gudimetla villages in Racherla Mandal, and Laxmakkapalli village in Tarlapadu Mandal.

2.3.6. Barytes (White): White barytes are broadly used in high-grade paint, paper-making, pharmaceutical, and rubber industries. They are available in Pulugurallapalle village in Pitikayagulla village in Bestavaripeta Mandal, China Cumbum, Thurimella villages in Cumbum

Mandal, Chapala Madugu villages in Pullalacheruvu Mandal, and Meerjapeta village in Tarlapadu Mandal

2.3.7. Ballast: Used with fluorescent and other discharge lamps to provide the required current and voltage, it is available in Chimakurthi village in Chimakurthi Mandal.

2.3.8. Marble: Marbles are principally used for buildings and monuments, interior decoration, statuary, tabletops, and novelties, and are available in Indlacheruvu village in Donakonda Mandal.

2.3.9. Slate: Mainly used for electrical panels, laboratory tabletops, roofing and flooring, and blackboards, it is available in Manginapudi village in Donakonda Mandal, Gorugunthalapadu village in Tarlapadu Mandal, and Tellapadu village in Tarlapadu Mandal.

2.3.10. Feldspar: Used in the process of glassmaking, ceramics, and to some extent as a filler and extender in the paint, plastics, and rubber industries, it is available in Palukur village in Kandukur Mandal.

2.3.11. Mica: Used in products such as drywalls, paints, fillers, especially in parts for automobiles, roofing, and shingles, as well as in electronics, it is available in Palukur village in Kandukur Mandal.

2.3.12. Shale: Used in the ceramics industry to make brick, tile, and pottery, it is available in Pedayachavaram village in Markapur Mandal.

2.3.13. Iron Ore: Used in construction, transportation, energy infrastructure, and even household appliances, it is available in Panduva village in Veligandla Mandal. The mineral resources map of the Prakasam district is shown in Figure-21.

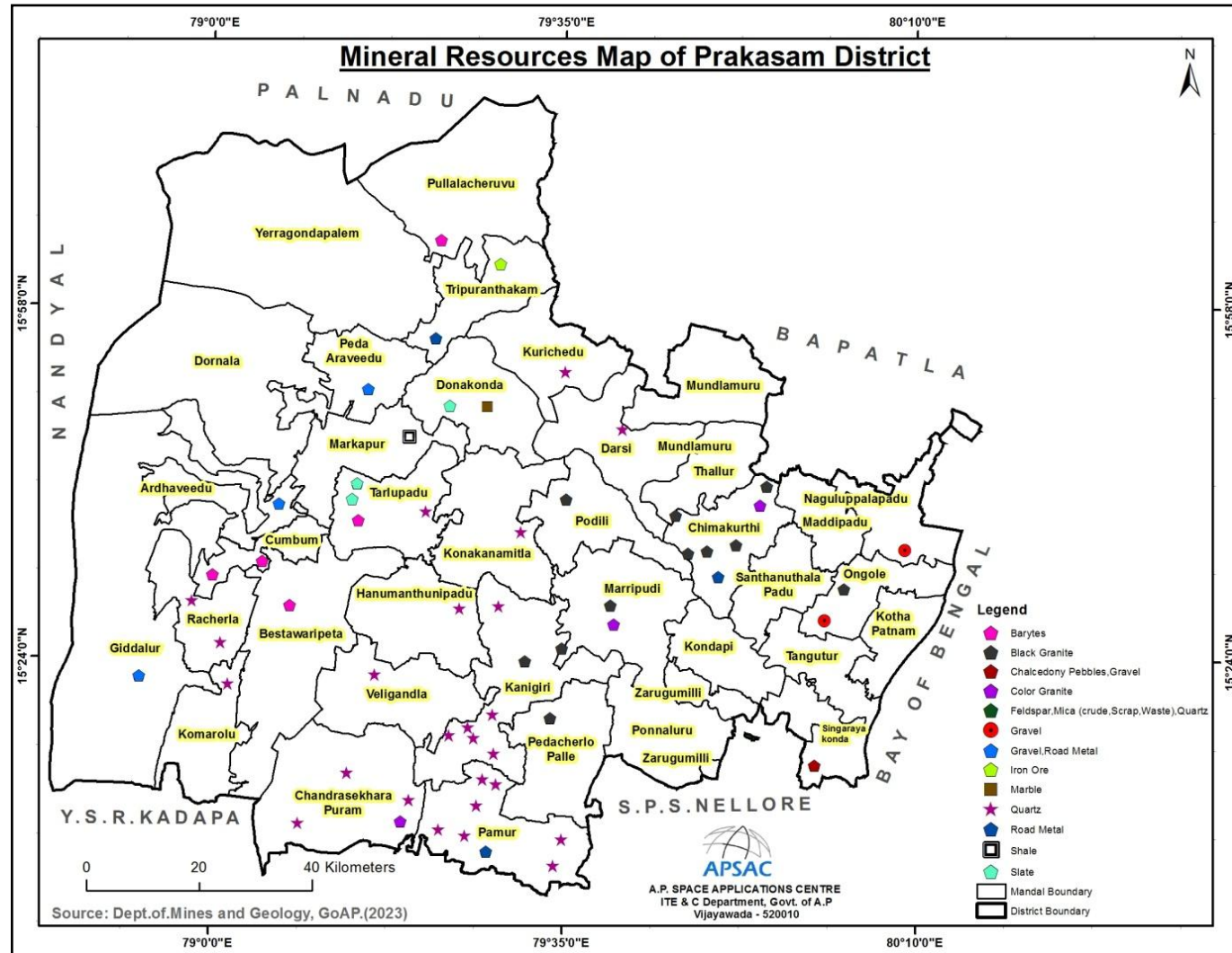


Figure-21: Mineral Resource Map of Prakasam District

The details of the working and non working leases in respect of O/o Asst. Director of Mines and Geology, Ongole in Prakasam district (Present Status of mining) shown in Table-15.

Table 15: Statement showing the Particulars of quarry leases for Granite held in the O/o. District Mines & Geology Officer, Ongole

S I. N o	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
1	Black Galaxy Granite	A.V.K Haranadh Babu	A.V.K Haranadh Babu, D.No. 7-7/1-11, Lawyerpet, Ongole - 523. 002.	21226/R3-2/2011, dt.27/05/2014	3.743	6/2/2014	6/1/2034	-	-	6/2/2014	Working	Non-captive	SEIAA/AP/PKM-233/2014-1989, dt:04-03-2015	15-34-43.45 79-50-4.23	Opencast
2	Black Galaxy Granite	APMDC Ltd	APMDC Ltd, 2nd 3rd Floor, 8-3-945, Pancum Business Centre, Ammerpet, Hyderabad.	20826/R3(2)/2007-2, dt. 08-06-2007	0.988	6/14/2007	5/12/2023	-	-	6/14/2007	Non Working	Non-captive	P-635/APPCB/ZO-VJA/CFO/W&A/2020, dt:05-08-2020	15-34-51.19694 79 -49-34.71994	Opencast
3	Black Galaxy Granite	APMDC Ltd	APMDC Ltd, 2nd 3rd Floor, 8-3-945, Pancum Business Centre, Ammerpet, Hyderabad.	20826/R3(2)/2007-1, dt. 08-06-2007	10.935	6/14/2007	6/19/2023	-	-	6/14/2007	Non Working	Non-captive		15-35-02.48675 79-49-14.93345	Opencast
4	Black Galaxy Granite	Samyuktha Granite Private Limited. Joint Venture With M/s. APMDC Limited	Samyuktha Granite Private Limited. Joint Venture With M/s. APMDC Limited	2295/D9/2021 ,dt. 13-04-2022	10.935	5/21/2022	6/19/2023	-	-	5/21/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/5/2021-3172, dt:21-05-2022	15-35-02.48675 79-49-14.93345	Opencast
5	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet, Ongole, Prakasam District.	129024/R3(1)/1996, dt. 27-09-1997	0.384	11/16/2001	11/15/2021	-	-	11/16/2001	Non Working	Non-captive	SEIAA/AP/PKM-62/2013-315, dt:10-04-2013	15-35-6.07 79- 50-13.64	Opencast
6	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2,	26506/R3(2)/96, dt. 24/12/2001	1.040	11/27/1996	11/26/2016	-	-	11/27/1996	Non Working	Non-captive	SEIAA/AP/PKM-62/2013-315, dt:10-04-2013	15-35-7.2 79-50-14.7	Opencast

APSAC, GoAP

DMG, GoAP

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Municipal High School Road, Santhapet, Ongole, Prakasam District.												
7	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet, Ongole, Prakasam District.	9873/R3(2)/2003, dt. 19/04/2003	1.858	4/23/2003	4/22/2023	-	-	4/23/2003	Non Working	Non-captive	SEIAA/AP/PKM-76/ 2013, dt:27-04-2013	15 -34-56.63844 79-50- 04.00869	Opencast
8	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet, Ongole, Prakasam District.	6184/R3-1/2012,19/03/2014	2.000	2/26/2013	2/25/2033	-	-	2/26/2013	Working	Non-captive	SEIAA/AP/PKM-75/2013, dt:27-04-2013	15-35-17.12267 79 50 06.80677	Opencast
9	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet, Ongole, Prakasam District.	3551/R3-1/2007, 08/07/2011	5.890	12/14/2008	12/13/2028	-	-	12/14/2008	Working	Non-captive	SEIAA/AP/PKM-168/2013-4297, dt:18-10-2015	15-35-12.03 79-50-05.73	Opencast
10	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet, Ongole, Prakasam District.	26507/R3(2)/1996, 28/12/2001	1.773	11/27/1996	11/26/2016	-	-	11/27/1996	Non Working	Non-captive	SEIAA/AP/PKM-72/2013-492, dt:17-04-2013	15-34-56.63890 79-49-12.63238	Opencast
11	Black Galaxy Granite	Anand Granite Exports(P) Ltd	Anand Granite Exports(P) Ltd, Director P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet,	4227/R3-2/2003, dt. 28/04/2004.	0.972	6/24/2004	6/23/2024	-	-	6/24/2004	Working	Non-captive	DEIAA/AP/PKM/42/MIN/2027, dt:13-11-2017	15-35-17.46 79-50-16.50	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Ongole, Prakasam District.												
12	Black Galaxy Granite	Andhra Pradesh Granite (Midwest) Private Limited.	Mg. Partner Sri K. Rama Chandra, (Sub-leased from APMDC Ltd. Ib 13-06-2007)8-2-684/3/25&26, Road No. 12, Banjara Hills, Hyderabad.	20827/R3(2)/2007, 08/06/2007	19.425	6/13/2007	2/2/2025	-	-	6/13/2007	Working	Non-captive	SEIAA/AP/PKM/MIN/VIO/08/2018/672, dt:08-02-2023	15-35-06.08745 79-49-20.48608	Opencast
13	Black Galaxy Granite	AP Granite (Midwest) Pvt. Ltd	AP Granite (Midwest) Pvt. Ltd, Mg. Partner Sri K. Rama Chandra.	25711/R3-2/2007, 08/11/2007	2.497	11/20/2007	11/19/2027	-	-	11/20/2007	Non Working	Non-captive		15-35-47.43 79-49-31.83	Opencast
14	Black Galaxy Granite	Apple Granites Limited.	Apple Granites Limited. Chairman: Sri S.V.S Prakash Rao,Sidda Pyramid DhyanakendramOpp: Sai Baba Temple, Layarpet Ongole, Prakasam District.	2341/R3-2/2008, 30/08/2008	7.272	12/6/2008	12/5/2028	-	-	12/6/2008	Working	Non-captive	SEIAA/AP/PKM/MIN/06/2017/334, dt:11-06-2018	15-35-02.00260 79-49-46.90962	Opencast
15	Black Galaxy Granite	Apple Granites Limited	Apple Granites Limited, Chairman: Sri S.V.S Prakash Rao,Sidda Pyramid DhyanakendramOpp: Sai Baba Temple, Layarpet Ongole, Prakasam District.	24906/R3-1/2008, 17/09/2009	1.748	3/4/2010	3/3/2030	-	-	3/4/2010	Working	Non-captive	P-577/APPCB/ZO-VJA/CFE&CFO/RED/2018, dt:26-12-2018	15-35-02.00260 79-49-46.90962	Opencast
16	Black Galaxy Granite	Archana Granites (TF Manikanta Minerals)	Archana Granites (TF Manikanta Minerals), Mg.P. Sri S. VenkateswaraRao.S.V. R. Complax, M.M. Donka, Ongole, Prakasam District.	213/R3-2/2015, 0902-2015	9.417	6/27/2015	10/15/2023	-	-	6/27/2015	Non Working	Non-captive		15-36-27.54 79-48- 12.24	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
17	Black Galaxy Granite	A.G.Exports	A.G.Exports, (TF Archean Granites (P) Ltd), Mg.Part. Sri SVS Prakash Rao, D.No.7-2-12, Lawyerpet, Ongole	3085/D9/2020 dt.08/07/2020	4.000	3/3/2012	3/2/2032	-	-	3/3/2012	Working	Non-captive	SEIAA/AP/PKM-212/2013-824, dt:18-12-2020	15-35-50.07270 79 48 34.33413	Opencast
18	Black Galaxy Granite	A.G.Exports	A.G.Exports, (TF Archean Granites (P) Ltd), Mg.Part. Sri SVS Prakash Rao, D.No.7-2-12, Lawyerpet, Ongole	3086/D9/2020 dt.08/07/2020	4.000	5/9/2006	5/8/2026	-	-	5/9/2006	Working	Non-captive	SEIAA/AP/PKM-213/2013-875, dt:18-12-2020	15-35-52.74 79-48-35.48	Opencast
19	Black Galaxy Granite	Bash Granites	Bash Granites, Mg.P. Sri K. Yusuff Basha, D.No.4/5P, Bareethi Street, Fire Road, Salecucc District, Tamilnadu.	1225/R3-1/2011, dt.03/07/2013	2.125	1/23/2012	1/22/2032	-	-	1/23/2012	Working	Non-captive	SEIAA/AP/PKM-140/2013-2359, dt:10-07-2013	15-35-22.58200 79-49-00.56990	Opencast
20	Black Galaxy Granite	Bethun Granites	Bethun Granites, C/o. Balaji, No.250, Ashook Nager, Chennai-600086.	12439/R3(2)/1998, 03/07/1998	4.048	7/21/1998	5/20/2011	-	-	7/21/1998	Non Working	Non-captive	SEIAA/AP/KNL-217/2015, dt:12-11-2015	15-36-19.96 79-48-18.33	Opencast
21	Black Galaxy Granite	Sri G. Narapa Reddy	Sri G. Narapa Reddy, tranferred in favour of Bhavya Granites, S/o. Late Koti Reddy, Santhamaguluru Village and Mandal, Prakasam District	4736/D9/2021, dt. 06/07/2021	1.000	9/2/2021	5/24/2027	-	-	9/2/2021	Non Working	Non-captive	DEIAA/AP/PKM/47/MIN/2017-185, dt:15-12-2017	15-36-20.80631 79-48-31.00638	Opencast
22	Black Galaxy Granite	BVL Exports (P) Ltd	BVL Exports (P) Ltd, Director : Sri BellamRamu, Ph.No. 94901 12222.Kondepi Road , Tangutur Mandal, Prakasam District.	10567/R3(2)/2007, 02/04/2007	2.858	6/3/2002	6/2/2022	-	-	6/3/2002	Non Working	Non-captive	SEIAA/AP/PKM-122/2013-1740, dt:14-06-2013	N15°35'39.79470" E79°48'43.87434"	Opencast
23	Black Galaxy Granite	BVL Exports (P) Ltd	BVL Exports (P) Ltd, Director : Sri BellamRamu, Ph.No. 94901 12222.Kondepi Road , Tangutur Mandal, Prakasam	19733/R3-2/2007, 06/10/2007	5.601	10/18/2007	10/17/2027	-	-	10/18/2007	Working	Non-captive	SEIAA/APPKM-174/2015, dt:27-11-2015	N15°35'39.90032" E79°48'30.97946"	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			District.												
24	Black Galaxy Granite	Chandrika Granites	Chandrika Granites, Prop: Sri Sidda Raghava Rao, D.No. 8-24, Denuvakonda Street, Lawyer pet, Ongole	2489/R3-1/13, 10/04/2013	2.287	4/10/2013	4/22/2025	-	-	4/10/2013	Working	Non-captive	SEIAA/AP/PKM/Min/3/2021/3037/158.97&153.116-387, dt:26-06-2021	15-34-54.38183 79-49-35.07105	Opencast
25	Black Galaxy Granite	N.V.Exports	N.V.Exports, (TF Dada Granite International), Mg.Part.SriN.Venkateswara Reddy, Plot No.A-7B, APIIC Industries Estate, Kurnool Road, Ongole	4205/Q/2007, dt.29/05/2021	6.932	5/29/2021	4/16/2028	-	-	5/29/2021	Non Working	Non-captive		15-36-06.12 79-49-25.35	Opencast
26	Black Galaxy Granite	Dinesh Granite Exports (TF Veerabadra Minerals (P) Limited)	Dinesh Granite Exports (TF Veerabadra Minerals (P) Limited), MD. G. Pratap Reddy, # 3A, Siva Sai Sannidhi, Plot No. 32, Opp. Shirdi Saibaba Temple, Hindinagar, Panjagutta, Hyderabad.	36294/R3(2)/2001, 08/02/2007	0.931	2/9/2007	2/8/2027	-	-	2/9/2007	Working	Non-captive	SEIAA/AP/PKM-220/2014, dt:16-12-2015	15-35-17.40 79-50-7.96	Opencast
27	Black Galaxy Granite	Eliezer Mines Private Limited	Eliezer Mines Private Limited, Director: Smt. G. Shyamala, Devarapalem Village, Near Ramatheerdham Temple, Chimakurthy.	3783/R3-2/2016, 05/07/2016	7.000	8/22/2016	8/31/2024	-	-	8/22/2016	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2017-300/176.43/173.27, dt:25-02-2022	15-36-31.38200 79-48-15.12136	Opencast
28	Black Galaxy Granite	G. Narapa Reddy	G. Narapa Reddy, S/o Late Koti Reddy, Santhamaguluru(V&M), Prakasam District.	1671/R3-2/2005, 25/02/2005	1.903	3/10/2006	3/9/2026	-	-	3/10/2006	Non Working	Non-captive	DEIAA/AP/PKM/58/MIN/2017-184, dt:15-12-2017	15-36-13.98412 79-48-33.86106	Opencast
29	Black Galaxy Granite	G. Narapa Reddy	G. Narapa Reddy, S/o Late Koti Reddy, Santhamaguluru(V&M), Prakasam District.	34524/R3(2)/2005, 14/04/2007.	0.481	5/25/2007	5/24/2027	-	-	5/25/2007	Non Working	Non-captive	DEIAA/AP/PKM/48/MIN/2017-178, dt:15-12-2017	15-36-25.30620 79-48-30.13988	Opencast
30	Black Galaxy Granite	Galaxy Granites	Galaxy Granites, Prop: Sri K. Subbarao, No.II	34086/R3(2)/2004, 09/12/2004	2.000	1/6/2005	1/5/2025	-	-	1/6/2005	Working	Non-captive	SEIAA/AP/PKM-209/2013-5419, dt:25-10-2013	15-34-48.78124 79-49-49.59781	Opencast

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S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Industrial Estate. Kurnool Road, Ongole, Prakasam District.												
31	Black Galaxy Granite	GEM Granites (P) Ltd	GEM Granites (P) Ltd, Power of Attorney Sri R. Guna Sekaran.No.76 Cathedral Road, Chennai -600086. Two leases amalgamated into single lease.	8334/D9/2019, dt. 08-02-2022	5.569	2/14/2007	2/13/2027	-	-	2/14/2007	Working	Non-captive	SEIAA/AP/PKM-32/2013, dt:04-04-2013	15-34-56.62043 79-49-21.96595	Opencast
32	Black Galaxy Granite	GEM Granites (P) Ltd	GEM Granites (P) Ltd, Power of Attorney Sri R. Guna Sekaran.No.76 Cathedral Road, Chennai -600086.	19376/D9/11, Dt.13/02/2020	0.405	7/15/2012	7/14/2032	-	-	7/15/2012	Working	Non-captive	DEIAA/AP/PKM-36/MIN/2017-133, dt:13-11-2017	15-34-52.81701 79-49-11.77520	Opencast
33	Black Galaxy Granite	GEM Granites (P) Ltd	GEM Granites (P) Ltd, Power of Attorney Sri R. Guna Sekaran.No.76 Cathedral Road, Chennai -600086.	24808/D9/2010, dt.30/03/2021	0.817	11/13/2011	11/12/2021	-	-	11/13/2011	Non Working	Non-captive		15-34-51.00750 79 49 13.68951	Opencast
34	Black Galaxy Granite	Global Exports	Global Exports, Partner P. Sridhar Anand, 58-12-2, Municipal High School Road, Santhapet, Ongole, Prakasam District.	28681/R3(2)/2003, 14/10/2003	1.485	12/8/2003	11/26/2016	-	-	12/8/2003	Non Working	Non-captive		15-34- 51.35569 79 -49-29.06391	Opencast
35	Black Galaxy Granite	M/s. Sri Kaamakshi Granites	M/s. Sri Kaamakshi Granites, Partner: Sri Sidda Raghava Rao, S/o Sri Venkateswarlu, H.No. 8-24, Dhenuvukondavari Street, Opp: Bethun Nursing Home, Ongole. Transferred from M/s.Global Exports, Partner P. Sridhar Anand	2240/D9/2023, dated: 24-03-2023	1.323	3/27/2023	5/19/2027	-	-	3/27/2023	Non Working	Non-captive	SEIAA/AP/MIN/PKM/07/2022/45 10/194.50 & 191.33, dt:24-08-2022	15-34- 50.83335 79 -49-33.84452	Opencast
36	Black Galaxy Granite	Golden Granites	Golden Granites, Mg.Partner Sri M. Venkata Rao, Flot	34354/R3(2)/2001, 12/11/2001	2.745	11/16/2021	11/15/2041	11/16/2021	### ### #	11/16/2021	Working	Non-captive	SEIAA/AP/PKM-245/MIN/2015/180.84&178.71,	15-35-04.76140 79-49-40.68407	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			No:201, Sripriya Homes Srinagar Colony, Kurnool Road, Ongole. Ph.No. 98490 55556										dt:16-11-2021		
37	Black Galaxy Granite	Hamsa Minerals & Exports LLP	Hamsa Minerals & Exports LLP, Mg.P. Sri V. Vikram Reddy, 3/2-1-6A. Regency Hights - Cleavaland Road, Frazer Town, Bangolore.	2281593/D9/2019, dt.20/04/2021	2.308	4/29/2021	11/29/2031	-	-	4/29/2021	Working	Non-captive	SEIAA/AP/PKM-130/2013-2372, dt:10-07-2013	15-35-16.73440 79-48-52.08085	Opencast
38	Black Galaxy Granite	Hamsa Minerals & Exports LLP	Hamsa Minerals & Exports LLP, Mg.P. Sri V. Vikram Reddy, 3/2-1-6A. Regency Hights - Cleavaland Road, Frazer Town, Bangolore.	8870/D9/2020, dt.20/04/2021	0.785	4/29/2021	9/4/2022	-	-	4/29/2021	Non Working	Non-captive	SEIAA/AP/PKM-129/MIN/2013-2380/169.25/166, dt:10-12-2021	N15°35'21.59761" E79°48'53.02809"	Opencast
39	Black Galaxy Granite	Hamsa Minerals & Exports LLP	Hamsa Minerals & Exports LLP, Mg.P. Sri V. Vikram Reddy, 3/2-1-6A. Regency Hights - Cleavaland Road, Frazer Town, Bangolore.	4490/R3-2/2013, dt. 16-12-2013	3.962	12/27/2013	11/29/2026	-	-	12/27/2013	Working	Non-captive	SEIAA/AP/PKM-225/2014, dt:08-10-2015	15-35-18.20168 79-48-41.06761	Opencast
40	Black Galaxy Granite	Hamsa Minerals (India) Pvt. Ltd.	Hamsa Minerals (India) Pvt. Ltd., Mg.P. Sri V. Vikram Reddy, 3/2-1-6A. Regency Hights - Cleavaland Road, Frazer Town, Bangolore.Ph. No. 98496 33559	3165/R3-2/2006, 21/02/2006	3.064	2/24/2006	10/18/2022	-	-	2/24/2006	Non Working	Non-captive	SEIAA/AP/PKM-125/2013-1719, dt:14-06-2013	N15-35-14.23324 E79-48-41.34935	Opencast
41	Black Galaxy Granite	Harikrishna Sai Granites	Harikrishna Sai Granites, Mg.P Sri P. Subbaratnam, G4,	8430/R3-2/2017, dt.19/10/2018	2.845	11/27/2018	8/21/2029	-	-	11/27/2018	Working	Non-captive	SEIAA/AP/PKM-131/2013/155.141/151.88-231, dt:22-06-2021	15-35-39.43 79 48 56.73	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Padamavathi Towers Lawyer Pet, Ongole.												
42	Black Galaxy Granite	HariPriya Granites	HariPriya Granites, P.Ch. Badari Narayana, No:11/5, Main Bazaar, Chimakurthy (V&M), Prakasam District.	32869/R3-2/1998, 01/04/2002	2.428	7/20/2002	7/19/2022	-	-	7/20/2002	Non Working	Non-captive	15-35-02.38160 79-49-24.40738	15-34-59.98162 79-49-25.67304	Opencast
43	Black Galaxy Granite	Imperial Granites Pvt. Ltd	Imperial Granites Pvt. Ltd, (100% Export oriented Unit) Power of Attorney Sri R. Guna Sekaran, No.76 Cathedral Road, Chennai -600086.	19377/R3-2/2011, dt.26-06-2018	6.184	12/4/2012	12/3/2032	-	-	12/4/2012	Working	Non-captive	SEIAA/AP/PKM-155/2013, dt:03-09-2013	15-35-14.3 79-50-28.3	Opencast
44	Black Galaxy Granite	Indian Minerals and Granite Comapany	Indian Minerals and Granite Comapany, Mg.Partner Sri N. Suryanarayana Reddy, 51 Gopala Swamy Street, Gandhi Nagar, Ballari.	34084/R3-1/2011, 13/12/2013	0.810	1/29/2014	1/28/2034	-	-	1/29/2014	Working	Non-captive	SEIAA/AP/PKM-150/2013-3017, dt:12-08-2013	15-34-51.89 79-49- 58.71	Opencast
45	Black Galaxy Granite	Indian Minerals and Granite Comapany	Indian Minerals and Granite Comapany, Mg.Partner Sri N. Suryanarayana Reddy, 51 Gopala Swamy Street, Gandhi Nagar, Ballari.	19423/R3(2)/2003, 26/06/2003	3.451	7/14/2003	7/13/2023	-	-	7/14/2003	Non Working	Non-captive	SEIAA/AP/PKM-63/ 2013-477, dt:17-04-2013	15-34-58.83088 79- 49-53.58340	Opencast
46	Black Galaxy Granite	Indian Minerals and Granite Comapany	Indian Minerals and Granite Comapany, Mg.Partner Sri N. Suryanarayana Reddy, 51 Gopala Swamy Street, Gandhi Nagar, Ballari.	13812/R3-1/11, 20/09/2011	3.064	12/12/2011	12/11/2031	-	-	12/12/2011	Working	Non-captive	SEIAA/AP/PKM-59/ 2013-316, dt:10-04-2013	15-35-00.55549 79-49-53.59212	Opencast
47	Black Galaxy Granite	JAYA Mineral Exports	JAYA Mineral Exports, Prop: S.V Sudeer Reddy, 15/329, Varada Nagar, Gudur, Nellore, Andhra Pradesh-524101, Ph.No. 9840581013.	30888/R3-1/12, 22/11/2012	2.850	7/15/2012	7/14/2032	-	-	7/15/2012	Working	Non-captive	DEIAA/AP/PKM/85/MIN/2018-239, dt:24-07-2018	15-35-20.87210 79 -48-42.97711	Opencast

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						From	To	From	To						
48	Black Galaxy Granite	Jubilee Granites Industries India Pvt Ltd	Jubilee Granites Industries India Pvt Ltd, Prop: LT. Nanwani, EGA Trade Center, 6C,6th Floor, New Number.318(Old No.809) Poonamallee High Road, Kilpauk, Chennai-10. Ph.No. 98400 55545.	55314/R3-1/2010, 20/01/2011	9.919	9/5/2002	9/4/2022	-	-	9/5/2002	Non Working	Non-captive		N15°34'55.18376" E79°50'08.06397"	Opencast
49	Black Galaxy Granite	Jyothi Exports	Jyothi Exports, Sri S V.V. Sudheer Kumar,201, Sripriya Homes, Kurnool Road, Ongole, Prakasam District.	20137/R3-2/2007, 07/01/2008	1.830	6/3/2007	6/2/2027	-	-	6/3/2007	Working	Non-captive	SEIAA/AP/PKM-258/2015, dt:08-10-2015	15-35-52.00638 79 48 47.17882	Opencast
50	Black Galaxy Granite	N.V. Exports	N.V. Exports, Mg.Part.SriN.Venkateswara Reddy, (T.F K L Granites Private Limited.,) Flat No.402, R.R.Enclave, Mangamuru Road, Ongole.	3575/R3-2/2019, dt.05/07/2019	1.000	7/24/2019	7/25/2028	-	-	7/24/2019	Working	Non-captive	SEIAA/AP/PKM-317/2015, dt:27-11-2015	15-35-22.35947 79 48 39.57585	Opencast
51	Black Galaxy Granite	NV Exports Pvt Ltd	NV Exports Pvt Ltd, T.F.,K.S.R Granites Director Sri N.Venkateswara Reddy, Plot No.A-7/Bm APIIC Industrial Estate, Kurnool Road, Ongole.	5939/D9/2021 , dt. 15-07-2021	4.452	10/31/2011	8/1/2022	-	-	10/31/2011	Non Working	Non-captive	SEIAA/AP/PKM-123/2013-1710, dt:14-08-2013	N15°35'47.14141" E79°48'30.47721"	Opencast
52	Black Galaxy Granite	K.V. Rama Rao	K.V. Rama Rao, S/o. Subbaiah, D.No. 5-267, NGO Colony, Ongole,	9694/R3-2/2014, 22-06-2016	1.324	7/14/2016	7/13/2036	-	-	7/14/2016	Working	Non-captive	SEIA/AP/PKM-303/2015, dt:09-10-2015	15-34-53.49 79-50-07.06	Opencast
53	Black Galaxy Granite	Kandula Rami Reddy	Kandula Rami Reddy, S/o Narayana Reddy, Do.No.10-90A, Jawhar Nagar Colony, Markapur(P &M), Prakasam District.	12165/R3-1/2011, 19/05/2011	4.970	7/6/2011	7/5/2031	-	-	7/6/2011	Working	Non-captive	SEIAA/AP/PKM-165/2013-3996, dt:03-10-2013	15 36 48.9 79 48 34.53	Opencast

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						From	To	From	To						
54	Black Galaxy Granite	Kishore Black Gold Granite (P) Ltd Mg. Director Sri Gottipati Ravi Kumar	Kishore Black Gold Granite (P) Ltd Mg. Director Sri Gottipati Ravi Kumar, Ganapavaram(V), Nadendla(M), Chilakaluripet Guntur District.	1911/R2-2/2015, 11/02/2015	7.251	3/31/2015	2/24/2024	-	-	3/31/2015	Non Working	Non-captive		15-35-58.72 79-48-20.16	Opencast
55	Black Galaxy Granite	Krishna Sai Exports (P) Ltd.	Krishna Sai Exports (P) Ltd., MD. Sri S. Hanumantha Rao, # 8-418, Sundar Nagar, M.M. Donka, Ongole - 2.	3816/R3(2)/2006, 28/02/2006	2.444	3/4/2006	5/10/2023	-	-	3/4/2006	Non Working	Non-captive	SEIAA/AP/PKM-102/2013-1354/154.28&159.34-410, dt:13-07-2021	15-35-06.51100 79-50-07.25171	Opencast
56	Black Galaxy Granite	Krishna Sai Granites	Krishna Sai Granites, Mg.P Sri Sidda. Venkateswara Rao, S.V.R. Complax, M.M. Donka, Ongole, Prakasam District.	5455/R3(2)/2004, 12/05/2004	5.000	6/5/2004	6/4/2024	-	-	6/5/2004	Working	Non-captive	SEIAA/AP/PKM-154/2013-3382, dt:03-09-2013	15-35-44.30378 79-48-30.71944	Opencast
57	Black Galaxy Granite	Krishna Sai Granites	Krishna Sai Granites, Mg.P Sri Sidda. Venkateswara Rao, S.V.R. Complax, M.M. Donka, Ongole, Prakasam District.	28689/R3-1/2009, 07/08/2009	1.174	8/31/2009	12/28/2027	-	-	8/31/2009	Working	Non-captive	P-254/APPB/ZO-VJA/CFO/W&A/2020, dt:23-10-2013	15-35-17.02 79-49-58.93	Opencast
58	Black Galaxy Granite	Krishna Sai Granites	Krishna Sai Granites, Mg.P Sri Sidda. Venkateswara Rao, S.V.R. Complax, M.M. Donka, Ongole, Prakasam District.	38192/R3(2)/2006, 22/01/2007	3.122	12/29/2007	12/28/2027	-	-	12/29/2007	Working	Non-captive	SEIAA/AP/PKM-162/2013-1033, dt:13-09-2019	15-35-18.0 79-49-59.30	Opencast
59	Black Galaxy Granite	Kumar Granites	Kumar Granites, Prop Sri SiddaRagava Rao, D.No. 8-24 Dhenuvakondavari Street, Lawyerpet Extention, Ongole.	9694/R3-2/2014, 26-02-2016	1.898	7/14/2016	7/13/2036	-	-	7/14/2016	Non Working	Non-captive	SEIAA/AP/PKM-284/2015-4321, dt:20-06-2016	15-35-31.5573 79-48-43.0144	Opencast
60	Black Galaxy Granite	Kumar Granites	Kumar Granites, Prop Sri SiddaRagava Rao, Flot No: 201,	29416/R3(2)/1997, 02/12/1997	5.927	12/4/2012	12/5/2032	-	-	12/4/2012	Non Working	Non-captive	SEIA/AP/PKM-173/2013, dt:16-12-2015	15-35-31.55730 79 48 43.01440	Opencast

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						From	To	From	To						
			Sripriya Homes Srinagar Colony, Kurnool Road, Ongole.												
61	Black Galaxy Granite	Lakshmi Galaxy Enterprises	Lakshmi Galaxy Enterprises, Prop: Smt. Sidda Lakshmi Padmavathi, Flot No:201, Sripriya Homes Srinagar Colony, Kurnool Road, Ongole.	35314/R2-2/2011, 18/07/2014	5.099	4/13/2013	4/12/2033	-	-	4/13/2013	Working	Non-captive	SEIAA/AP/PKM-172/2013, dt:08-10-2015	15-35-33.25402 79-49-4.73138	Opencast
62	Black Galaxy Granite	Larmin Granites	Larmin Granites, Prop: Md. Imtiazuddin, 501,5th flour, Padma Towers, Ongole, Prakasam District	33783/R3(2)/2006, 08/11/2006	1.740	11/15/2006	6/17/2025	-	-	11/15/2006	Working	Non-captive	SEIAA/AP/PKM-214/2013-5711, dt:25-10-2013	15-35-43.34544 79-48 28.06882	Opencast
63	Black Galaxy Granite	Manikanta Minerals	Manikanta Minerals, Mg. Partner Sri SiddaVenkateswara Rao, F1 Block No. A, Garden Towers, MM Road, Ongole -523 002, Prakasam District.	44653/R3-2/2013, dt. 31-07-2016	4.000	9/26/2016	9/25/2036	-	-	9/26/2016	Non Working	Non-captive		15-40-09.62393 79 52 30.44504	Opencast
64	Black Galaxy Granite	Manikanta Minerals Mg.P. Sri S. Venkateswara Rao	Manikanta Minerals Mg.P. Sri S. Venkateswara Rao, S.V.R. Complax, M.M. Donka, Ongole, Prakasam District.	11996/R3(2)/2006, 01/08/2006	2.203	10/19/2007	10/18/2027	-	-	10/19/2007	Working	Non-captive	SEIAA/AP/PKM/2013/6331/166.17&163.13-839, dt:27-09-2021	15-35-17.75 79-49-56.95	Opencast
65	Black Galaxy Granite	Manikanta Minerals Mg.P. Sri S. Venkateswara Rao	Manikanta Minerals Mg.P. Sri S. Venkateswara Rao, S.V.R. Complax, M.M. Donka, Ongole, Prakasam District.	25202/R3-1/2013, 26/06/2013	10.619	7/11/2013	4/29/2023	-	-	7/11/2013	Non Working	Non-captive		15-35-37.9 79-50-11.7	Opencast
66	Black Galaxy Granite	Manikanta Minerals Mg.P. Sri S. Venkateswara Rao	Manikanta Minerals Mg.P. Sri S. Venkateswara Rao, S.V.R. Complax, M.M. Donka, Ongole, Prakasam District.	17611/R3-1/2011, 04/03/2013	1.963	6/14/2012	6/13/2032	-	-	6/14/2012	Working	Non-captive	SEIAA/AP/PKM-181/2013-4413, dt:23-10-2013	15-36-41.48536 79 48 07.30702	Opencast
6	Black	Midwest	Midwest Granites (P)	37948/R2-	1.251	5/16/2	4/5/20	-	-	5/16/2	Working	Non-	SEIAA/AP/PKM/	15-34-56.74 79-	Opencast

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						From	To	From	To						
7	Galaxy Granite	Granites (P) Limited	Limited, Mg. Partner of Sri K. Rama Chandra, 8-2-684/3/25&26, Road No. 12, Banjara Hills, Hyderabad.	2/2013, 13/04/2014		006	25			006		captive	MIN/09/2019/1083-490, dt:23-10-2020	49-12.30	
68	Black Galaxy Granite	Midwest Granites (P) Limited	Midwest Granites (P) Limited, Mg. Partner of Sri K. Rama Chandra, 8-2-684/3/25&26, Road No. 12, Banjara Hills, Hyderabad.	5873/R3-2/2008, 04/01/2008	9.510	4/4/2009	4/3/2029	-	-	4/4/2009	Working	Non-captive	SEIAA/AP/PKM/MIN/09/2019/1083-490, dt:23-10-2020	15-35-02.51091 79-49-08.00822	Opencast
69	Black Galaxy Granite	N.V. Exports	N.V. Exports, Mg.Partner Sri P. Venkateswara Reddy (Transfer and clubbing for 3 files in Srinivasa Granites, D.No. 36-18(P), Saibaba Nagar, Kurnool Road, Ongole.	14726/R3-1/2012, 05/07/2012	2.676	7/9/2012	1/26/2032	-	-	7/9/2012	Working	Non-captive	DEIAA/AP/PKM/05/MIN/2017-60, dt:03-08-2017	15-35-55.25772 79-48-47.47655	Opencast
70	Black Galaxy Granite	N.V. Exports	N.V. Exports, Mg.Partner Sri P. Venkateswara Reddy, Industrial Estate, Kurnool Road, Ongole.	13655/R3-2/2015 dt.04-06-2016	0.615	6/15/2016	6/14/2036	-	-	6/15/2016	Working	Non-captive	SEIAA/AP/PKM-296/2015, dt:19-10-2015	15-35-56.43784 79-48-47.58462	Opencast
71	Black Galaxy Granite	Nasa Continetnal Exports (P) Ltd.	Nasa Continetnal Exports (P) Ltd., MD. Sri K. Ravinder Reddy, 6-3-351, 4th folur Road No- 1 Banjara Hills, Hyderabad.	20328/R3(2)/2004, 11/03/2005	1.777	4/15/2005	4/14/2025	-	-	4/15/2005	Working	Non-captive	SEIAA/AP/PKM-83/2013-653, dt:02-05-2013	15-35-03.82075 79-48-46.25251	Opencast
72	Black Galaxy Granite	Nasa Continetnal Exports (P) Ltd.	Nasa Continetnal Exports (P) Ltd., MD. Sri K. Ravinder Reddy, 6-3-351, 4th folur Road No- 1 Banjara Hills, Hyderabad.	33056/R3-2/2007, 20/12/2007	1.887	2/14/2008	2/13/2028	-	-	2/14/2008	Working	Non-captive	SEIAA/AP/PKM-82/2013, dt:05-02-2013	15-35-02.53859 79-48-46.70041	Opencast
73	Black Galaxy	Nirmal Granites	Nirmal Granites, Md. Imtiazuddin,	25709/R3-1/2011,	1.255	9/4/2008	9/3/2028	-	-	9/4/2008	Working	Non-captive	SEIAA/AP/PKM-214/2013-5712,	15-35-53.29165 79-48-27.62593	Opencast

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						From	To	From	To						
	Granite		501,5th floor, Padma Towers, Ongole, Prakasam District	13/12/2011									dt:28-10-2022		
74	Black Galaxy Granite	Ongole Galaxy Mg.P.Ch. Badari Narayana	Ongole Galaxy Mg.P.Ch. Badari Narayana, No:11/5, Main Bazaar, Chimakurthy (V&M), Prakasam District. Ph.No. 98492 66779	25807/R3-1/2009, 16/07/2009	2.720	8/20/2009	8/19/2028	-	-	8/20/2009	Working	Non-captive	DEIAA/AP/PKM/07/MIN/2017-54, dt:03-08-2017	15-34-58.13791 79-49-30.31776	Opencast
75	Black Galaxy Granite	Pallava Granite Industries (I) Pvt. Ltd.	Pallava Granite Industries (I) Pvt. Ltd., Prop: Sri K. Subba Reddy. R. L. Puram Village, Chimakurthy (M), Prakasam District. Ph.No. 94910 66519.	23150/R3-1/2009, 08/02/2010	6.954	9/26/2009	9/25/2029	-	-	9/26/2009	Working	Non-captive	SEIAA/AP/PKM-257/2015, dt:18-01-2016	15-34-56.28840 79 49 04.56594	Opencast
76	Black Galaxy Granite	Pallava Granite Industries India Pvt Ltd.	Pallava Granite Industries India Pvt Ltd., MD. K. SubbaReddy,R L Puram, Chimakurthy Mandal Prakasam District.	35079/R3-1/2010, 29/03/2011	2.044	4/16/2011	11/12/2027	-	-	4/16/2011	Working	Non-captive	SEIAA/AP/PKM-64/2019-468, dt:17-04-2013	15-34-59.88888 79 48 59.25612	Opencast
77	Black Galaxy Granite	Pallava Red Granites (P) Ltd	Pallava Red Granites (P) Ltd, MD. K. Subba Reddy, No.19, Sri Ram Nager, North Street, Alwar Pet, Chennai-600018.	1800/R3-2/2008, 26/04/2008	14.170	4/30/2008	6/19/2023	-	-	4/30/2008	Working	Non-captive	SEIAA/AP/PKM-115/2013-1531, dt:10-06-2013	15-35-24.14155 79 49-14.25708	Opencast
78	Black Galaxy Granite	Pearl Mineral & Mines Private Ltd.	Pearl Mineral & Mines Private Ltd., Director Sri Ch. Raja, R L Puram Village, Chimakurthy(M), Prakasam District.. Ph.No. 81425 53355	50985/R3-1/2010, 07/01/2011	7.252	1/10/2011	7/14/2027	-	-	1/10/2011	Working	Non-captive	SEIAA/AP/PKM-167/2013, dt:08-10-2015	15-35-02.54546 79-49-40.00970	Opencast
79	Black Galaxy Granite	Pokarna Granites Limited	Pokarna Granites Limited, Chairman & Mg. Director Goutam Chand	7368/R3-2/2002, 10/06/2002	0.660	6/19/2002	6/18/2022	-	-	6/19/2002	Non Working	Non-captive	DEIAA/AP/PKM/42/MIN/2017-140, dt:13-11-2017	15-35-10.15938 79-50-13.26491	Opencast

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						From	To	From	To						
			Jain, 105, Surya Towesrs, S.P Road, Secenderebed												
80	Black Galaxy Granite	Pokarna Granites Limited	Pokarna Granites Limited, Chairman & Mg. Director Goutam Chand Jain, 105, Surya Towesrs, S.P Road, Secenderebed	7367/R3-2/2002, 10/06/2002	1.417	6/19/2002	6/18/2022	-	-	6/19/2002	Non Working	Non-captive	SEIAA/AP/PKM-81/2013, dt:27-04-2013	15-35-27.09980 79-48-59.31141	Opencast
81	Black Galaxy Granite	Pokarna Granites Limited	Pokarna Granites Limited, Chairman & Mg. Director Goutam Chand Jain, 105, Surya Towesrs, S.P Road, Secenderebed	4326/R3-2/2008, 20/12/2008	0.785	12/30/2007	12/29/2027	-	-	12/30/2007	Working	Non-captive	SEIAA/AP/PKM-68/MIN/2013-320, dt:22-06-2022	15-35-10.44 79-50-12.07	Opencast
82	Black Galaxy Granite	Pokarna Granites Limited	Pokarna Granites Limited, Chairman & Mg. Director Goutam Chand Jain, 105, Surya Towesrs, S.P Road, Secenderebed	55790/R2-2/2010,05/08/2014	5.694	12/12/2011	12/11/2031	-	-	12/12/2011	Working	Non-captive	SEIAA/AP/PKM-88/2013, dt:10-06-2013	15-35-31.26420 79-48-49.44676	Opencast
83	Black Galaxy Granite	Pokarna Granites Limited	Pokarna Granites Limited, Chairman & Mg. Director Goutam Chand Jain, 105, Surya Towesrs, S.P Road, Secenderebed	30890/R2-2/2012, 06/11/2014	0.389	12/30/2007	12/29/2027	-	-	12/30/2007	Working	Non-captive	SEIAA/AP/PKM-66/2013-319, dt:10-04-2013	15-35-07.88 79-50-10.32	Opencast
84	Black Galaxy Granite	Pokarna Granites Limited	Pokarna Granites Limited, Chairman & Mg. Director Goutam Chand Jain, 105, Surya Towesrs, S.P Road, Secenderebed	54865/R2-2/2010-1, dt. 20-09-2014.	4.059	12/12/2011	12/11/2031	-	-	12/12/2011	Working	Non-captive	DEIAA/AP/PKM/90/MIN/2018-246, dt:24-07-2018	15-35-30.37611 79 - 48 - 59.58842	Opencast
85	Black Galaxy Granite	Pooshya Enterprises (P) Ltd	Pooshya Enterprises (P) Ltd, C/o. Balaji, No. B. 254 50th street, Ashook	47396/R3-1/2010, 29/09/2011	1.582	3/20/2012	3/19/2032	-	-	3/20/2012	Non Working	Non-captive	SEIAA/AP/PKM-207/2013, dt:25-10-2013	15- 35-27.37820 79-48-42.00420	Opencast

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						From	To	From	To						
			Nager, Chennai-600083.												
86	Black Galaxy Granite	R.R. GRANITES	R.R. GRANITES, Mg.Partner Sri L. Sudhakar Reddy, Registered Office 404-A Srinilaya Enclave New Science College Road 8-3-945 HYDERABAD. Ph.No. 98493 48395	47768/R3-1/2010, 09/08/2011	1.773	10/31/2011	11/1/2031	-	-	10/31/2011	Working	Non-captive	SEIAA/AP/PKM-160/2013, dt:03-10-2013	15-35-21.59419 79 48-50.06941	Opencast
87	Black Galaxy Granite	Radxport Enterprises Pvt Ltd.	Radxport Enterprises Pvt Ltd., MD., J. Hazarathaiiah, S/o. Venkaiah, B-Block, Flat No: 202, VKB Apartment, Beside Taluka Police Station, Ongole - 523002.	32908/R3(2)/2004, dt.11-03-2005	2.225	5/5/2005	5/4/2025	-	-	5/5/2005	Working	Non-captive	P-583/APPCB/ZO-VJA/CFE&CFO/RED/2019, dt:07-01-2019	15-36-27.45933 79-48-14.94141	Opencast
88	Black Galaxy Granite		Rasun Exports (P) Limited. MD of Sri K. Ravinder Reddy, 6-3-351, 4th folur Road No- 1 Banjara Hills, Hyderabad. Ph.No. 98490 61650.	32744/R3-2/2007, 09/01/2008	1.567	3/3/2008	3/2/2028	-	-	3/3/2008	Non Working	Non-captive	SEIAA/AP/PKM-85/2013, dt:02-05-2013	15-35-09.55242 79-48-49.07131	Opencast
89	Black Galaxy Granite	Rasun Exports (P) Limited.	Rasun Exports (P) Limited., MD of Sri K. Ravinder Reddy, 6-3-351, 4th folur Road No- 1 Banjara Hills, Hyderabad. Ph.No. 98490 61650.	462/R3-1/2011, 10/07/2012	3.884	12/24/2011	12/23/2031	-	-	12/24/2011	Working	Non-captive	SEIAA/AP/PKM-84/2013, dt:02-05-2013	15-35-11.49652 79-48-49.72093	Opencast
90	Black Galaxy Granite	Rasun Exports (P) Limited.	Rasun Exports (P) Limited., MD of Sri K. Ravinder Reddy, 6-3-351, 4th folur Road No- 1 Banjara Hills, Hyderabad. Ph.No. 98490 61650.	18751/R3-1/2009, 25/08/2012	1.748	6/24/2009	6/23/2029	-	-	6/24/2009	Working	Non-captive	SEIAA/AP/PKM-86 2013-675, dt:02-05-2013	15-35-13.71578 79-48-59.74589	Opencast

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						From	To	From	To						
91	Black Galaxy Granite	Sai Granites	Sai Granites, Prop: Sri B.V. Subba Reddy, H.No. 7-344-1, Reedy Nagar, Beside Andhra Bank Line Chimakurthy(V&M), Prakasam District.	43256/R3(2)2002, 19/08/2003	0.713	8/29/2003	8/28/2023	-	-	8/29/2003	Non Working	Non-captive	SEIAA/AP/PKM/MIN/08/2020/2037-703, dt:08-12-2020	15-35-24.45572 79-48-51.86882	Opencast
92	Black Galaxy Granite	Sakthi Kiran Granites (P) Ltd.	Sakthi Kiran Granites (P) Ltd., Md. Imtiazuddin, 501,5th floor, Padma Towers, Ongole, Prakasam District	24140/R3-1/2006, 23/08/2014	5.300	7/16/2007	7/15/2027	-	-	7/16/2007	Working	Non-captive	SEIAA/AP/PKM-220/2014, dt:16-12-2015	15-36-9.84 79-48-29.96	Opencast
93	Black Galaxy Granite	SAS Mineral & Mines Ltd.	SAS Mineral & Mines Ltd., Director Sri SVS Prakasa Rao, D.No.7-2-12, Lawyerpet, Ongole, Prakasam District. (T.F Pearl)	3087/D9/2020 dt.16/07/2020	4.000	7/18/2020	9/14/2027	-	-	7/18/2020	Working	Non-captive	P-642/APP/CB/ZO-VJA/CFO/W&A/2019, dt:04-02-2020	15-35-50.81 79-48-40.97	Opencast
94	Black Galaxy Granite	Shaheen Granites	Shaheen Granites, Prop: Sri MD. Imtiazuddin, 501,5th floor, Padma Towers, Ongole, PrakasamDistrictPh.No. 98494 33667.	4463/D9/2020 dt.10/07/2020	4.608	8/21/2020	9/16/2023	-	-	8/21/2020	Working	Non-captive	SEIAA/AP/PKM-243/2015, dt:20-11-2015	15-35- 57.09543 79 - 48- 28.40772	Opencast
95	Black Galaxy Granite	Shaheen Granites	Shaheen Granites, Prop: Sri MD. Imtiazuddin, 501,5th floor, Padma Towers, Ongole, PrakasamDistrictPh.No. 98494 33667.	30889/R3-1/2013, 25/05/2013	2.866	2/21/2003	2/20/2023	-	-	2/21/2003	Non Working	Non-captive	SEIAA/AP/PKM-188/2013-4392, dt:23-10-2013	15-36-14.81599 79 48 23.29143	Opencast
96	Black Galaxy Granite	SVSSG Exports	SVSSG Exports, Partner Sri Gudipudi Prasad Gudipudivaripalem Village, Gonugunta Post, Chimakurthy Mandal, Prakasam District Sheetal Granites,	764/D9/2022 Dt.08-06-2022	0.640	4/7/2012	4/6/2032	-	-	4/7/2012	Working	Non-captive	DEIAA/AP/PKM/41/MIN/2017-181, dt:15-12-2017	N15°34'50.77173" E79°49'06.69447"	Opencast

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						From	To	From	To						
			Mg.PartnerSri.P. Subhoji,												
97	Black Galaxy Granite	SiddaHanumatha Rao	SiddaHanumantha Rao, D.No. 7-5-82(3), Iswarya Nagar, Near Anjaiah Road, Ongole, PrakasamDistrict.Ph.No . 98481 52709	4376/R3-1/2007, 16/09/2009	9.000	11/13/2009	11/12/2029	-	-	11/13/2009	Non Working	Non-captive		15-36-18.01 79-48-14.04	Opencast
98	Black Galaxy Granite	Southern Rocks & Minerals (P) Ltd	Southern Rocks & Minerals (P) Ltd, Prop: Sri P. Rama Rao, Adjacent to Indutial Estate, Kurnool Road, Ongole, Prakasam District..	11381/R3-1/2011, 03/12/2012	2.223	4/9/2012	4/8/2032	-	-	4/9/2012	Working	Non-captive	SEIAA/AP/PKM-92/2013-726, dt:30-04-2013	15-35-17.02 79 49 58.93	Opencast
99	Black Galaxy Granite	Southern Rocks & Minerals (P) Ltd	Southern Rocks & Minerals (P) Ltd, Prop: Sri P. Rama Rao, Adjacent to Indutial Estate, Kurnool Road, Ongole, Prakasam District..	50660/R3-1/10, 12/09/2011	2.730	11/28/2011	11/27/2031	-	-	11/28/2011	Non Working	Non-captive	SEIAA/AP/PKM-88/2013-658, dt:02-05-2013	15-35-29.07 79-49-05.23	Opencast
100	Black Galaxy Granite	Southern Rocks & Minerals (P) Ltd	Southern Rocks & Minerals (P) Ltd, Prop: Sri P. Rama Rao, Adjacent to Indutial Estate, Kurnool Road, Ongole, Prakasam District..	842/R3-2/2008, 12/12/2008	2.356	12/21/2008	12/20/2028	-	-	12/21/2008	Working	Non-captive	SEIAA/AP/PKM-67/2013-325, dt:10-04-2013	15-34-56.35421 79-49-07.24901	Opencast
101	Black Galaxy Granite	Krishna Sai Granites	Krishna Sai Granites, Mg.Part. Sri SiddaVenkateswara Rao, T.F. Sparkle Minerals (P) Ltd .	6174/D9/2020 dt.25/05/2021	1.392	6/23/2021	6/22/2041	-	-	6/23/2021	Non Working	Non-captive	SEIAA/AP/PKM-107/2013-1351, dt:20-05-2013	15-35-32.18762 79 48 43.63766	Opencast
102	Black Galaxy Granite	Sri Hanuman Granites Prop. Sri A. Gangadhar	Sri Hanuman Granites Prop. Sri A. Gangadhar, D. No. 2-259, Samatha Nagar, Kurnool Road, Ongole	43873/R2-2/2012, 09/04/2015	2.000	7/22/2006	7/21/2026	-	-	7/22/2006	Working	Non-captive	SEIAA/AP/PKM/MIN/09/2013/205-1487, dt:25-11-2019	15-40-34.15862 79-52-34.41851	Opencast
103	Black Galaxy Granite	Sri Sai Enterprises	Sri Sai Enterprises, Mg.P. Sri M. Srinivasulu&	19407/R3(2)/2006, 11/09/2006	5.000	11/9/2006	6/25/2023	-	-	11/9/2006	Non Working	Non-captive	P-587/APPCB/ZO-VJA/CFE&CFO/R	15-35-39.21126 79-48-26.52897	Opencast

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						From	To	From	To						
			K. SarveswaraRao.Budawada Village, Chimakurthy(M), Prakasam District.										ED/2019, dt:23-01-2019		
104	Black Galaxy Granite	Sri Surya Granites	Sri Surya Granites, Prop: Sri B. Subba Reddy, Gandhi Nager 1st lane, Chimakurthy (V&M), PrakasamDistrict.Ph. No. 98495 21555	30221/R3-1/2010, 08/04/2011	1.976	12/7/2011	12/6/2031	-	-	12/7/2011	Working	Non-captive	SEIAA/AP/PKM/MIN/VIO/07/2013/135-12, dt:18-12-2019	15-35-03.93204 79-49-52.83234	Opencast
105	Black Galaxy Granite	Sri Surya Granites	Sri Surya Granites, Prop: Sri B. Subba Reddy, Gandhi Nager 1st lane, Chimakurthy (V&M), PrakasamDistrict.Ph. No. 98495 21555	30222/R3-1/2010, 08/04/2011	3.846	6/13/2011	6/12/2031	-	-	6/13/2011	Working	Non-captive	SEIAA/AP/PKM/MIN/VIO/07/2013/13446, dt:18-12-2019	15-35-09.92839 79-49-51.59665	Opencast
106	Black Galaxy Granite	Sri Surya Granites	Sri Surya Granites, Prop: Sri B. Subba Reddy, Gandhi Nager 1st lane, Chimakurthy (V&M), PrakasamDistrict.Ph. No. 98495 21555	19711/R3-2/2003, 05/10/2006	3.271	10/9/2006	10/8/2026	-	-	10/9/2006	Working	Non-captive	DEIAA/AP/PKM/11/MIN/2017-67, dt:03-08-2017	15-34-48.6193 79-49-22.55431	Opencast
107	Black Galaxy Granite	Sri Vasavi Granites	Sri Vasavi Granites, Prop: Sri Sidda.Pandu Ranga Rao, Siddavari Street, Chimakurthy(P.O, V&M), PrakadamDisrict. Ph.No. 92464 68528	8003/R2-2/2015, 30/04/2015	0.583	12/7/2011	12/6/2031	-	-	12/7/2011	Working	Non-captive	DEIAA/AP/PKM/63/MIN/2017-209, dt:12-03-2018	15-35-12.41051 79-49-54.81958	Opencast
108	Black Galaxy Granite	Sri Vasavi Granites	Sri Vasavi Granites, Prop: Sri Sidda.Pandu Ranga Rao, Siddavari Street, Chimakurthy(P.O, V&M), PrakadamDisrict. Ph.No. 92464 68528	8004/R2-2/2015, 30/04/2015	3.889	12/7/2011	12/6/2031	-	-	12/7/2011	Working	Non-captive	DEIAA/AP/PKM/62/MIN/2017-210, dt:12-03-2018	15-35-09.24749 79-50-00.60057	Opencast
10	Black Galaxy	Sri Venkata Sai Granites	Sri Venkata Sai Granites,	21527/R3-1/2009,	2.728	9/6/2010	9/5/2030	-	-	9/6/2010	Working	Non-captive	DEIAA/AP/PKM/53/MIN/2017-	15-35-47.82 79-50-24.19	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
9	Granite		Mg.P.K. Rama Mohana Rao, Door No:4-498(16), 2nd Line, Pandaripuram, Ongole,	19/07/2010									86, dt:15-12-2017		
110	Black Galaxy Granite	Sudharsan Granites	Sudharsan Granites, Prop.Ch. Badari Narayana, No:11/5, Main Bazaar, Chimakurthy (V&M), Prakasam District.	34476/R3-2/2000, 17/06/2002	1.141	7/20/2002	7/19/2022	-	-	7/20/2002	Non Working	Non-captive		15-35-02.38160 79-49-24.40738	Opencast
111	Black Galaxy Granite	Swathi Granites	Swathi Granites, Prop: Sri Guda Rama Mohan, R L Puram Village, Chimakurthy (M), Prakasam District. Ph.No. 98491 15621	13183/R3-1/2010, 07/01/2011	1.429	6/27/2011	6/26/2031	-	-	6/27/2011	Working	Non-captive	SEIAA/AP/PKM-201/2013-4911, dt:25-10-2013	15-35-14.37904 79-49-54.48930	Opencast
112	Black Galaxy Granite	Veerabadra Minerals (P) Limited	Veerabadra Minerals (P) Limited, MD. G. Pratap Reddy, # 3A, Siva Sai Sannidhi, Plot No. 32, Opp. Shirdi Saibaba Temple, Hindinagar, Panjagutta, Hyderabad.	12728/R3-1/2012, 23/01/2013	1.861	3/6/2013	3/5/2033	-	-	3/6/2013	Working	Non-captive	SEIAA/AP/PKM-164/2013, dt:03-10-2013	15-35-17.40 79-50-7.96	Opencast
113	Black Galaxy Granite	Venus Granites	Venus Granites, Mg.P. Sri K. Yusuff Basha, D.No.4/5P, Bareethi Street, Fire Road, Salecucc District, Tamilanadu.	6534/R3-1/2013, 10/04/2013	3.521	12/22/2008	12/21/2028	-	-	12/22/2008	Working	Non-captive	DEIAA/AP/PKM/39/MIN/2017-137, dt:13-11-2017	15-35-23.42322 79 48 57.54282	Opencast
114	Black Galaxy Granite	Vijay Mining (P) Limited	Vijay Mining (P) Limited, Director Sri C. Vijaya Kumar Reddy, H.No.8-2-686, Road No. 12, Banjarahills, Hyderabad.	9440/R3(2)/2006, 04/04/2006	1.862	3/5/2004	3/4/2024	-	-	3/5/2004	Working	Non-captive	SEIAA/AP/PKM-185/2013, dt:23-10-2013	15-36-10.37 79-48-38.26	Opencast
115	Black Galaxy Granite	Vijay Mining (P) Limited	Vijay Mining (P) Limited, Director Sri C. Vijaya Kumar Reddy, H.No.8-2-686, Road No. 12,	38017/R3-2/2006, 27/12/2008	4.277	2/24/2009	2/23/2029	-	-	2/24/2009	Working	Non-captive	SEIAA/AP/PKM-127/2013-1770, dt:20-06-2013	15-36-04.7 79-48-37.35	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
116	Black Galaxy Granite	Vishnu Minerals Mg. Partner G. Vanaja	Banjarahills , Hyderabad. Vishnu Minerals Mg. Partner G. Vanaja, Ashook Nagar, Havambavi, Ballary, Karnataka State.	26816/R3-2/2009, dt.26/06/2018	2.631	9/4/2012	9/3/2032	-	-	9/4/2012	Working	Non-captive	SEIAA/AP/PKM-297/2015, dt:20-11-2015	15-36-39.15613 79-48-15.27174	Opencast
117	Black Galaxy Granite	Vishnu Minerals Mg. Partner G. Vanaja	Vishnu Minerals Mg. Partner G. Vanaja, Ashook Nagar, Havambavi, Ballary, Karnataka State.	20236/R3(2)/2007, 29/06/2007	4.048	10/24/2009	10/23/2029	-	-	10/24/2009	Working	Non-captive	SEIAA/AP/PKM-138/2013, dt:10-07-2013	15-36-38.49183 79-48-11.74340	Opencast
118	Black Galaxy Granite	VIVA Granites	VIVA Granites, Mg.P Sri K. Vijay Kumar Reddy, N.S.P. colony, Main Road, Chimakurthy, Prakasam District. Ph.No. 98492 33088.	24476/R3-2/2008, 12/02/2009	1.611	2/19/2009	7/6/2029	-	-	2/19/2009	Working	Non-captive	SEIAA/AP/PKM-89/2013-708, dt:30-04-2013	15-35-19.99275 79-49-51.02610	Opencast
119	Black Galaxy Granite	Yak Granite (Industries) Pvt Ltd	Yak Granite (Industries) Pvt Ltd, C/o Balaji, No.250, Ashook Nager,Chennai-600086. Ph.No. 98494 88369	19771/R3-2/2007, 21/07/2007	8.094	4/26/2008	4/25/2028	-	-	4/26/2008	Working	Non-captive	SEIAA/AP/PKM-176/2013, dt:08-10-2015	15-35-51.60 79-48-21.18	Opencast
120	Black Galaxy Granite	Yak Granite (Industries) Pvt Ltd	Yak Granite (Industries) Pvt Ltd, C/o Balaji, No.250, Ashook Nager, Chennai-600086.	30179/R3-2/2006, 17/11/2006	8.094	11/22/2006	11/21/2026	-	-	11/22/2006	Non Working	Non-captive	SEIAA/AP/PKM-175/2013, dt:08-10-2015	15-34- 51.35569 79 -49-29.06391	Opencast
121	Black Galaxy Granite	Ongole Galaxy	Ongole Galaxy, Mg.P.Ch. Badari Narayana, No:11/5, Main Bazaar, Chimakurthy (V&M), Prakasam District. Ph.No. 98492 66779	9673/R3-2/2013, dated 05/01/2017	1.234	1/12/2018	1/11/2038	-	-	1/12/2018	Working	Non-captive	DEIAA/AP/PKM/07/MIN/2017-54, dt:03-08-2017	15-34-57.79166 79 49 32.23653	Opencast
122	Black Galaxy Granite	Krishna Sai Granites	Krishna Sai Granites, Mg.Part. Sri SiddaVenkateswara Rao, S.V.R. Complex, 1st Floor, Magamur	214/R3-2/2015, dt.28/05/2018	0.404	7/23/2018	7/22/2038	-	-	7/23/2018	Working	Non-captive	SEIAA/AP/PKM-304/2015-4973, dt:20-11-2015	15-35-40.24 79-48-41.49	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Road, Ongole-523002												
123	Black Galaxy Granite	Karthikeya MNRL	Karthikeya MNRL, Mg.P: Sri Satti Naga Ramcharan Reddy, Villa No.21 GR Sun Villas, behind Prestige Tranquility, Nimbekaipura, Mainroad, Bangalore. Traferredfrom Sri S.L.N. Reddy	5477/D9/2023 , dt:08-05-2023	3.785	6/12/2023	3/26/2039	-	-	6/12/2023	Non Working	Non-captive	SEIAA/AP/PKM/MIN/01/2018/493, dt:11-06-2018	15-36-23.58884, 79-48-24.77913	Opencast
124	Black Galaxy Granite	N.V.Exports	N.V.Exports, Mg.Part. Sri N.Venkateswara Reddy, Plot No.A-7/Bm APIIC Industrial Estate, Kurnool Road, Ongole	7749/D9/2019 dt.05/03/2021	2.749	3/18/2021	3/17/2041	-	-	3/18/2021	Working	Non-captive	SEIAA/AP/PKM/MIN/10/2020/2265-, dt:18-03-2021	15-35-23.10435 79-48-40.15756	Opencast
125	Black Galaxy Granite	Sri Y.Ramu	Sri Y.Ramu, S/o. Ramanarasaiah, D.No.8-217-13/1, Rajiv Nagar, Near Alavala Apartment, Lawyerpet, Ongole.	1995/D9/2018 dt.25/05/2021	1.578	6/4/2021	6/3/2041	-	-	6/4/2021	Working	Non-captive	SEIAA/AP/PKM/MIN/01/2020/1598-, dt:04-06-2021	15-35-36.52296 79 48-59.83190	Opencast
126	Black Galaxy Granite	Alla Ravi	Alla Ravi, H.No. 5-411a, 1st Line, Venkateswara Nagar Colony, Kurnool Road Ongole, Prakasam District	1934/D9/2019 , dt. 08-07-2021	3.691	8/5/2021	8/4/2041	-	-	8/5/2021	Non Working	Non-captive	SEIAA/AP/PKM/MIN/09/2020/2120-889, dt:05-08-2021	15-40-33.53555 79-52-42.30319	Opencast
127	Black Galaxy Granite	Siva Mines	Siva Mines, Sri M Krishna Reddy, S/o. Punna Reddy, Plot No. 183, Road No. 11, Prashasan Nagar, Jubilee Hills, Shaikpet, Hyderabad	904/D9/2019, dt. 06/07/2021	0.910	1/25/2022	1/24/2042	-	-	1/25/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/12/2019-1507-88, dt:25-01-2022	15-34-47.95617 79-50-11.77014	Opencast
128	Black Galaxy Granite	Balaji Mines	Balaji Mines, Mg. Partner Sri V. U.S.B. Bhushan Kumar, Plot No. 183, Road No. 11, Prashasan Nagar, Jubilee Hills, Shaikpet,	420/D9/2019, dt. 13/05/2021	1.946	1/25/2022	1/24/2042	-	-	1/25/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/12/2019-1510-86, dt:25-01-2022	15-35-36.67098 79-49-05904	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Hyderabad												
129	Black Galaxy Granite	Krishna Mines	Krishna Mines, Sri M Krishna Reddy, S/o. Punna Reddy, Plot No. 183, Road No. 11, Prashasan Nagar, Jubilee Hills, Shaikpet, Hyderabad	903/D9/2019, dt. 04-05-2021	2.225	1/25/2022	1/24/2042	-	-	1/25/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/12/2019-1504-89, dt:25-01-2022	15-35-52.00478 79 49 39.44377	Opencast
130	Black Galaxy Granite	RRR Granites	RRR Granites, Mg. Partner: Sri Chaluvadi Venkata Naga Raju, S/o. Nageswara Rao, D.No. 7-64, Navbharath Buildings, Kurnool Road, Ongole, Prakasam District	4728/D9/2020, dt. 20-05-2022	2.950	6/2/2022	6/1/2042	-	-	6/2/2022	Working	Non-captive	SEIAA/AP/CTR/MIN/1/2021/2746, dt:02-06-2022	N15°34'50.14929" E79°49'11.56999"	Opencast
131	Black Galaxy Granite	M/s. Naandhi Granites India Private Limited.	M/s. Naandhi Granites India Private Limited., Joint Venture with M/s. APMDC Limited. D.No. 294/1D, 100 feet. Tadigadapa to Enikepadu Road Kanuru, Vijayawada	16143/D9/2016, dt. 08-06-2022	6.382	6/16/2022	6/15/2042	-	-	6/16/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/5/2021-3171, dt:16-06-2022	15-35-22.40031 79 49 04.04780	Opencast
132	Black Galaxy Granite	M/s. Bash Granites	M/s. Bash Granites, Mg.Part: Sri K. Yusuff Basha, 4/59, Bharthi Street, Swarnapuri, 5 Roads, Salem -636 004.	14215/D9/2017, dt. 29-07-2022	0.708	8/12/2022	8/11/2042	-	-	8/12/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/04/2022-4202, dt:12-08-2022	15-35-23.52897, 79-49-00.29875	Opencast
133	Black Galaxy Granite	M/s. Bash Granites	M/s. Bash Granites, GPA holder Sri R.P. Ravi Chandran, D.No. 37-1-5(17), Raju Tutorial College Road, Santhapet, Ongole, Prakasam District.	5108/D9/2018, dated: 29-06-2022	3.000	8/12/2022	8/11/2042	-	-	8/12/2022	Non Working	Non-captive	SEIAA/AP/MIN/PKM/04/2022-4193, dt:12-08-2022	15-35-56.58569 79-49-14.2268	Opencast
134	Black Galaxy Granite	M/s. Siva Mines	M/s. Siva Mines, Mg. Partner: Sri M. Krishna Reddy, S/o. Punna Reddy, Plot	12021/D9/2018, dt. 13-05-2021	3.945	9/6/2022	9/5/2042	-	-	9/6/2022	Non Working	Non-captive	SEIAA/AP/MIN/PKM/12/2019-1505-543, dt:14-09-2022	15-34-47.95617 79-50-11.77014	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			No. 183, Road No. 11, Prashasan Nagar, Jubilee Hills, Shaik Pet, Hyderabad -500033.												
135	Black Galaxy Granite	M/s. Parvathi Mines	M/s. Parvathi Mines, Mg. Partner: Sri V.U.S.B. Bhushan Kumar, S/o. Chandra Rao, Plot No. 183, Road No. 11, Prashasan Nagar, Jubilee Hills, Shaik Pet, Hyderabad -500033.	12020/D9/2018, dt. 13-05-2021	1.100	9/14/2022	9/13/2042	-	-	9/14/2022	Non Working	Non-captive	SEIAA/AP/MIN/PKM/02/2020-1693-508, dt:06-09-2022	15-36-31.0748 79-48-28.9805	Opencast
136	Colour Granite	Manikanta Minerals	Manikanta Minerals, Mg. Parner Sri SiddaVenkateswara Rao, S.V.R. Complex , M.M. Road, Ongole, Prakasam District.(Four leases clubbing single lease)	10708/R3-1/2011, dt:9-08-2011	16.892	10/5/2011	4/29/2028	-	-	10/5/2011	Non Working	Non-captive	SEIAA/AP/PKM/MIN/01/2016/1-1247, dt:02-09-2016	15-40-05.22174 79 52-46.55867	Opencast
137	Road metal	N. Hanumantha Rao	N. Hanumantha Rao, S/o Govindaiah, S2 Classic Recidency, Brindavannagar 4th Lane, Anjaiah Road, Ongole.	416/Q/09 dt.9/8/2010	4.000	10/1/2010	9/30/2025	-	-	10/1/2010	Working	Non-captive	P-586/APPCB/ZO-VJA/CFE&CFO/RED/2019, dt:19-01-2019	15-36-35.60 79-47-28.92	Opencast
138	Road metal	Sai Lakshmi Stone Crusher	Sai Lakshmi Stone Crusher, Y. Narasimha Reddy, Buddawada Village, Chimakurthy Mandal, Prakasam District.	1509/Q3/2013 dt.13/05/2013	1.093	6/14/2013	6/13/2028	-	-	6/14/2013	Working	Non-captive	DEIAA/AP/PKM/44/MIN/2017-175, dt:15-12-2017	15-35-24.33 79-48-51.42	Opencast
139	Road metal	Sri S.Bhaskara Rao	Sri S.Bhaskara Rao, S/o.Venkateswarlu, D.No.42-1-153(3), ThurpuKammapalem, Near Kothapatnam, Ongole.	198/Q1/2019, dt.07/09/2020	4.881	10/8/2020	10/7/2030	-	-	10/8/2020	working	Non-captive	SIEEA/AP/PKM/MIN/02/2020/1743-, dt:08-07-2020	15-35-27.08414 79-48-16.99246	Opencast
14	Gravel	Sri M. Seshagiri Rao	Sri M. Seshagiri Rao, S/o M.Venkaiah,	1576/Q3/2017 , dt.29-03-	1.866	6/21/2018	6/20/2023	-	-	6/21/2018	Non Working	Non-captive	DEIAA/AP/PKM/40/MIN/2017-	15-35-40.37 80-09-07.65	Opencast

APSAC, GoAP

DMG, GoAP

S I. N o	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
0			H.No.3.27, Ammanabrole(V), N.G.Padu(M)	2018									176, dt:15-12-2017		
141	Chalcedony Pebbles & Gravel	M/s Bhuvanewari Enterprises	M/s Bhuvanewari Enterprises, Prop.SriV.Phani Kumar, S/o Punnaiah, D.No.76/101/1/11/E3, Near Venkateswara Swamy Temple, Vasavi Nagar, Ballary Road, Kurnool.	1614/Q1/19, Dt.12/11/2020	1.121	2/5/2021	2/4/2026	-	-	2/5/2021	Working	Non-captive	SEIAA/AP/PKM/MIN/02/2020/1699-, dt:05-02-2021	15° 14' 13.73901'' 79° 59' 03.45181''	Opencast
142	Gravel	Radithi Venkata Rao	Radithi Venkata Rao, S/o. Rangaswamy, D.No. 35-1/1-18/3, Near Jayaram Theater, Sanjay Gandhi Nagar 1st Line, Ongole, Prakasam District	4685/Q1/2021, dt. 30-04-2022	1.163	6/8/2022	6/7/2027	-	-	6/8/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/02/2022/3971, dt:08-06-2022	15-26-43.15866 80-00-10.15163	Opencast

Minor Mineral Lease details of Markapuram Office, Prakasam District

Sl. N o.	Name of the Mineral	Name of the Lessee	Address & Contact No. of the Lessee	Mining Lease Grant Order No. & Date	Area of mining lease (ha)	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd ...renewal)		Date of commencement of Mining Operation	Status (Working/ non-working/ Temp. working for dispatch etc.,)	Captive/ Non-captive	Obtained environmental clearance (YES/No), if Yes Letter No. with date of grant of EC	Location of the Mining Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
1	Iron Ore	UBR Minerals	UBR Minerals, Mg. Partner: Sri P. Udaya Bhaskar Rao, H.No. 27-1-1642, Lakshmi Nagar, Balaji Nagar, Nellore - 524002, Ph.No.9849045475	GO.Ms.93, dt.31-03-2008	23.903	9/18/2010	9/17/2030	-	-	9/18/2010	Non Working	Non-captive	SEIAA/AP/P RK-03/2008-269, dt:08-05-2009	16-03-37.5 79-28-16.6	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
2	Black Granite	Sri Sailam Granites	Sri Sailam Granites, Prop: Sri Y. Laxmi Narayana Yadav, S/o. Pakkirappa, D.No. 13/472, Prasanthi Nagar, Tadipathri, Ananthapur District, Ph.No.9848126153	10200/R3(2)/2003, dt.26-05-2003	1.247	6/25/2003	6/24/2023	-	-	6/25/2003	Working	Non-captive	DEIAA/AP/PKM/44/MIN/2017-144, dt:13-11-2017	15-24-01.84174 79-32-04.27071	Opencast
3	Black Granite	Sri Srinivasa Granites	Sri Srinivasa Granites, Mg. Partner: Sri T.C. Srinivassulu, D.No. 15/186, C.B. Road, Tadipatri Village & Mandal, Prakasam District., Ph.No.9849102600	15922/R3(2)/2003, dt:19-06-2003	1.000	6/25/2003	6/24/2023	-	-	6/25/2003	Working	Non-captive	-	15-24-12.53391 79-32-20.01462	Opencast
4	Black Granite	Sri Srinivasa Granites	Sri Srinivasa Granites, Mg. Partner: Sri T.C. Srinivassulu, D.No. 15/186, C.B. Road, Tadipatri Village & Mandal, Prakasam District., Ph.No.9440243150	22152/R3(2)/2004, dt. 13-12-2004	2.000	2/9/2005	2/8/2025	-	-	2/9/2005	Working	Non-captive	-	15-24-03.06559 79-32-12.71809	Opencast
5	Black Granite	Sri Srinu Granites	Sri Srinu Granites, Proptx: Smt. T.Nagarathna, C.B. Road, Tadipatri, Ananthapur District, Ph.No.9848740888	8443/R3-2/2005, dt. 11-05-2005	1.498	8/11/2005	8/10/2025	-	-	8/11/2005	Working	Non-captive	DEIAA/AP/PKM/69/MIN/2017-205, dt:12-03-2018	15-23-57.10489 79-31-42.85461	Opencast
6	Black Granite	Sri Y. Laxmi Narayana Yadav	Sri Y. Laxmi Narayana Yadav, S/o. Pakkirappa, D.No. 13/472, Prasanthi Nagar, Tadipathri, Ananthapur District, Ph.No.9848126153	41323/R3-1/2005, dt. 11-09-2006	2.000	9/21/2006	9/20/2026	-	-	9/21/2006	Working	Non-captive	SEIAA/AP/PKM-221/2014-1033, dt:08-01-2015	15-24-02.27090 79-32-01.16506	Opencast
7	Black Granite	Sri Srinivasa Granites	Sri Srinivasa Granites, Mg. Partner: Sri T.C. Srinivassulu, D.No. 15/186, C.B. Road, Tadipatri Village & Mandal, Prakasam	32952/R3-2/2006, dt. 18-10-2006	1.482	10/30/2006	10/29/2026	-	-	10/30/2006	Working	Non-captive	-	15-24-08.95362 79-32-18.43134	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			District. , Ph.No.9849102600												
8	Black Granite	Sri Sai Balaji Granites	Sri Sai Balaji Granites, Mg. Partner: Sri. K. Somasekhara Reddy, H.No. 7-53(2), Pallapotulavari Street, Chimakurthy Village & Mandal, Prakasam District , Ph.No.9849775144	35759/R3(2)/2006, dt. 20-11-2006	1.000	1/5/2007	1/4/2007	-	-	1/5/2007	Working	Non-captive	SEIAA/AP/P KM-242/MIN/2014/186.25&183.18, dt:26-05-2022	15-38-40.56593 79-35-33.75647	Opencast
9	Black Granite	K. Viswanathai ah	K. Viswanathaiah, S/o. KasthuriYanadaiah, H.No.5-325/1, Gayathri Nagar, Tirupathi, Chittoor District., Ph.No.9000100623	12677/R3-2/2008, dt:05-06-2008	2.954	6/21/2008	6/20/2008	-	-	6/21/2008	Working	Non-captive	SEIAA/AP/P KM-253/2015-43, dt:04-04-2015	15-24-41.60315 79-31-38.12234	Opencast
10	Black Granite	Sri P. Radha Krishna	Sri P. Radha Krishna, S/o. Kotaiah, Ploinenicheruvu, Ankabupalapuram Village, Valetivaripalem, Nellore District , Ph.No.9032015155	22583/R3-1/2009, dt. 09-09-2009	1.000	10/15/2009	10/14/2009	-	-	10/15/2009	Working	Non-captive	SEIAA/AP/P KM/MIN/11/2020/2393/158.26&153.58-368, dt:28-06-2021	15-24-52.29894 79-31-39.19929	Opencast
11	Black Granite	Chandra Granites	Chandra Granites, Prop: Sri Chandramouli, Nancharam Colony, Kundukur (V&M), Prakasam District , Ph.No.9848622444	49229/R3-1/2010, dt. 30-04-2011	1.875	5/6/2011	5/5/2011	-	-	5/6/2011	Working	Non-captive	-	15-24-52.80263 79-31-44.449	Opencast
12	Black Granite	Khadar Vali Granites	Khadar Vali Granites, Prop: Sri S. Khadar Valli, D.No. 7/26, Shankavaram Village, Kanigiri Mandal, Prakasam District., Ph.No.9703658441	50198/R3-1/2010, dt. 23-05-2011	2.000	6/8/2011	6/7/2011	-	-	6/8/2011	Non Working	Non-captive	-	-	Opencast
13	Black Granite	Dastagiri Swamy Granites	Dastagiri Swamy Granites, Mg. Partner: Sri G. Raghavendra Reddy, D.No. 12/35, Sankavaram Village,	9405/R2-2/2014, dt. 08-10-2014	1.874	11/12/2014	7/22/2014	-	-	11/12/2014	Working	Non-captive	DEIAA/AP/P KM/88/MIN/2018-244, dt:24-07-2018	15-24-44.28644 79-31-38.18746	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Kanigiri Mandal, Prakasam District, Ph.No.9866377312												
14	Black Granite	Sri Krishna Granites	Sri Krishna Granites, Mg. Partner Sri G. Krishna, H.No. 33/2, M.K. Building, Near Radhika Theatre, Bellary -583 10, Karnataka., Ph.No.9490112365	9996/R2-6/2012, dt. 13-05-2015	11.510	9/28/2015	9/27/2035	-	-	9/28/2015	Working	Non-captive	SEIAA/AP/P KM-214/2014-1978, dt:28-09-2015	-	Opencast
15	Black Granite	Sri Lakshmi Srinivasa Granites	Sri Lakshmi Srinivasa Granites, Mg. Director: Sri Nune Venkata Subrahmanyam, Ph.No.9948033585	20069/R3-2/2018, dt. 27-02-2016	1.000	4/26/2016	10/4/2029	-	-	4/26/2016	Working	Non-captive	SEIAA/AP/P KM-277/2015-2786, dt:03-08-2015	15-24-02.35100 79-31-48.02222	Opencast
16	Black Granite	Venkateswara Granites	Venkateswara Granites, Prop: Sri Gogineni Tarun Chowdary, S/o. Prdeep Kumar, PrajaVydyasala, Palnadu Road, Vinukonda, Guntur District, Ph.No.8522082742	49238/R3-2/2013, dt. 23-03-2017	2.000	5/15/2017	5/14/2037	-	-	5/15/2017	Working	Non-captive	SEIAA/AP/P KM-319/2015, dt:27-11-2015	15-38-46.03387 79-35-37.59640	Opencast
17	Black Granite	Daddaala Narayana	Daddaala Narayana, S/o. PeddaMalakondaiah, Perugupalli Village, Bellavaram Post, Veligandla Mandal, Prakasam District., Ph.No.9912014568	6980/R3-2/2016, 06-02-2018	1.607	3/28/2018	3/27/2038	-	-	3/28/2018	Working	Non-captive	DEIAA/AP/P KM/46/MIN /2017-179, dt:15-12-2017	15-23-50.74984 79-31-54.19262	Opencast
18	Black Granite	Sri Sai Balaji Granites	Sri Sai Balaji Granites, Mg. Partner: Sri. K. Somasekhara Reddy, H.No. 7-53(2), Pallapotulavari Street, Chimakurthy Village & Mandal, Prakasam District, Ph.No.9493366354	24262/R3-2/2017, dt. 07-05-2018	3.000	5/9/2018	5/8/2038	-	-	5/9/2018	Working	Non-captive	DEIAA/AP/P KM/61/MIN /2017-218, dt:12-03-2018	15-38-36.52472 79-35-38.7828	Opencast
19	Black Granite	Andhra Granites &	Andhra Granites & Minerals, Mg. Partner	11003/R3-2/2016, dt.28-	1.609	7/26/2018	7/25/2038	-	-	7/26/2018	Working	Non-captive	DEIAA/AP/P KM/63/MIN	15-23-58.76949	Opencast

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S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)	
						From	To	From	To							
		Minerals	Smt. N. Sampurna, W/o. Mohan Rao, D.No. 45-1-114, K.P. Road, Ongole, Prakasam District., Ph.No.9490112365	05-2018									e /2017-208, dt:12-03-2018	79-32-00.07466		
20	Black Granite	PetluriHanumantha Rao	PetluriHanumantha Rao, S/o. Kondaiah, Balaji Towers, flat No. 305, Brundavan Nagar, 3rd Line, Anjaiah Road, Ongole., Ph.No.9849019179	19950/R3-2/2017, dt. 22-05-2018	2.000	10/25/2018	10/24/2038				10/25/2018	Working	Non-captive	DEIAA/AP/PKM/60/MIN/2017-217, dt:12-03-2018	15-18-36.95944 79-32-29.67406	Opencast
21	Black Granite	BMR Avani Granites	BMR Avani Granites, Mg. Partner: Sri B. Ravi Kumar, S/o. Prasada Rao, H. No. 8-1-38, JammichettuVeedhi, Kothapeta, Ongole, PrakasamDistrit, Ph.No.9849139119	670/D9/2021, dt. 19-02-2021	1.618	3/16/2021	2/18/2038				3/16/2021	Working	Non-captive	DEIAA/AP/PKM/56/MIN/2017-193, dt:19-02-2018	15-24-14.90428 79-32-24.24446	Opencast
22	Black Granite	Sri Sri Sai Raja Mahendra Granites	Sri Sri Sai Raja Mahendra Granites, Mg. Partner Smt. MukkuAdilakshamma, W/o. Sri M. Kasi Reddy, H.No. 8-123/4a, Kothapeta, Kanigiri Village & Mandal, Prakasam District , Ph.No.9849145567	6241/D9/2019, dt. 15-09-2021	4.341	11/11/2021	11/10/2041				11/11/2021	Working	Non-captive	SEIAA/AP/PKM/MIN/2021-2839/158.1 15&158.13 4.377, dt:11-11-2021	15-24-42.67812 79-32-39.31561	Opencast
23	Black Granite	Andhra Granites & Minerals	Andhra Granites & Minerals, Mg. Partner Smt. N. Sampurna, W/o. Mohan Rao, D.No. 45-1-114, K.P. Road, Ongole, Prakasam District., Ph.No.9490112365	3396/D9/2020, dt.19-04-2021	1.000	1/18/2022	1/17/2042				1/18/2022	Working	Non-captive	SEIAA/AP/PKM-252/2015, dt:04-04-2015	15-24-03.65200 79-32-01.55490	Opencast
24	Black Granite	ChittaRahas ekhara Reddy	ChittaRahas ekhara Reddy, S/o. Chinna Konda Reddy, Door No. 7-567-2, Beside Bajaj Showroom, Chimakurthy	6277/D9/2019, dt. 18-05-2022	1.739	5/24/2022	5/23/2042				5/24/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/01/2021/2766 /163.19&16 0.16-587,	15-18-43.68085 79-32-44.33477	Opencast

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						From	To	From	To						
			Village & Mandal, Prakasam District , Ph.No.9381680189										dt:24-05-2022		
25	Black Granite	Andhra Granites & Minerals	Andhra Granites & Minerals, Mg. Partner Smt. N. Sampurna, W/o. Mohan Rao, D.No. 45-1-114, K.P. Road, Ongole, Prakasam District., Ph.No.9490112365	3395/D9/2020, dt.19-04-2021	2.992	7/15/2022	7/14/2042	-	-	7/15/2022	Working	Non-captive	SEIAA/AP/PKM-251/2015-41/199.488&196.30, dt:08-11-2022	15-24-04.28932 79-31-50.49661	Opencast
26	Black Granite	M/s. Usman Granites	M/s. Usman Granites, Mg.Part: Sri Sk. Usman, H.No.11-119, DorvuBajar, 11th ward, Kanigiri, Prakasam District	1789/D9/2019, dt:30-06-2021	4.921	7/18/2022	7/17/2042	-	-	7/18/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/12/2019/1555-64, dt:11-06-2020	15-24-17.45260 79-31-35.91467	Opencast
27	Black Granite	M/s. Stanley Minerals LLP.	M/s. Stanley Minerals LLP., Part: Sri V.Vamsi Krishna, H.No.6-3-596/47/A/1, Plot No.E, AdvaitaNestam, Venkataramana Colony, Khairathabad, Telangana - 500034, Ph.No.9849912400	8505/D9/2022, dt:07-02-2023	3.84	2/7/2023	2/6/2043	-	-	2/7/2023	Working	Non-captive	SEIAA/AP/MIN/PKM/11/2022/4725/, dt:28-12-2022	15-25-19.89120 79-32-29.06875	Opencast
28	Black Granite	Swathi Minerals	Swathi Minerals, Mg. Partner: Sri G. Venkata Kaushik, H.No. 8-57/2, Mangamoor Road, Ongole, Prakasam District lease transfer from M/s. Kapotheswara Swamy Minerals, Ph.No.9677904617	8658/D9/2021, dt. 21/04/2022	4.37	7/17/2021	7/16/2041	-	-	7/17/2021	Working	Non-captive	SEIAA/AP/PKM/43/MIN/2017-143/2, dt:13-07-2023	15-17-29.77264 79-35-17.55072	Opencast
29	Colour Granite	ChilakalaPrathap Reddy	ChilakalaPrathap Reddy, D.No. 54/64, 2nd Floor, 1st Cross, Gangappa Lay-out, Shanthi Nagar, Virgo Nagar Post, Doorawani Nagar, Near Nayanas Bakery, Bangalore.,	2423/R3-2/2012, dt. 04-06-2016	9.932	11/16/2016	11/15/2036	-	-	11/16/2016	Working	Non-captive	SEIAA/AP/PKM-280/2015/2803, dt:03-05-2015	15-11-46.70294 79-21-18.48723	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Ph.No.9739008178												
30	Colour Granite	Harshitha Granites	Harshitha Granites, Prop: Smt. Smt. V. Susheela, W/o. Poli Reddy, Railway Station Road, Near St. Ann's School, Rayavaram Village, Markapuram Mandal, Prakasam District., Ph.No.9705574006	32048/D9/2017, dt. 10-02-2020	4.980	4/3/2020	4/2/2040	-	-	4/3/2020	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2019/88052, dt:29-06-2019	15-27-07.16475 79-38-09.72967	Opencast
31	Colour Granite	NadendlaKoteswara Rao	NadendlaKoteswara Rao, S/o. Sri Bhaskara Rao, Kurravanipalem Village, Korisapadu Mandal, Prakasam District , Ph.No.9704952642	5735/D9/2021, dt. 15-11-2022	4.715	12/22/2022	12/21/2042	-	-	12/22/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/05/2022/4323/, dt:03-08-2022	15-52-02.11835 79-42-40.03502	Opencast
32	Colour Granite, RM, Waste boulders , Gravel	Sri Mohammed Israr Ahamad	Sri Mohammed Israr Ahamad, Sri Mohammed Ibrahim Johari, D.No.40-1-90, Flat No.402, Sulthan's Ninth Avenue, Kanna Nagar, Benz Circle, Vijayawada-520010.	5733/D9/2021, dt. 04-05-2023	4.955	7/1/2023	6/30/2043	-	-	7/1/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/06/2022/4343/192.07&189.07, Dt:03-08-2022	15-52-27.10736 79-41-59.08057	Opencast
33	Quartz	Venkata Krishna Minerals	Venkata Krishna Minerals, Mg. Partner: K. Raja Mohan Reddy, No. 2/240, Narsingaraopet, Gudur, Nellore District , Ph.No.9441074036	GO.Ms. No. 82, dt. 03-02-2000	60.704	7/31/2000	2/4/2037	-	-	7/31/2000	Non Working	Non-captive	-	15-07-13.83 79-37-43.55	Opencast
34	Quartz	Veenus Minerals	Veenus Minerals, Prop: Sri Chadalavada Jayaram Babu, D.No. 4-5-10A/4/1 Vidyanagar, Guntur , Ph.No.9394494490	GO.Ms. No. 400, dt. 08-10-2002	18.741	9/30/2003	9/29/2023	-	-	9/30/2003	Non Working	Non-captive	SEIIAA/AP/PKM/MIN/01/2018-487, dt:19-04-2018	15-05-34.84753 79-22-21.74457	Opencast
35	Quartz	Sk. Yasdani Basha	Sk. Yasdani Basha, S/o. Mahaboob Saheb, 4th ward, Kanigiri -523230., Ph.No.9885782556	GO.Ms. No. 149, dt. 16-07-2004	9.494	11/1/2004	10/31/2024	-	-	11/1/2004	Non Working	Non-captive	-	15-28-37.59076 79-26-05.92590	Opencast
36	Quartz	Gayatri Minerals	Gayatri Minerals, S.V. Siva Reddy, Residing at H.No. 48, 2nd Line	GO.Ms. No. 221, dt. 04-10-2004	76.487	5/10/2005	4/1/2025	-	-	5/10/2005	Non Working	Non-captive	-	15-36-20.7 79-14-37.1	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)	
						From	To	From	To							
			Beach, Vanguard House, Chennai, Ph.No.9441074036													
37	Quartz	Y. Sateesh	Y. Sateesh, Owner, G.P.A. Holder, Sri S.K. Mahaboobvali, H.No. 8-17-128/58A, Nalla Banda Bazar, 8th ward, Giddaluru Post and Mandal, Prakasam District, Ph.No.9440510381	GO.Ms. No. 239, dt. 11-07-2006	4.919	6/28/2008	6/27/2028				6/28/2008	Working	Non-captive	SEIAA/AP/PKM-293/2015-4080, dt:21-09-2015	15-37-39.61590 79-21-58.89302	Opencast
38	Quartz	Gandikota Enterprises	Gandikota Enterprises, Mg. Director: Y. Vijayabhaskar Reddy, D.No. 37, Old Mahabalipuram Road, Kazhipattur Village, Padur Post, Chenigleput Taluk, Kancheepuram District, Tamil Nadu State, Ph.No.9347101685	GO.Ms. No. 47, dt. 09-02-2009	4.000	6/17/2009	6/16/2029				6/17/2009	Working	Non-captive	DEIAA/AP/PKM/26/MIN/2017-122, dt:13-11-2017	15-29-54.83689 78-56-47.19498	Opencast
39	Quartz	Addanki Sambasiva Rao	Addanki Sambasiva Rao, TRS Towers, Shop No. 12, Ganugapalem, Ongole, Prakasam District, Ph.No.9849912301	2477/R3-2/2011, dt. 12-08-2016	28.328	9/15/2016	9/14/2036				9/15/2016	Non Working	Non-captive	SEIAA/AP/PKM-226/2014, dt:18-01-2016	15-17-58.57311 79-24-37.35365	Opencast
40	Quartz	Stanley Mining Company Private Limited.	Stanley Mining Company Private Limited., Mg. Director Sri V. Vamsi Krishna, Plot No. 85, Flat No. 301, S.R. Residency, Amar Co-Op Society, Madhapur, Hyderabad, Ph.No.9849912400	2317/R3-2/2017, dt. 09/10/2017	18.622	11/16/2017	11/15/2037				11/16/2017	Working	Non-captive	SEIAA/AP/PKM/MIN/06/2017/338, dt:15-07-2017	15-27-41.80293 79-28-33.81694	Opencast
41	Quartz	Poosarla Minerals Private Limited.	Poosarla Minerals Private Limited., Mg. Director Sri P. Janaki Krishna, Pragathi Sapphire, Flat No. 501, Magantivari	12693/R3-2/2017, dt. 30/08/2018	6.859	10/5/2018	10/4/2038				10/5/2018	Non Working	Non-captive	SEIAA/AP/PKM/MIN/02/2018-587, dt:11-06-2018	15-21-49.3 79-18-08.8	Opencast

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						From	To	From	To						
			Street, Maruthi Nagar, Vijayawada												
42	Quartz	Smt Ch. Vanajakumari	Smt Ch. Vanajakumari, W/o. Veeranjanyulu, H.No. 1-20-6, Pamur Village and Mandal, Prakasam District , Ph.No.9441255324	14057/R3-2/2016, dt. 10-10-2018	2.400	11/14/2018	11/13/2038	-	-	11/14/2018	Working	Non-captive	SEIAA/AP/PKM/MIN/05/2018-599760, dt:14-08-2018	15-12-51.2978279-29-13.05074	Opencast
43	Quartz	Southern Rocks & Minerals (P) Ltd.	Southern Rocks & Minerals (P) Ltd., Mg. Director Sri Pothula Rama Rao, Adjacent Industrial Estate, Kurnool Road, Ongole, Andhra Pradesh. , Ph.No.9032114473	2397/R3-2/2018, dt. 05-07-2019	5.000	7/15/2019	7/14/2039	-	-	7/15/2019	Non Working	Non-captive	SEIAA/AP/PKM/MIN/02/2019/83818, dt:03-05-2019	15-06-41.9373979-08-03.95694	Opencast
44	Quartz & Barytes	Amaravathi Mines and Minerals Pvt. Limited.	Amaravathi Mines and Minerals Pvt. Limited., Mg. Director: KanaparthiAndharaiah, S/o. Arjuna Rao, H.No. 5-24-34, PallakondavariVeedhi, Itmanagar, Tenali, Guntur District , Ph.No.8008161561	32037/R3-2/2017, dt. 05-07-2019	3.671	7/15/2019	7/14/2039	-	-	7/15/2019	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2019/849, dt:31-05-2019	15-27-25.5291479-08-49.35435	Opencast
45	Quartz	Stanley Mining Company Private Limited.	Stanley Mining Company Private Limited., Mg. Director Sri V. Vamsi Krishna, Plot No. 85, Flat No. 301,S.R. Residency, Amar Co-Op Society, Madhapur, Hyderabad, Ph.No.9849912400	2799/R3-2/2018, dt. 05-07-2019	4.900	8/29/2019	8/28/2039	-	-	8/29/2019	Working	Non-captive	SEIAA/AP/PKM/MIN/09/2018/686, dt:29-08-2019	15-20-11.5638119-15-23.64503	Opencast
46	Quartz	Sadhana Minerals	Sadhana Minerals, Mg. Partner: Sri K. Suresh Kumar Reddy, H.No. 1/116, Masthanvali Complex, Anilnagar, Chillakur By pass, SPSR Nellore District., Ph.No.9849056209	17061/D9/2016, dt. 04-03-2020	4.323	4/29/2020	4/28/2040	-	-	4/29/2020	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2019-894-5, dt:29-04-2020	15-14-29.9151579-29-17.61345	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
47	Quartz	Multielement Minerals Private Limited.	Multielement Minerals Private Limited., Director: Sri Rahim Khan, S/o. Ilyas Khan, Sy No. 326/C, Khazipur Village, Karimnagar Mandal, Karimnagar District, Ph.No.9845373523	1097/D9/2019, dt. 03/11/2020	4.937	11/27/2020	11/26/2040	-	-	11/27/2020	Working	Non-captive	SEIAA/AP/PKM/MIN/07/2019/11491, dt:27-11-2020	15-25-01.24324 78-59-00.04425	Opencast
48	Quartz	DS Max	DS Max, Prop: Sri KilaparthiVelankany Satish, Ground Floor, No. 1854, 17th Main, 5th Block, 30th B-Cross, HBR Layout, 1st stage, Bangalore, Karnataka. , Ph.No.9535278112	8210/D9/2020, dt. 08-01-2021	12.577	2/26/2021	3/30/2037	-	-	2/26/2021	Working	Non-captive	SEIAA/AP/PKM/-208/2013-5558, dt:25-10-2013	15-35-38.91610 79-31-28.15760	Opencast
49	Quartz	V. Srinivasulu	V. Srinivasulu, S/o. Venkateswarlu, House No. 7-267(60), Sujatha Nagar 2nd Line, Near Police Quarters, Lawyer pet, Ongole, Prakasam District, Ph.No.9394494490	14426/D9/2017, dt. 01/07/2021	3.428	8/24/2021	8/23/2041	-	-	8/24/2021	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2019-879-5, dt:24-08-2021	15-07-47.99979 79-08-36.48222	Opencast
50	Quartz	H.M. Mines and Minerals	H.M. Mines and Minerals, Mg. Partner Smt. P. Hemalatha, D.No. 1-744-A, Dwaraka Nagar, Kadapa, YSR Kadapa District. , Ph.No.9440669999	2270/D9/2020, dt. 18/05/2022	10.900	5/20/2022	5/19/2042	-	-	5/20/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/10/2020, dt:19-05-2022	15-51-18.30026 79-37-03.54208	Opencast
51	Quartz	SmtAkuthotaPrameela Devi	SmtAkuthotaPrameela Devi, D.No. 9-115, Muni Narayanasetty Street, Palamaneru Village, and Mandal, Chittoor District.	5790/D9/2021, dt. 17-06-2022	4.500	8/8/2022	8/7/2042	-	-	8/8/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2022/4047/183.18/180.10, dt:16-04-2022.	15-50-40.55075 79-37-33.29247	Opencast
52	Quartz	Raging River Mines and	Raging River Mines and Minerals Private Limited, Director Sri K. Suresh,	5994/D9/2021, dt. 21-10-2022	2.500	12/8/2022	12/7/2042	-	-	12/8/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/06/2022/4364	15-50-03.34966 79-36-	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)	
						From	To	From	To							
		Minerals Private Limited	House No. 16-2-329, Hydernagar, Kukatpally Mandal, Medchal, Malkajigiri District, Telangana., Ph.No.7731822222										/, dt:01-08-2022	41.80501		
53	Quartz	SreeDhanwi Infra	SreeDhanwi Infra, Partner : Smt. D.S. Suvarchala Devi, Plot No. 560, Flat No. 301, Mathurusri Nagar, Madapur Village, Serlingampalli Mandal, Rangareddy District, Ph.No.9491958883	13126/D9/2021, dt. 21-10-2022	3.995	12/8/2022	12/7/2042				12/8/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/06/2022/4363, dt:01-08-2022	15-36-17.4511679-18-28.86014	Opencast
54	Quartz	Shiva Microns	Shiva Microns, Mg. Partner. Sri Jaswanth Reddy, H.No. 3-55/1, BN Reddy Colony, Madanapalle Village and Mandal, Annamayya District, Ph.No.9966944887	860/D9/2022, dt. 14-11-2022	4.987	12/23/2022	12/22/2042				12/23/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/04/2022/4331/, dt:23-12-2022	15-26-01.8576279-02-24.49352	Opencast
55	Quartz	Shiva Microns	Shiva Microns, Mg. Partner. Sri Jaswanth Reddy, H.No. 3-55/1, BN Reddy Colony, Madanapalle Village and Mandal, Annamayya District, Ph.No.9966944887	861/D9/2022, dt. 11-11-2022	3.601	12/23/2022	12/22/2042				12/23/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/5/2022/4330/1, dt:23-12-2022	15-25-51.7885279-02-58.08134	Opencast
56	Quartz	M/s Millennia Minerals	M/s Millennia Minerals, Prop: Sri Sai Vishwanath, D.No. 64-5-4, 3F, Lords, Enclave, Patamata, Krishna District, Ph.No.9555089999	11467/D9/2021, dt. 09/12/2022	5.587	12/26/2022	8/9/2026				12/26/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/05/2008/215.25, dt:13-07-2023	15-15-41.0709379-23-29.40003	Opencast
57	Quartz	Venkata Sai Mines and Minerals	Venkata Sai Mines and Minerals, Mg. Partner: Smt. P. Geetha.	2356/D9/2021, dt. 09/12/2022	3.905	2/3/2023	2/2/2043				2/3/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2022/4111/183.68/180.50,	15-18-17.5690179-25-42.62270	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
													dt:21-04-2022		
58	Quartz	Venkata Sai Mines and Minerals	Venkata Sai Mines and Minerals, Mg. Partner: Smt. P. Geetha.	2357/D9/2021, dt. 09/12/2022	4.865	2/3/2023	2/2/2023	-	-	2/3/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2022/4112/183.67/180.49, dt:21-04-2022	15-18-16.84070 79-25-42.47757	Opencast
59	Quartz	Sri Shaik Lal Babu	Sri Shaik Lal Babu, H.No. 5-98, Mahaboob Nagar, Near post office, Darsi Village & Mandal, Prakasam District , Ph.No.9010440473	8520/D9/2021, dt. 31-01-2023	3.646	2/8/2023	2/7/2023	-	-	2/8/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/05/2022/4322 , dt:08-02-2023	15-36-26.28178 79-17-05.94407	Opencast
60	Quartz	SmtKarlaguntaBalamma	SmtKarlaguntaBalamma, W/o. Koteswara Rao, D.No. 74-24-25/2, F.No. 503, Ananda Sai Nilayam, Dhanekulavari Street, Ashok Nagar, Time Hospital Road, Opp: Kanuru, Vijayawada, Krishna District, Ph.No.8977755369	6666/D9/2021, dt. 31/01/2023	1.885	2/9/2023	2/8/2023	-	-	2/9/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/6/2022-4429, dt:09-02-2023	15-11-38.78537 79-24-45.34470	Opencast
61	Quartz	Sri P.B.V.V. Satyanarayana	Sri P.B.V.V. Satyanarayana, S/o. Sri Janardhana Rao, D.No. 23-33-17/1, Thomson Street, Visakhapatnam District-530001., Ph.No.8977755369	6667/D9/2021, dt. 31-01-2023	1.863	2/9/2023	2/8/2023	-	-	2/9/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/07/2022/4468 /, dt:24-08-2022	15-11-43.75843 79-24-44.48230	Opencast
62	Quartz	Sri K. Rajesh	Sri K. Rajesh, D.No. 3-127, Barlapudi Road, Movva Village, Kuchipudi Mandal, Krishna District., Ph.No.8977755369	6668/D9/2021, dt. 31-01-2023	4.900	2/9/2023	2/8/2023	-	-	2/9/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/8/2022/4528/1, dt:09-02-2023	15-12-04.92988 79-24-56.53956	Opencast
63	Quartz	Amogu Roy Minerals	Amogu Roy Minerals, Mg. Partner : Sri Gade Venkata Subba Reddy, S/o. Venkateswara	4808/D9/2020, dt. 31/01/2023	2.509	2/9/2023	2/8/2023	-	-	2/9/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/04/2022/4151/185.10/18	15-18-35.68059 79-25-36.82462	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)	
						From	To	From	To							
			Reddy, D.No. 9-1631, Main Street, GuthikondavaripalemKopolu (Rural), Prakasam District.										2, dt:18-05-2022.			
64	Quartz	M/s. Sri Gangammathalli Minerals	M/s. Sri Gangammathalli Minerals, Mg. Partner: Sri M Narasimhulu, S/o. Sri Narasimhulu, Lingasamudram Village & Mandal, Prakasam District., Ph.No.9700581336	9766/D9/2021, dt. 25-01-2023	3.577	2/13/2023	2/12/2043				2/13/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/05/2022/4314, dt:13-02-2023	15-07-28.30224 79-06-53.63126	Opencast
65	Quartz	M/s. Vishnu Mines and Minerals	M/s. Vishnu Mines and Minerals, Mg. Partner Sri Chinna Venkata Rami Reddy, Ph.No.9000557456	17808/D9/2017, dt. 20-12-2022	1.760	2/16/2023	2/15/2043				2/16/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/03/2019-862, dt:16-02-2023	15-09-38.45968 79-30-18.01839	Opencast
66	Quartz	Sri B.V.S. Sekhar Babu	Sri B.V.S. Sekhar Babu, S/o. Subba Rao, H.No. 9-110, Kusturibai Street, Markapuram Village & Mandal, Prakasam District.	5817/D9/2020, dt. 18/05/2023	4.900	7/15/2023	7/14/2043				7/15/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/11/2022/4720/206.09/203.05, dt:13-01-2023	15-20-31.62310 79-01-44.23190	Opencast
67	Quartz	Sri Bhagawan Minerals	Sri Bhagawan Minerals, Prop. SmtMachavarapu Sri Kumari H.No. 401, Swathi Residency, 3rd line, Nirmal Nagar, Ongole, Prakasam District, Ph.No.9440018112	4887/D9/2018, dt. 14-06-2022	4.820	06-07-2022	7/5/2042				06-07-2022	Working	Non-captive	SEIAA/AP/PKM/MIN/06/2019, dt:13-09-2019	15-17-46.99009 79-24-58.92702	Opencast
68	Quartz	K.R. Mines and Minerals	K.R. Mines and Minerals, Mg. Partner: Sri P.V. Subba Reddy, H.No.1-753, Dwaraka Nagar, Kadapa, YSR District, Ph.No.917779999	7665/D9/2020, dt. 10-02-2022	3.411	2/22/2022	2/21/2042				2/22/2022	Working	Non-captive	SEIAA/AP/PKM/IN/10/2020/2209-1, dt:22-02-2022	15-20-33.41506 79-02-22.60711	Opencast
69	Quartz	UBR Minerals	UBR Minerals, Mg. Partner: Sri P. Udaya Bhaskar Rao, H.No. 27-	16270/R3-2/2006, dt. 29-06-2018	171.538	1/11/2019	1/10/2039				1/11/2019	Working	Non-captive	-	15-26-09.52332 78-58-	Opencast

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S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)	
						From	To	From	To							
			1-1642, Lakshmi Nagar, Balaji Nagar, Nellore - 524002, Ph No. 9849045475, Ph.No.9866444515											56.89075		
70	Quartz	Chalapathi Minerals	Chalapathi Minerals, Prop: Sri Ch. Chalapathi Rao, P.No. 207, Roja Kishore Residency, Chechupeta, Tenali, Guntur District, Ph.No.9346709990	12530/R3-2/2016, dt. 24-01-2018	18.409	3/1/2018	2/28/2038				3/1/2018	Working	Non-captive	SEIAA/AP/PKM/MIN/10/2017-463, dt:01-03-2018	15-25-57.99405 79-06-35.91088	Opencast
71	Quartz	Photon Sticks	Photon Sticks, Prop: Sri Syed FazeelAhmeed, H.No.4-3/189, Friends Colony, Uppalaguda, Hyderabad lease transferred from M/s. Sai Impex. , Ph.No.7330333337	3142/D9/2022, dt. 16-03-2023	4.952	3/20/2023	1/30/2040				3/20/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/2019-954739, dt:31-01-2020	15-11-48.93336 79-18-23.26278	Opencast
72	Quartz	Midwest Granite Private Limited.	Midwest Granite Private Limited., Director: Smt. K Ranganayakamma, H.No. 8-2-684/3/25 & 26, Road No. 12, Banjara hills, Hyderabad., Ph.No.9989506858	6691/D9/2021, dt. 07/09/2021	21.012	9/16/2021	9/15/2023				9/16/2021	Working	Non-captive	-	15-26-37.53815 79-25-43.12410	Opencast
73	Quartz	D.V. Rama Raju	D.V. Rama Raju, 10-33/5, Sneha Apartments, Plot No. 300 Near Police Quarters, Visalakshi Nagar, Visakhapatnam, Andhra Pradesh., Ph.No.9849912400	2316/R3-2/2017, dt. 22/05/2018	3.997	7/16/2018	7/15/2038				7/16/2018	Working	Non-captive	DEIAA/AP/PKM/67/MIN/2017-212, dt:12-03-2018	15-27-32.91119 79-28-44.68898	Opencast
74	Quartz	M.V.K Brothers Industries & Minerals	M.V.K Brothers Industries & Minerals, Mg. Partner Sri M. Lazar, H.No. 6-1-142, Beside PadmasaiApts, Padmarao Nagar, Secunderabad., Ph.No.8790326901	15545/R3-2/2006, dt. 10/11/2017	3.495	12/23/2017	12/22/2037				12/23/2017	Working	Non-captive	DEIAA/AP/PKM/8/MIN/2017, dt:03-08-2017	15-11-40.52300 79-28-30.39005	Opencast
75	Quartz	Smt. D.	Smt. D. Subbamma,	GO.Ms. No. 400,	17.000	8/13/20	8/12/20				8/13/20	Non	Non-	-	15-17-07.9	Opencast

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						From	To	From	To							
		Subbamma	W/o. Late Ranga Reddy, 5th ward, Kottavuru, Kanigiri Mandal, Prakasam District, Ph.No.9848250889	dt. 08-10-2002			03	23			003	Working	captive		79.26-19.8	
76	Quartz	Vengamamba Minerals	Vengamamba Minerals, Mg.Partner: Ch. Chalapathi Rao, F.No. 207, Roja Kishore Residency, Tenali Taluka, Guntur District, Ph.No.7032132130	4715/D9/2019, dt. 06/06/2022	1.789	6/14/2022	3/31/2023				6/14/2022	Working	Non-captive	SEIAA/AP/P KM-121/2013, dt:14-06-2013	15-45-40.41642 79-40-07.27821	Opencast
77	Quartz	Gnanaishwarya Mines and Minerals	Gnanaishwarya Mines and Minerals, Prop: Sri N. Siva Sankar, H.No. 9-112, Sriramulapeta, Proddatur, Kadapa, Ph.No.9000557456	12039/D9/2021, dt. 31/12/2021	30.907	1/5/2022	3/31/2023				1/5/2022	Non Working	Non-captive	-	15-17-59.84472 79-26-00.06142	Opencast
78	Quartz	Premier Minerals Enterprises	Premier Minerals Enterprises, Partner Sri P. Babul Reddy R/o. at H.No. 4-53, Takkellapadu Village, Kanigiri Mandal, Prakasam District, Ph.No.9441229009	10980/D9/2017, dt. 20-09-2022	16.187	9/20/2022	3/31/2023				9/20/2022	Non Working	Non-captive	-	15-18-03.38064 79-26-56.45867	Opencast
79	Quartz	SkMahaboo b Basha	SkMahaboo b Basha, S/o. Khajavali, Near New Water Tank, Pamur, Prakasam District, Ph.No.9703814786	GO.Ms. No. 101, dt. 07-03-2002	3.077	10/29/2002	10/28/2022				10/29/2002	Non Working	Non-captive	SEIAA/AP/P KM-39/2012-4330, dt:22-12-2012	-	Opencast
80	Quartz	Kiran Global Chem. Ltd.	Kiran Global Chem. Ltd., No. 81, New Avadi Road, Kilpak, Chennai - 600010, Ph.No.9445024595	GO.Ms. No. 141, dt. 12-06-2009	13.644	4/9/2003	4/8/2023				4/9/2003	Non Working	Non-captive	-	-	Opencast
81	Quartz	Syed Mastan Basha	Syed Mastan Basha, S/o. Peera Mahammad, Satyanarayanapuram, Pamuru Mandal, Prakasam District, Ph.No.9705422884	GO.Ms. No. 399, dt. 08-10-2002	14.571	12/23/2003	12/22/2023				12/23/2003	Working	Non-captive	-	15-13-21.85506 79-13-06.97196	Opencast

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						From	To	From	To						
82	Quartz	Star Mines and Minerals	Star Mines and Minerals, Re.by its Mg. Partner: Sri S. Mahaboob Basha, D.No. 66/98, Valmiki Street, Rayachoti - 516269, Ph.No.9441523952	GO.Ms. No. 108, dt. 20-05-2010	44.117	6/22/2010	7/31/2022	-	-	6/22/2010	Non Working	Non-captive	-	15-03-57.85522 79-27-20.44431	Opencast
83	Quartz	Sai Rohit Minerals India Pvt. Limited.	Sai Rohit Minerals India Pvt. Limited., Mg. Partner Smt. P. Geetha, H.No. 8-116, Mandiram Street, Kanigiri, Prakasam District, Ph.No.9494327766	GO.Ms. No. 221, dt. 08-08-2008	20.234	12/29/2009	3/21/2022	-	-	12/29/2009	Non Working	Non-captive	-	15-18-17.0 79-26-33.2	Opencast
84	Quartz	Bhairava Minerals Private Limited.	Bhairava Minerals Private Limited., Mg. Director Sri S. Bhanu Prathap Reddy, Balasubbaiah Nagar, Pamuru Village and Mandal, Prakasam District, Ph.No.9640502222	18706/R3-2/2016, dt. 24/10/2017	5.395	11/2/2017	11/1/2037	-	-	11/2/2017	Working	Non-captive	SEIAA/AP/P KM/MIN/06 /2017/345, dt:15-07-2017	15-05-53.61687 79-27-37.01774	Opencast
85	Quartz	Smt. T. Udaya Lakshmi	Smt. T. Udaya Lakshmi, Vavveru Village & Post, Buchireddypalem Mandal, Nellore District, Ph.No.9849552757	GO.Ms. No. 292, dt. 22-05-2001	9.712	11/14/2007	9/27/2022	-	-	11/14/2007	Non Working	Non-captive	-	15-11-50.52646 79-24-33.16281	Opencast
86	Quartz	Sai Minerals	Sai Minerals, Mg. Partner: Sri B. R. Muralidhara Rao, 58-9-5, Santhapeta, Ongole., Ph.No.9849552757	GO.Ms. No. 358, dt. 04-09-2002	32.007	9/28/2022	9/27/2022	-	-	9/28/2022	Non Working	Non-captive	-	-	Opencast
87	Quartz	M/s. Jaishree Industries Ltd.	M/s. Jaishree Industries Ltd., Mg. Director S.S. Maheswari, Sy No. 1166, Chimakurthy Road, Santhanuthalpadu Village and Mandal, Prakasam District., Ph.No.9951850970	GO.Ms. No. 89, dt. 02-09-2013	14.500	11/14/2013	6/25/2023	-	-	11/14/2013	Working	Non-captive	SEIAA/AP/P KM/MIN/02 /2018-503, dt:27-11-2018	15-11-51.81341 79-26-41.27782	Opencast
88	Quartz	M/s. Jaishree	M/s. Jaishree Industries Ltd., Mg. Director S.S.	13072/D9/2016, dt. 21-06-2023	6.710	8/17/2023	8/16/2043	-	-	8/17/2023	Working	Non-captive	-	-	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working /Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)	
						From	To	From	To							
		Industries Ltd.	Maheswari, Sy No. 1166, Chimakurthy Road, Santhanuthalapadu Village and Mandal, Prakasam District.										e			
89	Quartz	M/s.Muneeswara Minerals	M/s.Muneeswara Minerals, Mg.Part:Smt.G.Vanaja, D/o.C.Ramana Reddy, Siruguppa Road, Havambhavi, Ballari, Karnataka.	6778/D9/2018, dt:24-07-2023	10.95	9/21/2023	9/20/2023				9/21/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/12/2019/1562/197.26/194.21, dt:07-10-2022	15-37-43.479-18-20.6	Opencast
90	Quartz	M/s.Muneeswara Minerals	M/s.Muneeswara Minerals, Mg.Part:Smt.G.Vanaja, D/o.C.Ramana Reddy, Siruguppa Road, Havambhavi, Ballari, Karnataka.	6777/D9/2018, dt:24-07-2023	14.000	9/21/2023	9/20/2023				9/21/2023	Working	Non-captive	SEIAA/AP/PKM/MIN/12/2019/1567/197.27/194.22, dt:07-10-2022	15-37-43.479-18-20.6	Opencast
91	Barytes	Sri S. Sankar Reddy	Sri S. Sankar Reddy, H.No. 1/397-1, Court Road, Kadapa, Ph.No.9490449987	GO.Ms. No. 271, dt. 13-10-2009	1.970	4/8/2009	4/7/2009				4/8/2009	Non Working	Non-captive	-	15-01-3079-37-00	Opencast
92	Barytes	I Venkata Ravi Kumar Reddy	I Venkata Ravi Kumar Reddy, S/o. Eswara Reddy, House No. 10-1064-Z-74, CNT Colony, Near NagadiswariTheater, Markapur, Prakasam District., Ph.No.7036106868	10906/R3-2/2017, dt. 22-01-2019	4.391	1/30/2019	1/29/2019				1/30/2019	Working	Non-captive	DIA/AP/MIN/11467/2017-330, dt:15-10-2018	15-32-49.079-04-03.0	Opencast
93	Barytes	V. Nikhileswara Reddy	V. Nikhileswara Reddy, S/o. Venugopal Reddy, H.No. 10-6-19-B, Nagisetty Street, Markapur, Prakasam District., Ph.No.7013132388	18357/R3-2/2017, dt. 08-11-2019	1.858	11/30/2019	11/29/2019				11/30/2019	Working	Non-captive	DEIAA/AP/PKM/69/MIN/2017-205, dt:13-09-2019	16-04-04.3212379-23-31.70659	Opencast
94	Slate	Super Star Slate & Slate	Super Star Slate & Slate PencialIndustreis, Partner: Sri Somisetty	GO.Ms. No. 59, dt. 04-03-2006	5.702	4/20/2006	4/19/2026				4/20/2006	Non Working	Non-captive	-	-	Opencast

S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
		PencialIndustreis	Nageswara Rao, D.No. 7-307, Nehru Street, Markapur												
95	Slate	T. Sailaja	T. Sailaja, W/o. Late Sri T. Venkateswara Reddy, Mittameedipally, Markapur, Prakasam District, Ph.No.9000001137	GO.Ms. No. 202, dt. 31-07-2008	46.547	10/14/2010	4/7/2022	-	-	10/14/2010	Non Working	Non-captive	-	15-41-21.50 79-18-45.50	Opencast
96	Slate	R. Venkataiah	R. Venkataiah, Manginapudi, Donakonda Mandal, Prakasam District, Ph.No.9394719414	GO.Ms. No. 499, dt. 24-09-2001	9.278	6/30/2002	6/29/2022	-	-	6/30/2002	Non Working	Non-captive	-	-	Opencast
97	Slate	D. Sudha Rani	D. Sudha Rani, S/o. Late D. Venkateswara Reddy, D.No. 2-114, Doddavari Street, Markapur, Prakasam, Ph.No.9248515151	4925/Q4/2016, dt. 22-09-2018	0.919	10/11/2018	10/10/2028	-	-	10/11/2018	Working	Non-captive	DEIAA/AP/PKM/83/MIN/2018-240, dt:24-07-2018	15-41-27.27192 79-13-13.48055	Opencast
98	Slate	Sri V. Poli Reddy	Sri V. Poli Reddy, S/o. Pedanantha Reddy, H.No.10-1052-L-3, S.R. Nagar, Markapur, Prakasam District, Ph.No.9440266250	4044/Q2/2020, Dated: 31.05.2022	0.963	6/6/2022	3/31/2023	4/1/2022	3/31/2033	6/6/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/4/2021/3136/165.63&162.57-791, dt. 21-09-2021	15-47-58.25988 79-23-21.94012	Opencast
99	Slate	M/s. Charitha Impex	M/s. Charitha Impex, Prop. P. Venkateswara Reddy, H.No.10-104-D3, J.N. Colony, Markapur, Prakasam District, Ph.No.9440266098	1254/Q2/2020, dt: 25-05-2022	0.752	6/1/2022	3/31/2023	4/1/2022	3/31/2033	6/1/2022	Non Working	Non-captive	SEIAA/AP/PKM/MIN/11/2020/2460/156.03&160.03-425, dt. 22-07-2021	15-41-13.71977 79-12-55.63540	Opencast
100	Marble	Sk. Saidula Sahab	Sk. Saidula Sahab, Ph.No.9581245599	15126/R3(2)2005, dt. 10/08/2005	1.000	8/23/2005	8/22/2025	-	-	8/23/2005	Non Working	Non-captive	-	-	Opencast
101	Road Metal	Lakshmi Balaji Mines and Mineerals	Lakshmi Balaji Mines and Mineerals, Mg. Partner Sri S. Lakshmi Narayana Reddy,	532/Q2/2022, dt. 09-11-2022	4.984	11/14/2022	11/13/2037	-	-	11/14/2022	Working	Non-captive	SEIAA/AP/PKM/MIN/04/2022-4211,	15-06-12.81914 79-27-11.18286	Opencast

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S I. No	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Extent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of commencement of Mining Operation	Status (Working / Non - Working / Temp. working for dispatch etc.,)	Captive / Non-captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
			Ph.No.9640502222										dt:14-11-2022		
102	Road Metal	Ch Yedukondalu	Ch Yedukondalu, transfer from A. Venkata Reddy , Ph.No.9849542812	643/Q2/2022, dt. 30-11-2022	0.688	12/31/2022	4/25/2026	-	-	12/31/2022	Working	Non-captive	DEIAA/AP/PKM/52/MIN/2017-192, dt:15-12-2017	15-35-58.03867 79-03-33.01895	Opencast
103	Road Metal & Gravel	Smt. K Sharadhamma	Smt. K Sharadhamma, W/o. Chinna Remi Reddy, Nallabanda Street, Giddaluru, Prakasam District, Andhra Pradesh , Ph.No.900858575	726/Q2/2018, dt. 05/10/2020	1.768	11/9/2020	11/8/2030	-	-	11/9/2020	Working	Non-captive	SEIAA/AP/PKM/MIN/01/2020/16004, dt:11-06-2020	15-23-25.20237 78-53-41.00615	Opencast
104	Road Metal	M.N. Constructions	M.N. Constructions, Mg. Partner: Sri P. Madhusudhana Reddy, H. No. 1-7, BellamKondavaripalem, Tallur Mandal, Prakasam District , Ph.No.8790694629	4158/Q/2018, dt. 02/05/2019	1.488	7/30/2019	7/29/2029	-	-	7/30/2019	Working	Non-captive	SEIAA/AP/PKM/MIN/01/2019/830, dt:23-02-2019	15-52-44.87129 79-39-18.45334	Opencast
105	Road Metal	Sri B. Venkata Reddy	Sri B. Venkata Reddy, S/o. Kasi Reddy, H.No. 8-75, Nadigadda H/o. Dupadu Village, Tripuranthakam Mandal, Prakasam District, Ph.No.9959889338	932/Q2/2018, dt. 12/06/2018	0.748	6/19/2019	6/18/2029	-	-	6/19/2019	Working	Non-captive	SEIAA/AP/PKM/MIN/02/2019-823, dt:19-06-2019	15-57-04.42655 79-21-34.66634	Opencast
106	Road Metal & Gravel	Sri Sai Flyash Cement Bricks	Sri Sai Flyash Cement Bricks, Prop: Smt. S. Suseela, H.No. 10-104-8-2, J.V. Colony, Markapur, Ph.No.9247270583	5210/Q4/2016, dt. 17-11-2018	2.768	12/24/2018	12/23/2028	-	-	12/24/2018	Working	Non-captive	DEIAA/AP/PKM/57/MIN/2017-213, dt:24-12-2018	15-48-24.21022 79-13-41.34152	Opencast
107	Road Metal	Sri D.Ravi Babu	D.Ravi Babu, H.No. 2-68-1, Nachupoda Village, Pamuru Mandal, Prakasam District , Ph.No.9440406104	5324/Q4/2011, dt. 17-04-2014	6.337	5/19/2014	4/22/2024	-	-	5/19/2014	Non Working	Non-captive	-	15-06-23.34352 79-26-54.22377	Opencast
108	Gravel, Road	Sri N.V. Narayana	Sri N.V. Narayana Reddy, Ph.No.9849496114	5297/Q4/2016, dt:26-09-2018	1.129	10/25/2018	10/24/2028	-	-	10/25/2018	Non Working	Non-captive	DEIAA/AP/PKM/65/MIN	15-35-59.1 79-05-35.3	Opencast

S I. N o	Name of the Mineral	Name of the Lessee	Address & Contact No. of the lessee	Mining Lease Grant Order No. & Date	Ext ent	Period of Mining Lease (Initial)		Period of Mining Lease (1st & 2nd.. renewal)		Date of comm ence ment of Minin g Opera tion	Status (Worki ng /Non - Workin g / Temp. workin g for dispatc h etc.,)	Captive / Non- captive	Obtained EC (Yes/No), if Yes Letter No. with date of grant of EC	Location of the Mines Lease (Latitude & Longitude)	Method of Mining (Opencas t / Undergro und)	
						From	To	From	To							
	Metal	Reddy										ng	e	/2017-203, dt:12-03- 2018		

Data Source: Assistant Director of Mines and Geology, *Prakasam* District, Andhra Pradesh

The Details of statement showing the letter of intent (LoI) in the district is showing in Table-15:

Table 16: Statement showing the list of the letter of intent (LoI) in the district

Sl. No	District	Office	Applicant	Mineral	Sy.No.	Village	Mandal	Extent	ADMG File No.	DMG File No.	LOI Issue Date	Date of AMP	Date of EC	Date of CFE	Remarks
Ongole															
1	Prakasam	Ongole	Dr.E.V.Ranga Reddy	Colour Granite	236	Devanakonda	Addanki	8.000 Hects	6688/Q/2006	39674/D9/2006	15.07.2015	17.10.2015	27.11.2015	No	AMP, EC Submitted .But CFE not Submitted.
2	Prakasam	Ongole	M/s Vishwakshen Industries	Black Galaxy Granite	514/16	Illapuvallur	Chimakurthy	3.686 Hects	13956/Q/2017	8777/D9/2018	10.10.2018	09.11.2018	09.11.2018	No	EC,CFE Not submitted.But AMP Submitted
3	Prakasam	Ongole	M/s R.K.Enterprices	Black Galaxy Granite	162	R.L.Puram	Chimakurthy	4.000 Hects	3966/Q/2010	620/D9/2020, dt. 11.11.2020	11.11.2020	22.03.2021	26.10.2021	not submktted	Not furnished CFE & requestef for Extension of time
4	Prakasam	Ongole	M/s Giri Raju Granites	Colour Granite	230-B(P)&232	Ballikurava	Ballikurava	0.615 Hects	3167/Q/2020	4837/D9/2021, dt. 14.09.2021	14.09.2021	09.11.2021	No	No	EC, CFE not submitted.AMP Submitted
5	Prakasam	Ongole	M/s Sri Thirumala Sai Granites Exports&Imports	Black Granite	111/2	Muddapadu	P.C palli	4.834 Hects	2004/Q/2019	682/D9/2020, dt. 03.11.2020	03.11.2020	27.12.2021	No	No	EC,CFE Not submitted.But AMP Submitted & requested for extension of time
6	Prakasam	Ongole	M/s. Devi Impex	Colour Granite	1075/P	Kopparam	Santhamag uluru	11.44	6167/Q/2018	693/R3-2/2019, dt. 07.06.2019	07.06.2019	No	No	No	-
7	Prakasam	Ongole	M/s. Sri Vishnu Granites	Black Granite	121/3, 145/1 to 6	Gurijepali	Santhamag uluru	1.926	3800/Q/2015	442/R3-2/2019, dt. 12.06.2019	12.06.2019	7.11.2019	No	No	-
8	Prakasam	Ongole	M/s. Kishore Exports	Colour Granite	439/C1	Nagarajupalli	Martur	3.652	14976/Q/2017	2435/R3-2/2019, dt. 17.06.2019	17.06.2019	No	No	No	-
9	Prakasam	Ongole	Smt. Mandava lakshmi Jyothi	Colour Granite	34/B-1E & 1C	Vaidena	Ballikurava	0.922	9169/Q/2014	26284/R3-2/2017, dt. 05.07.2019	05.07.2019	11.10.2019	No	No	show cause notice issued 17.07.2020
10	Prakasam	Ongole	M/s. N.V. Expor, Mg. Partner: Sri N. Venkateswara Reddy	Black Galaxy Granite	10/4P3 11/3P1	R.L.Puram	Chimakurthy	1.076	989/Q/2019	4563/R3-2/2019, dt. 31.10.2019	31.10.2019	19.08.2020	No	No	-
11	Prakasam	Ongole	M/s Bharath Expor, Mg.Part: Sri P.V.Srinivasa Rao	Colour Granite	282/P	Kopparapalem	Ballikurava	6.736	7363/Q/2018	692/D9/2019, dt. 25.03.2019	25.03.2019	No	No	No	-
12	Prakasam	Ongole	M/s Muneeswara Minerals, Mg. Part:G.Shashidhar Reddy	Quartz	44/2	Chundi	Voletivaripalem	19.809	1392/Q/2018	1957/D9/2019, dt. 28.06.2019	28.06.2019	Submitted	No	No	EC,CFE Not submitted.But AMP Submitted & requested for extension of time
13	Prakasam	Ongole	M/s Krishna Sai Expor (P) Limited	Black Granite	125/8C, 125/9C, 124/3D, 124/2A, 124/1A,90/1, 90/3 & 118/1B	Gurijepali	Santhamag aluru	4.925	2714/Q/2018	2441/D9/2019, dt. 29.09.2020	29.09.2020	No	No	No	-
14	Prakasam	Ongole	M/s Stanvis Minerals, Mg. Partner Sri M. Sumanth Kumar Reddy	Black Granite	367	Somavarappadu	Talluru	3.897	14400/Q/2017	2744/D9/2019, dt. 29.09.2020	29.09.2020	Submitted	No	No	EC,CFE Not submitted.But AMP Submitted & requested for extension of time
15	Prakasam	Ongole	Maturi Srinivasulu	Silica Sand	115/1	Motupalli	Chinnaganji	1.969	3664/Q/2017	9075/D9/2020, dt.	04.05.2021	No	No	No	-

	Prakasam	Ongole	Kanduluri Nageswara Rao	Colour Granite	1075/P	Kopparam	Santhamagaluru	4.443	3940/Q/2020	10355/D9/2020, dt. 04.05.2021	04.05.2021	No	No	No	-
16	Prakasam	Ongole	Bodduluri Srinivasa Rao	Silica Sand	115/1	Motupalli	Chinnaganjam	1.992	3820/Q/2020	9085/D9/2020, dt. 05.05.2021	05.05.2021	No	No	No	-
17	Prakasam	Ongole	Y. Venkateswara Rao	Silica Sand	115/1	Motupalli	Chinnaganjam	2.981	3820/Q/2020	9083/2020, dt. 10.05.2021	10.05.2021	No	No	No	-
18	Prakasam	Ongole	Ch. Srinivasa Rao	Silica Sand	115/1	Motupalli	Chinnaganjam	2.952	3818/Q/2020	9084/D9/2020, dt. 10.05.2021	10.05.2021	No	No	No	-
19	Prakasam	Ongole	M/s C.R. Granites, Partner: Sri Ch. Vijaya Saradhi	Colour Granite	446, 447	Rajupalem	Martur	2.554	7447/Q/2018	2477/D9/2019, dt. 17.09.2021	17.09.2021	No	No	No	-
20	Prakasam	Ongole	M/s Giriraj Granites, Mg. Partner: Sri Raja Ramanjan	Colour Granite	230/B/P & 232	Ballikurava	Ballikurava	0.615	3167/Q/2020	4837/D9/2021, dt. 14.09.2021	14.09.2021	09.11.2021	No	No	Extension of time applied
21	Prakasam	Ongole	M/s Sarojini Granites & Expor, Mg. Partner Sri K. Satyanarayana	Colour Granite	242/B/1I, 242/2B	Ballikurava	Ballikurava	2.302	5728/Q/2019	3625/D9/2020, dt. 21.09.2021	21.09.2021	No	No	No	-
22	Prakasam	Ongole	M/s K.B. Stones, Mg. Part: Sri Devineni Srinivasa Rao	Colour Granite	1023 & 1024	Konidena	Ballikurava	3.4	1319/Q/2020	4809/D9/2020, dt. 21.09.2021	21.09.2021	No	No	No	-
23	Prakasam	Ongole	M/s Sri Bhanu Minerals, mg. Part: Sri Vallabhaneni Akhil	Colour Granite	240/B2A, 240/B2B, etc.,	Ballikurava	Ballikurava	1.12	1754/Q/2021	5139/D9/2021, dt. 21.09.2021	21.09.2021	No	No	No	-
24	Prakasam	Ongole	M/s A.G.Expor, Mg. Partner: S.V.S. Prakasa Rao	Black Galaxy Granite	99/5 etc.,	Budawada	Chimakurthy	2.805	2277/Q/2020	4334/D9/2021, dt. 30.09.2021	30.09.2021	No	No	No	-
25	Prakasam	Ongole	M/s K.B. Granites LLP, Mg. Partner: Sri Manne Satyanarayana Chowdary	Colour Granite	934/31-B12/P etc.,	Konidena	Ballikurava	3.772	6051/Q/2020	5209/D9/2020, dt. 29.09.2021	29.09.2021	No	No	No	-
26	Prakasam	Ongole	Abhuri Sandhya	Colour Granite	359/P and 369/P	Ballikurava	Ballikurava	3.312	6202/Q/2020	4812/D9/2021, dt. 04.10.2021	04.10.2021	No	No	No	-
27	Prakasam	Ongole	M/s Marvel Rocks, Mg. Part: Sri Jasti Siva Brahmam	Colour Granite	934/16-3P	Konidena	Ballikurava	5.438	222/Q/2021	4357/D9/2021, dt. 29.09.2021	29.09.2021	No	No	No	-
28	Prakasam	Ongole	M/s Apple Granites Limited, Mg. Diector Sri S.V.S. Prakasa Rao	Black Galaxy Granite	55/6P2, 121/2P2 etc.,	R.L.Puram	Chimakurthy	3.173	2402/Q/2019	4333/D9/2021, dt. 30.09.2021	30.09.2021	No	No	No	-
29	Prakasam	Ongole	M/s Ayan Exims, Mg. Partner: Sri Yakkanti Brahma Reddy	Black Galaxy Granite	514/8	Illapavalluru	Chimakurthy	4	13372/Q/2017	8152/D9/2021, dt. 09.11.2021	09.11.2021	No	No	No	-
30	Prakasam	Ongole	M/s Krishna Sai Expor (P) Limited	Colour Granite	20,82, etc.,	Ballikurava	Ballikurava	2.335	8728/Q/2013	22649/R3-2/2015, dt. 12.08.2016	12.08.2016				SCN under submission to the DMG
31	Prakasam	Ongole	M/s Virat Minerals & Export	Black Granite	70/3P etc.,	Gurijepali	Santhamagaluru	2.246	9204/Q/2013	17493/R3-2/2016, dt. 19.01.2017	19.01.2017				show cause notice issued on 06.07.2020
32	Prakasam	Ongole	M/s Kamepalli Granites & Expor	Black Granite	101/1A2(P)	Gurijepali	Santhamagaluru	1.513	7678/Q/2015	15138/R3-2/2016, dt. 15.02.2017	15.02.2017				show cause notice issued on 06.07.2020
33	Prakasam	Ongole	M/s Amulya Granites	Black Granite	562/P	Vaidana	Ballikurava	4	2475/Q/2013	14173/R3-2/2013, dt. 10.07.2017	10.07.2017				under submission for extension of time
34	Prakasam	Ongole	M/s Dhanasri Associates, Mg.P.Sri K. Murali Krishna	Colour Granite	1/P	Chennupalli	Ballikurava	5	5436/Q/2016	18327/R3-2/2016, dt.22.11.2017	22.11.2017				SCN under submission to the DMG
35	Prakasam	Ongole	M/s Demeter Consultancy (P) Limited, Director: Sri Y. Janardhana Rao	Colour Granite	282/P	Kopparapalem	Ballikurava	8.875	2751/Q/2017	28020/R3-2/2017, dt. 01.12.2017	01.12.2017				
36															

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37	Prakasam	Ongole	M/s Sri Ramagiri Minerals (P) Limited	Colour Granite	1/P	Chennupalli	Ballikurava	4.886	11577/Q/2014	3665/R3-2/2017, dt. 05.03.2018	05.03.2018				Show cause notice issued on 08.07.2020
38	Prakasam	Ongole	M/s Sri Ramagiri Minerals (P) Limited	Colour Granite	1/P	Chennupalli	Ballikurava	4.149	11576/Q/2014	3664/R3-2/2017, dt. 05.03.2018	05.03.2018				Show cause notice issued on 08.07.2020
39	Prakasam	Ongole	M/s N.V. Export	Colour Granite	934/28(P)	Chennupalli	Ballikurava	1.178	1266/Q/2018	28022/R3-2/2017, dt. 05.03.2018	05.03.2018				under submission for extension of time
40	Prakasam	Ongole	T.P.Alluraiah	Quartz	241/7	Mogilicharla	Lingasamudram	4.47	1903/Q/2017	765/R3-2/2018, dt. 11.03.2018	11.03.2018				show cause notice issued on 10.07.2020
41	Prakasam	Ongole	M/s Gangammathalli Minerals	Quartz	241/8	Mogilicharla	Lingasamudram	5.989	6890/Q/2017	31850/R3-2/2017, dt. 20.03.2018	20.03.2018				SCN under submission to the DMG
42	Prakasam	Ongole	M/s Amaravathi Mines, Prop: Smt Ch. Sarala	Colour Granite	282/P	Kopparapalem	Ballikurava	8.2	6889/Q/2017	3276/R3-2/2018, dt. 08.06.2018	08.06.2018				SCN under submission to the DMG
43	Prakasam	Ongole	Vadde Nagendra Babu	Colour Granite	1075/P	Kopparam	Santhamagaluru	8	2110/Q/2018	3268/R3-2/2018, dt. 20.06.2018	20.06.2018				show cause notice issued on 13.07.2020
44	Prakasam	Ongole	Sirangi Prahlada Rao	Black Galaxy Granite	514/15	Illapavuluru	Chimakurthy	3.686	13954/Q/2017	8781/R3-2/2018, dt. 10.10.2018	10.10.2018				SCN under submission to the DMG
45	Prakasam	Ongole	M/s Janani Rocks, Prop: Nalluri Satyanarayana	Colour Granite	359/P	Ballikurava	Ballikurava	5.907	4241/Q/2018	8486/R3-2/2018, dt. 10.10.2018	10.10.2018				
46	Prakasam	Ongole	M/s Vishwakshen Industries (P) Limited	Black Galaxy Granite	514/16	Illapavuluru	Chimakurthy	3.686	13956/Q/2017	8777/R3-2/2018, dt. 10.10.2018	10.10.2018				Show cause notice issued on 08.07.2020
47	Prakasam	Ongole	M/s Surya Granites	Black Galaxy Granite	965/6,7,8,9,10 etc.,	Chimakurthy	Chimakurthy	5.649	13629/Q/2017	8785/R3-2/2018, dt. 04.12.2018	04.12.2018				requested for extension of time
48	Prakasam	Ongole	M/s Sunshine Mines & Minerals, Md.Sk.Mohd.Ghouse	Quartz	634/4	Daddawada	Komarolu	8.094	1464/Q/2017	8255/R3-2/2018, dt. 11.01.2019	11.01.2019	Submitted	20.02.2020	Not submitted	CFE requested for extension of time
49	Prakasam	Ongole	M/s S.V.B. Mines, Mg. Partner: Sri M. Vihan Reddy	Black Galaxy Granite	33/2P3	Pallamalli	Chimakurthy	9.974		421/D9/2019, dt. 22.01.2019	22.01.2019				
50	Prakasam	Ongole	M/s Balaji Mines, Mg. Part: V.U.S.B. Bhushan Kumar	Black Galaxy Granite	21/4,14,15,23,24 &33	R.L.Puram	Chimakurthy	1.946	7979/Q/2018	420/D9/2019, dt. 22.01.2019	22.01.2019				requested for extension of time
51	Prakasam	Ongole	M/s Hanuman Expor, Mg. Partner: tulabandula tulasi	Colour Granite	934/27P	Konidena	Ballikurava	4.961	6218/Q/2018	9311/R3-2/2018, dt. 21.03.2019	21.03.2019				SCN under submission to the DMG
52	Prakasam	Ongole	M/s Lucky Granites, Prop: Sri Thalathoti Mari	Colour Granite	231 (old) 240 (New)	Kommalapadu	Santhamagaluru	4.7	4437/Q/2018	9484/R3-2/2018	21.03.2019				show cause notice issued on 15.07.2020
53	Prakasam	Ongole	M/s. Mahalakshmi Granites	Colour Granite	282/P	Kopparapalem	Ballikurava	4.953	8032/Q/2018	694/R3-2/2019	03.05.2019				SCN under submission to the DMG
54	Prakasam	Ongole	Sri Alla Ravi	Black Galaxy Granite	514/5P5B	Illapavuluru	Chimakurthy	3.691	8015/Q/2018	1934/R3-2/2019	03.05.2019				08.07.2021
55	Prakasam	Ongole	M/s. Kishore Slabs & Tiles	Colour Granite	103P(Veerlakond) Un-Surveyed Hill	Konidena	Ballikurava	0.404	6523/Q/2013	2436/R3-2/2019	03.05.2019				SCN under submission to the DMG
56	Prakasam	Ongole	M/s. Bhavya Keerthana Granites	Colour Granite	1021/3B	Konidena	Ballikurava	1.6	4660/Q/2018	1839/R3-2/2019	28.05.2019				SCN under submission to the DMG
57	Prakasam	Ongole	G.Anil Kumar	Silica Sand	487/1B	Kadavakudur	Chinnaganj	0.663	3477/Q/	17877/D9/2013	03.07.2017				

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58	Prakasam	Ongole	A.Govinda Rajulu	Silica Sand	127/4, 127/7P	Pandillapalli	Vetapalem	1.283	15229/Q/ 2016	993/D9/2017	25.04.2017				
59	Prakasam	Ongole	M/s Sai Sree Exports	Black Galaxy Granite	514/7P, 514/5P	Illapavaluru	Chimakurthy	3.561	8343/Q/ 2018	137/D9/2021	25.05.2021				AMP EC CFE not submitted
60	Prakasam	Ongole	M/s Sri Bhanu Minerals, mg. Part: Sri Vallabhaneni Akhil	Colour Granite	233/P, 238/P, 241/P	Ballikurava	Ballikurava	3.687	1527/Q/ 2021	4411/D9/2021	24.05.2021				AMP EC CFE not submitted
61	Prakasam	Ongole	Parimi Venkatesh	Quartz	732	Anumalapalli	Racherla	10	193/Q/2 022	1624/D9/2022	14.03.2022	Not Submitted	Not Submitted	Not Submitted	LoI issued on 14.03.2022.
62	Prakasam	Ongole	P.Venkatesh	Quartz	Hill Block No.14	Pusalapadu	Bestavaripet	2.962	3643/Q/ 2021	1109/D9/2022	15.02.2022	Not Submitted	Not Submitted	Not Submitted	LoI issued on 15.02.2022
63	Prakasam	Ongole	M/s Sree Raghavendra Enterprises, Mg.Pt Sri N.Surya Narayana Reddy, 51, Gopal Swamy Road, Bellary, Karnataka.	Colour Granite	282	Kopparapalem	Ballikurava	6.000	15227/Q/ 16	16957/R3-2/2017	16957/R3-2/2017, dt. 07.07.2017				Govt
64	Prakasam	Ongole	Kokayuva Sai Kumar, S/o.Venkata Rama Rao, H.No.5-267, NGO Colony, Opp. Power office, Ongole	Colour Granite	231	Kommalapadu	Santhamagulur	3.000	11783/Q/ 2017		LOI letter issued 18-05-2018				Govt
65	Prakasam	Ongole	M/S.Vishnu Minerals Mg.p:-G.Vanuja. w/o.G.KarunaKar Reddy,Ashok nagar,havambhavi bellary,karnakata.(state)	Quartz	241	Mogilicharala	Lingasamudram	10.000	7013/Q/ 17	1577/R3-2/2018	1577/R3-2/2018, dt. 28.05.2018				Govt.
66	Prakasam	Ongole	M/S.Vishnu Minerals Mg.p:-G.Vanuja. w/o.G.KarunaKar Reddy,Ashok nagar,havambhavi bellary,karnakata.(state)	Quartz	241	Mogilicharala	Lingasamudram	19.000	7011/Q/ 17	1576/R3-2/2018	1576/R3-2/2018, dt. 28.05.2018				Govt.
67	Prakasam	Ongole	M/S.Vishnu Minerals Mg.p:-G.Vanuja. w/o.G.KarunaKar Reddy,Ashok nagar,havambhavi bellary,karnakata.(state)	Quartz	241	Mogilicharala	Lingasamudram	10.000	7012/Q/ 17	1575/R3-2/2018	1575/R3-2/2018, dt. 28.05.2018				Govt.
68	Prakasam	Ongole	M/S.V.K.Granites mgp:-d.v.krishana rao s/o.anjaneyulu d.no:-3-6,thurpu naidupalem(v),tangutur(m),prakasam(dt)	Colour Granite	536/b,518/1 A,535/1&523 /3B	Uppamaguluru	Ballikurava	6.599	7948/Q/ 2018		LOI issued				Patta
69	Prakasam	Ongole	M/S.A.P.M.D.C.Ltd 6-2-915,HMWSSB.Premises rear.block,3rd floor,khairthabad,5000 04	Black Galaxy Granite	942/1 to 9	Chimakurthy	Chimakurthy	3.347	10940/Q/ 17	3328325/D9/2020	3328325/D9/2020, dt.9.10.2020				Govt.
70	Prakasam	Ongole	Sri B.Sankara Rao, S/o.Prasada Rao, 8-137, 10th cross Road,	Colour Granite	71/2	Gurijepalli	Santhamaguluru	1.959	4569/Q/ 2020	1586/D9/2021	1586/D9/2021, dt.23.12.2021				Patta

			Lawyer pet extension, MM Road, Ongole												
71	Prakasam	Ongole	M/s Veerabhadra Mines and Minerals, Prop. sRi A.Govinda reddy, Plot No.601, Green space fortune, Rajendra Nagar Mandal, Rangareddy Dist. Telangana.	Colour Granite	192/A, 192/B & 194/4	Ballikurava	Ballikurava	6.635	2864/Q/2020	2832/D9/2021	2832/D9/2021, dt. 15.12.2021				Patta
72	Prakasam	Ongole	M/s Veerabhadra Mines and Minerals, Prop. sRi A.Govinda reddy, Plot No.601, Green space fortune, Rajendra Nagar Mandal, Rangareddy Dist. Telangana.	Colour Granite	251 & 192A	Ballikurava	Ballikurava	3.000	2865/Q/2020	2833/D9/2021	2833/D9/2021, dt. 15.12.2021				Patta
73	Prakasam	Ongole	M/s Mallanna Granite	Colour Granite	1025/A	Konidena	Ballikurava	2.000	5861/Q/2021	11640/D9/2021	11640/D9/2021, 15.12.2021				Patta
74	Prakasam	Ongole	M/S.Lakshmi granites prop:-sidda raghava rao s/o.venkateswarlu,d.no:-8-24,Denuva kona vari street opp.bethun nursing home,lawyerpet,ongole	Colour granite	103	Konidena	Ballikurava	1.500	7577/Q/2018	8522-2/D9/2021	8522-2/D9/2021, 30.12.2021				Govt.
75	Prakasam	Ongole	M/S.Lakshmi granites prop:-sidda raghava rao 8-24,devarakonda vari street,mangamuru donka,ongole	Colour granite	103	Konidena	Ballikurava	5.000	3684/Q/2018	8522-1/D9/2021	8522-1/D9/2021,30.12.2021				Govt.
76	Prakasam	Ongole	M/s Sri Srinivasa Granites, Mg.Pt M.Adilakshamma, W/o Kasi Reddy, D.No. 8-123/4A, Kothapeta, Kanigiri, Prakasam district	Colour Granite	103	Konidena	Ballikurava	2.000	7303/Q/14	8522/D9/2021	8522/D9/2021,30.12.2021				Govt.
77	Prakasam	Ongole	M.Venkateswarlu, S/o Narayana,	Colour Granite	367 & 132	Somavarappadu	Talluru	10.000	3156/Q/12	12795/D9/2021	12795/D9/2021, dt.12.01.2022				Govt.
78	Prakasam	Ongole	Smt K.Sambrajayam	Colour Granite	103	Gurijepalli	Santhamanguluru	1.833	2208/Q/2021	5141/D9/2021	5141/D9/2021, dt. 21.09.2021				Patta
79	Prakasam	Ongole	K.Ranganayakulu s/o.balaiah durga nilayam sujatha nagar, 7th line, ongole	Black Galaxy Granite	965,966&969	Chimakurthy	Chimakurthy	5.000	747/Q/2019	6094/D9/2019	6094/D9/2019, dt. 27.07.2022				Govt.
80	Prakasam	Ongole	A.Narashimha rao s/o.venkata subbaiah h.no:-22-2-21/1 sai nagar,kovur road,kandukur,prakasam	Colour Granite	1026/5B,1025/C,1A,1025/1B1	Konidena	Ballikurava	3.430	5338/Q/2019		LOI Issued, GPS on 19-06-2020				Patta
81	Prakasam	Ongole	Sri P.Krishna Murthy, S/o.Rangaiah, D.No.35-286/9, Ganesh Sai Srinivasa Appartment, P.No.1, Purushothapatnam, Chilakaluripet.	Colour Granite	934/19, 20 & 263	Konidena	Ballikurava	4.000	3497/Q/2020		LOI Issued, GPS on 11-01-2022.				Patta

Markapur															
1	Prakasam	Markapur	M/s North east Impex Pvt Ltd	Barytes	1260	RAjupalem	Komarolu	22.670	2787/Q/2016	21295/D9/2016	15.02.2017				
2	Prakasam	Markapur	M/s. Andhra Granites and Minerals	Black Granite	55/1, 55/2(P) and 56/1	Sankavaram	Kanigiri	2.857	2084/Q/2016	19429/R3-2/2017	17.06.2019	Awaited	Awaited	Awaited	
3	Prakasam	Markapur	M/S. Raging River Mines and Minerals Pvt Ltd.,; Director Smt N.Harika Reddy	Quartz	787/P	Chandalur	Darsi	11.000	460/Q/2018	5995/D9/2021	15.12.2021	Awaited	Awaited	Awaited	
4	Prakasam	Markapur	M/s. Good Will Minerals;Mgp: Sri P.SK.Jilani	Quartz	581/P	Siddavaram	Konakanmittla	11.000	2186/Q/2016	65/D9/2017	15.12.2021	Awaited	Awaited	Awaited	
5	Prakasam	Markapur	M/s. Amaravathi Mines & Minerals Pvt. Ltd.,	Barytes	H.B.No.VI	Madanapullalacheruvu	Bestavaripet	4.766	741/Q/2018	8166/R3-2/2018	28.06.2019	No	No	No	
6	Prakasam	Markapur	M/s. Sree Vishnu Minerals	Quartz	212/(P)	Ballipalli	Kanigiri	14	2183/Q/2016	7056/R3-2/2018	28.06.2019	No	No	No	Show cause notice issued on 15.07.2020
7	Prakasam	Markapur	M/s Stanley Mining Company (P) Limited	Quartz	466/P	Pulikunta Rallapalle	Veligandla	9.44	1055/Q/2019	1730/D9/2020	07.11.2020	No	No	No	
8	Prakasam	Markapur	P.Srinivas	Quartz	Hill Block No.13	Thokapalli	Peddaravedu	2.856	2101/Q/2021	2950/D9/2021	21.09.2021	No	No	No	
9	Prakasam	Markapur	M/s Vengamamba Minerals, Prop: Sri Ch. Chalapathi Rao	Quartz	888	Darsi	Darsi	1.789	2776/Q/2018	4715/D9/2019	30.09.2021	No	No	No	
10	Prakasam	Markapur	M/s Sri Bramarambhika Granites, Prop: Y. Lakshmi Narayana Yadav	Black Granite	53/2	Machavaram	Kanigiri	1.95	1186/Q/2012	28836/D9/2017	22.11.2017	No	No	No	show cause notice issued on 08.07.2020
11	Prakasam	Markapur	M/s Southern Rocks & Minerals (P) Limited	Quartz	288/2	Vatlabayalu	C.S. Puram	12.808	2830/Q/2016	2398/R3-2/2018	18.05.2018	No	No	No	SCN under submission to the DMG
12	Prakasam	Markapur	Sri Raavi Rathamma	Slate	189/P	Kethagudipi	Tarlupadu	16.184	875/Q/2018	6824/R3-2/2018	16.11.2018	No	No	No	show cause notice issued on 10.07.2020
13	Prakasam	Markapur	M/s Sunshine Mines & Minerals	Quartz	634/4 (Old Sy.No.634/1)	Daddawada	Komarolu	8.094	1464/Q/2017	8255/D9/2018	11.01.2019	No	No	No	requested for extension of time
14	Prakasam	Markapur	M/s S.V.G. Granites Limited	Colour Granite	1	Darsi	Darsi	1.49	1722/Q/2012	1011/R3-2/2018	04.02.2019	No	No	No	SCN under submission to the DMG
15	Prakasam	Markapur	M/s S.V.G. Granites Limited	Colour Granite	1	Darsi	Darsi	6.51	992/Q/2011	1012/R3-2/2018	04.02.2019	No	No	No	SCN under submission to the DMG
16	Prakasam	Markapur	M/s Thirumala Expor, Mg. Paryt: Sri P. Srinivasulu	Colour Granite	61/6P	Komatigunta	C.S. Puram	6.858	622/Q/2018	9309/R3-2/2018	21.03.2019	No	No	No	show cause notice issued on 15.07.2020
17	Prakasam	Markapur	K.Geetha	Colour Granite	1/P	Darsi	Darsi	4.955	1885/Q/2015	20169/R3-2/2016	25.03.2019	No	No	No	show cause notice issued on 17.07.2020
18	Prakasam	Markapur	M/s. Sree Vishnu Minerals	Quartz	212(P)	Ballipalli	Kanigiri	20	3172/Q/2016	7055/R3-2/2018	03.05.2019	No	No	No	requested for extension for submission of EC & CEF
19	Prakasam	Markapur	M/s. Tirumala Export	Colour Granite	61/7P	Komatigunta	C.S. Puram	8.149	623/Q/2018	9308/R3-2/2018	03.05.2019	No	No	No	extension accorded on 07.04.2021
20	Prakasam	Markapur	M/s North East Impex Private Limited, Mg. Director: Sri N.V. Rama Raju	Barytes	1260	Rajupalem	Komarolu	22.67	2787/Q/2016	21295/D9/2016	15.02.2017	No	No	No	SCN issued on 15.11.2021

21	Prakasam	Markapur	M/s Stanley Mining Company (P) Limited	Quartz	320/P etc.,	Panduva	Veligandla	4.9	327/Q/2018	2799/D9/2018	30.04.2018	No	No	No	
22	Prakasam	Markapur	M/s Sri Abhayanjaneya Mines & Minerals, Mg. Part: Sri U. Sudheer	Barytes	925/1	Ardhaveedu	Ardhaveedu	4.812	621/Q/2017	9088/D9/2017	23.06.2017	No	No	No	
23	Prakasam	Markapur	M/s Amaram Commodity Ventures	Quartz	227/Part	Bodanampadu	Kurichedu	22.494	2883/2021	5789/D9/2021	14.07.2021	No	No	No	AMP EC CFE not submitted
24	Prakasam	Markapur	M/s. Madhuminmet India Pvt Ltd	Quartz	H.B.No. 14	Pusalapadu	Bestavaripet	20.000 Hects	67/Q/2022	1120/D9/2022	22.02.2022	No	No	No	LoI issued on 22.02.2022
25	Prakasam	Markapur	Sri. B.V.S Sekhar	Quartz	H.B.No. 14	Pusalapadu	Bestavaripet	4.936 Hects	3647/QL/2021	1110/D9/2022	15.02.2022	No	No	No	LoI issued on 22.02.2022
26	Prakasam	Markapur	M/s. Shiva Microns	Quartz	H.B.No. 14	Gudimetla	Racherla	4.990 Hects	3488/Q/2021	858/D9/2022	07.02.2022	No	No	No	
27	Prakasam	Markapur	M/s. Shiva Microns	Quartz	H.B.No. 14	Gudimetla	Racherla	3.990 Hects	3490/Q/2021	859/D9/2022	07.02.2022	No	No	No	LoI issued on 07.02.2022
28	Prakasam	Markapur	M/s. Sujatha Mines & Minerals	Quartz	462	Ayyavaripalli	Pamur	462	1934/QL/2019	937/D9/2022	15.02.2022	No	No	No	Extension on 24.03.2023

Data Source: Assistant Director of Mines and Geology, *Prakasam* District, Andhra Pradesh

2.4 Details of Royalty in last 3 years

The royalty of last three years in the district detailed list is given in Table-17.

Table 17: Royalty for 2022-23(PRAKASAM OFFICE)

S. No.	Mineral	Royalty (in Rs. Lakhs)	Consideration Amt. (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
1	Black Granite(Galaxy Variety)	13948.968	6974.484	1743.416	278.947
2	Boulders	27	27	8.1	0.54
3	Chalcedony Pebbles	0.279	0.279	0.084	0.006
4	Gravel	1.042	1.042	0.313	0.021
5	Ordinary Earth	5.327	5.327	1.598	0.107
6	Road Metal	15.435	15.435	4.631	0.309
TOTAL		13998	7024	1758	280

Royalty for 2022-23 (MARKAPUROFFICE)

S. No.	Mineral	Royalty (in Rs. Lakhs)	Consideration Amt. (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
1	Barytes (Off-Color)	1.7	1.7	0.51	0.034
2	Black Granite	449.186	224.593	56.143	8.983
3	Colour Granite (Others)	5.942	2.971	0.743	0.119

S. No.	Mineral	Royalty (in Rs. Lakhs)	Consideration Amt. (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
4	Gravel	0.025	0.025	0.008	0.001
5	Ordinary Earth	0.081	0.081	0.024	0.002
6	Quartz	43.755	43.755	13.116	0.874
	Road Metal	2.961	2.961	0.888	0.059
	Slate	3.976	3.976	1.193	0.08
TOTAL		508	280	73	10

Royalty for 2021-22 (PRAKASAM OFFICE)

S. No.	Mineral	Royalty (in Rs. Lakhs)	Consideration Amt. (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
1	Black Granite(Galaxy Variety)	23127.107	5781.77675	2883.971	461.435
2	Chalcedony Pebbles	0.09	0.045	0.027	0.002
3	Gravel	0.293	0.1465	0.088	0.006
4	Road Metal	15.929	7.9645	4.779	0.319
TOTAL		23143	5790	2889	462

Royalty for 2021-22 (MARKAPUR OFFICE)

S. No.	Mineral	Royalty (in Rs. Lakhs)	Consideration Amt. (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
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S. No.	Mineral	Royalty (in Rs. Lakhs)	Consideration Amt. (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
1	Barytes (Off-Color)	5.455	2.7275	1.637	0.109
2	Barytes (White)	1.76	0.88	0.528	0.035
3	Black Granite	645.652	161.413	79.59	12.734
4	Colour Granite (Others)	6.074	1.5185	0.759	0.121
5	Gravel	56.107	28.0535	16.832	1.122
6	Quartz	28.949	14.4745	8.685	0.579
7	Road Metal	2.871	1.4355	0.861	0.057
8	Slate	1.86	0.93	0.557	0.037
TOTAL		749	211	109	15

Royalty for 2020-21 (PRAKASAM OFFICE)

S. No.	Mineral	Royalty (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
1	Black Granite(Galaxy Variety)	22057.299	2756.191	440.991
2	Colour Granite (Others)	12.686	1.586	0.254
3	Gravel	0.54	0.162	0.011
4	Road Metal	33.048	9.914	0.661
TOTAL		22104	2768	442

Royalty for 2020-21 (MARKAPUROFFICE)

S. No.	Mineral	Royalty (in Rs. Lakhs)	DMF (In Rs. Lakhs)	MERIT (in Rs. Lakhs)
1	Barytes (Off-Color)	0.64	0.192	0.013
2	Barytes (White)	0.44	0.132	0.009
3	Black Granite	713.385	89.173	14.268
4	Colour Granite (Others)	21.219	2.652	0.424
5	Gravel	40.762	12.229	0.815
6	Quartz	22.505	6.751	0.45
7	Road Metal	52.859	15.858	1.057
8	Slate	11.31	3.393	0.226
TOTAL		863	130	17

Data Source: Assistant Director of Mines and Geology, *Prakasam* District, Andhra Pradesh

2.5 Details of Production in last 3 years

Production of last three years in the district details is given in Table-18.

Table 18: Production for 2022-23 (PRAKASAM OFFICE)

S. No.	Mineral	Unit	Production
1	Black Granite(Galaxy Variety)	Cubic Meter	376396.783
2	Boulders	Cubic Meter	30000
3	Chalcedony Pebbles	Cubic Meter	0

S. No.	Mineral	Unit	Production
4	Gravel	Cubic Meter	2150
5	Ordinary Earth	Cubic Meter	11833
6	Road Metal	Cubic Meter	17150

Production for 2022-23 (MARKAPUR OFFICE)

S. No.	Mineral	Unit	Production
1	Barytes (Off-Color)	MT	310
2	Black Granite	Cubic Meter	19780.52
3	Colour Granite (Others)	Cubic Meter	298.383
4	Gravel	Cubic Meter	24
5	Ordinary Earth	Cubic Meter	0
6	Quartz	MT	47945
7	Road Metal	Cubic Meter	3020
8	Slate	MT	2272

Production for 2021-22 (PRAKASAM OFFICE)

S. No.	Mineral	Unit	Production
1	Black Granite(Galaxy Variety)	Cubic Meter	625536.944
2	Chalcedony Pebbles	Cubic Meter	100
3	Gravel	Cubic Meter	450
4	Road Metal	Cubic Meter	17699

Production for 2021-22 (MARKAPUR OFFICE)

S. No.	Mineral	Unit	Production
1	Barytes (Off-Color)	MT	1091
2	Barytes (White)	MT	160
3	Black Granite	Cubic Meter	29579.05
4	Colour Granite (Others)	Cubic Meter	251.864
5	Gravel	Cubic Meter	98566.1
6	Quartz	MT	31429
7	Road Metal	Cubic Meter	3190
8	Slate	MT	1130

Production for 2020-21 (PRAKASAM OFFICE)

S. No.	Mineral	Unit	Production
1	Black Granite(Galaxy Variety)	Cubic Meter	607261.776
2	Colour Granite (Others)	Cubic Meter	546.684
3	Gravel	Cubic Meter	195
4	Road Metal	Cubic Meter	36720

Production for 2020-21 (MARKAPUR OFFICE)

S. No.	Mineral	Unit	Production
1	Barytes (Off-Color)	MT	128
2	Barytes (White)	MT	40
3	Black Granite	Cubic Meter	31252.405

4	Colour Granite (Others)	Cubic Meter	916.124
5	Gravel	Cubic Meter	90592
6	Quartz	MT	24849
7	Road Metal	Cubic Meter	58162
8	Slate	MT	6900

Data Source: Assistant Director of Mines and Geology, *Prakasam* District, Andhra Pradesh

2.6 Impact on environment

The extraction and utilization of minor minerals have become integral to our modern way of life, fueling infrastructure development, construction, and various industries. However, the impact of these activities on the environment cannot be underestimated. Minor minerals, which include granite, road metal, gravel, clay, and more, play a significant role in shaping the natural landscape and ecosystems. The various environmental consequences associated with the extraction and use of minor minerals are:

- i. Habitat Destruction:** The mining of minor minerals often entails the removal of topsoil and vegetation, leading to habitat destruction. This can disrupt ecosystems, displace wildlife, and threaten the survival of numerous species. Loss of biodiversity is a significant concern in regions with extensive mining operations.
- ii. Land Degradation:** Mining activities can lead to land degradation, including soil erosion and compaction. This not only reduces the land's fertility but also affects its ability to support agriculture and vegetation growth. Moreover, land degradation can contribute to increased vulnerability to natural disasters like floods.
- iii. Water Pollution:** Mining operations can contaminate nearby water bodies through the discharge of sediments, chemicals, and heavy metals. This pollution can have detrimental effects on

aquatic life, disrupt local hydrology, and compromise the quality of water available for human consumption.

- iv. Air Quality:** Dust emissions from mining sites can deteriorate air quality in surrounding areas. The fine particles and pollutants released during excavation and transportation of minor minerals can pose health risks to both workers and nearby communities.
- v. Regulatory Challenges:** Enforcing regulations and monitoring mining activities in remote or unregulated areas can be challenging, allowing illegal and unsustainable practices to persist.

The extraction and utilization of minor minerals are essential for economic development, but they come at a cost to the environment. Recognizing the environmental impacts of these activities is crucial for sustainable resource management.

2.7 Remedial Measures

The provisions of Rule 12 (1) and Rule 12 (5) and of Andhra Pradesh Minor Mineral Concession Rules, 1966 allows the State Government to issue the Letters of Intent with the stipulated conditions to submit Approved Mining Plan (AMP), Environment Clearance (EC) and Consent for Establishment (CFE) for grant of lease.

Mine Plan stipulate the maximum permissible annual production of the mineal from the designated lease area and also includes estimated quantum of solid waste generation and its method of disposal, etc. Based on the Approved Mine Plan projections, Environment Management Plan shall be prepared and SEIAA makes the decision to grant the EC based on the EMP.

Leaseholders commit to all the remedial measures in the Mining Plan and the State Environment Impact Assessment Authority (SEIAA) ensures the remedial measures are being adhered to during the tenure of the Environmental Clearance.

Leaseholders in the district have adopted various remedial measures to mitigate the impact of mining on the environment. These measures aim to reduce the environmental footprint of mining operations and address the associated challenges. Some common practices include:

- i. **Environmental Impact Assessments (EIAs):** Leaseholders conduct comprehensive EIAs to evaluate the potential environmental consequences of mining projects. They shall use this information to develop mitigation strategies.
- ii. **Reclamation and Rehabilitation:** Leaseholders work to restore mined areas by recontouring landscapes, replanting native vegetation, and stabilizing soils to promote ecosystem recovery.
- iii. **Water Management:** Proper management of water resources is crucial. Leaseholders use techniques like sedimentation ponds, water recycling, and water treatment facilities to minimize water pollution and ensure responsible water use.

The following preventive measures are being followed for minimizing adverse effects on water regime:

- Small Gully checks, gully check dams, silt settling tanks, silt traps, etc. shall be constructed.
 - Along all discharge points leaving the mining lease, into the surrounding area, suitable number of filter walls of sufficient lengths shall be erected across the flow, at intervals, all along the length to prevent suspended solids entering the surrounding streams/ drains/ water courses, to confine the discharge water quality to the permissible limits.
 - Regular monitoring may be carried out and further remedial steps as may be necessary may be taken.
- iv. **Waste Management:** Effective management of mining waste, such as tailings and slag, involves containment in secure facilities to prevent soil and water contamination. Advances in waste disposal technologies are also being explored.

Steps being followed for effective waste management:

- Implementation of practices to minimize waste generation at the source. This involves optimizing extraction

- techniques, reducing overburden removal, and improving resource utilization.
- Encouraging recycling and reuse of waste materials wherever possible within the mining operation.
 - Selection of an appropriate disposal methods based on waste characteristics and environmental considerations. Common methods include landfilling, controlled dumping, and backfilling.
 - Treatment of contaminated water and effluents using appropriate technologies before discharge.
- v. **Afforestation:** Leaseholders carry out a year-wise afforestation plan for the initial years with detailed costing of each plant, its maintenance per piece, etc.

While these measures represent positive steps toward mitigating environmental impact, it's important to note that the effectiveness of these practices can vary widely depending on factors such as the location, scale, and specific mineral being mined. Continuous improvement and adaptation are essential in the mining industry's ongoing efforts

2.8 Reclamation Measures

As per Rule 7A (ii) of Andhra Pradesh Minor Mineral Concession Rules, 1966, Mine Closure Plan shall be submitted by the leaseholder before 6 months of expiry of the lease in the proforma as prescribed by the Director. The Deputy Director concerned shall approve the mine closure plan and ensure compliance of conditions of the approved mine closure plan before expiry of the lease period.

Financial assurance of Rs.50,000/- (Rupees Fifty Thousand) for the quarry lease granted below five(5) hectares and Rs.10,000/- (Rupees Ten Thousand) per Hectare or part thereof for the quarry lease granted five (5) hectares and above, shall be submitted in the form of deposit. If the leaseholder does not reclamate the area as mentioned in the Mine Closure Plan, the deposit shall be forfeited, and the Department of Mines & Geology ensure the proper implementation of the Mine Closure Plan.

2.9 Risk Assessment & Disaster Management Plan

Leaseholders conduct comprehensive risk assessment, prepare a model disaster management plan and submit in the Mining Plan.

The leaseholders maintain and arrange following resources at the mine site:

- a) Firefighting equipment
- b) Ambulance services with location
- c) List of volunteer organizations
- d) List of Civil, Police and other authorities to be informed in case of an accident
- e) List of mobile crane operators (Government, Public Sector, and Private Sector).
- f) List of mines, contacts, facility available nearby
- g) List of first aiders and contacts.
- h) List of Officers of DGMS to be informed in case of serious accidents
Concerned DGMS officers concerned is displayed at the mine head.

The leaseholders shall monitor the total execution of the disaster management plan. The resources of all departments including men and material are being promptly made available. They are also conducting regular mock rehearsals with their staff to update the risk register and accordingly, disaster management plan

2.9.1. Mineral Regulatory:

The important functioning of District Mines and geology Officer, Srikakulam are:-

1. Achievement of Targets of Mineral Revenue collections being fixed to this office annually
2. Receiving and processing of the Mineral Concession Applications duly conducting the Technical inspection, Survey and demarcation of the Mineral bearing applied areas
3. Execution and Regulation of the operations of the Mining / Quarry leases in accordance with the Acts and Rules
4. Issuing of dispatch permits duly collecting the Advance Royalty / Seig.fee from the lease holders on the minerals produced and intend to dispatch from their leased areas through online permit system

5. Controlling the illegal Mining / Quarrying and transportation by conducting the periodical inspections of the Mines and Quarries and also conducting the surprise vehicular checking and imposing the penalties
6. Finalisation of Demand, Collection and Balance statements of the leases on annual basis

2.10 Plantation & Green Belt Development

Leaseholders are complying with the plantation and green belt development programmes as committed in their Mining Plans.

CHAPTER III: SAND

3.1 Sand Mineral Resources of the Prakasam District

3.1.1 General Sand Mineral Details Prakasam District

(Prepared as per Sustainable Sand Mining Management Guidelines 2016 & 2020) (Data Source: Assistant Director of Mines and Geology, Prakasam District, Andhra Pradesh.

The District Mines & Geology Officer, Ongole, consolidated with the Executive Engineer, Irrigation, Ongole, on 11.09.2023. They have informed that within this district's jurisdiction, there are no major rivers for the deposition of mineable sand, and no data is available regarding the annual deposition of sand in the third-order streams (Paleru, Manneru, Musi, Gundlakamma, etc.). Furthermore, Irrigation department officials have requested to provide data pertaining to other districts to facilitate the necessary information. The details of the Production of Sand in the district are described in in Table-19.

Table 19: Details of Production of Sand in Last three years in the

Year	Production (In MTs)
2020-21	---
2021-22	0
2022-23	0

Data Source: District Mines and Geology Officer, Prakasam District

3.1.2 River Basins in Prakasam District

The Gundlakamma, Paleru and Musi river basins are covered 80% in the district. The remaining part of the district covered with Manneru, Sagileru river basins and partially covered with Prakasam, Romperu river basins are present in Prakasam District. The catchment area of each river basin is delineated by using master plan records and updated with survey of India toposheets (1:50K). The Gundlakamma, Musi and Paleru river basins areas are 6,920.98 Sq.km, 2,203.52 Sq.km and 2,372.72 Sq.km in the district. The district having total number of tanks and ponds including minor irrigation tanks 3,958. The Hydrological units of Prakasam district is shown in Table-20 and Figure-22, Drainage system with description of main rivers is shown in Table-21. Salient features and altitudes origin of

rivers is shown in Table-22 and rivers lengths of Prakasam district is shown in Table-23.

Table 20: Hydrological units of Prakasam District

S.No	Major Basin	Minor Basin	Catchment Area (Sq.km)	No of. Tanks
1	Gundlakamma	Gundlakamma	6,236.63	1292
2		Minor Drainages between Musi & Gundlakamma	684.35	459
3	Prakasam	Lower Prakasam	561.46	7
4	Manneru	Manneru	1,056.44	339
5	Musi	Musi	2,203.52	740
6	Paleru	Paleru	2,372.72	910
7	Pennar	Sagileru	997.96	133
8	Romperu	Romperu	141.16	78
Total			14,254.24	3,958

Data source: APSAC, Vijayawada

Table 21: Drainage System with Description of main rivers

S.No	Name of the River Basin	Area Drained (Sqkm)	% of Area Drained in the District
1	Lower Prakasam	589.05	4.13
2	Gundlakamma	6,207.30	43.55
3	Romperu	141.16	0.99
4	Manneru	1,056.17	7.41
5	Musi	2,203.52	15.46
6	Paleru	2,372.72	16.65
7	Sagileru	983.24	6.90
8	Kunderu	16.73	0.12
9	Minor Drainages between Musi & Gundlakamma	684.35	4.80

Data source: APSAC, Vijayawada

Table 22: Salient Features of Important Rivers in Prakasam District

S. No	Name of the River	Place of Origin	Altitude at Origin (m)
1	Prakasam	Western Ghats, Mahabaleswar hills, Sattar District, Maharashtra State	1,400
2	Gundlakamma	Nallamalai Hills, Giddalur, Prakasm district	971
3	Musi	Gandlapenta RF and Nalla Konda, Turlapadu mandal	340
4	Paleru	VeddulaCheruvu RF, VeddulaCheruvu of Veligandla mandal in of Prakasam district	820
5	Manneru	Balusula Konda, Thungodu of Chandrasekhara Puram mandal in of Prakasam district	703
6	Romperu	Janakavarampanguluru&Martur of Prakasam district	217
7	Mudigandieru	Chimakurthi RF, Chimakurthi of Prakasam district	638
8	Kunderu	Erramala hills, Nandyal district	565
9	Sagileru	Nallamala hills, Badvel, YSR Kadapa district	829

Data source: APSAC, Vijayawada

Table 23: River Lengths in Prakasam District

S. No	Name of the Major Basin	Name of the Minor Basin	Name of the River	River Length in Km
1	Gundlakamma	Gundlakamma	Chilakaleru River	2.61
2			China KandleruVagu	22.54
3			DornapuVagu	13.47
4			Duvvaleru River	39.61
5			ErraVagu	6.55
6			Gundlakamma River	99.30
7			Jampaleru River	32.56
8			Kakarla Vagu	16.56
9			KallaVagu	11.58
10			Kandleru River	7.41
11			KandurlaVagu	20.20
12			Male Vagu	3.53
13			Mekaleru River	3.17

14			NallgondaVagu	5.84
15			PasupugalluVagu	12.80
16			PeddaVagu	14.99
17			Puli vagu	11.34
18			RallaVagu	47.14
19			SuddaVagu	16.18
20			Tigaleru River	51.32
21			Vemuleru	34.77
22		Minor Drainages between Musi & Gundlakamma	AkkantokaVagu	8.95
23			MudigandiEru	47.68
24	Manneru	Manneru	DokkalaVagu	20.86
25			DuppalabandaVagu	14.22
26			Konda Vagu	12.72
27			Manneru River	132.81
28			MutteruNadi	4.29
29			NachuVagu	19.02
30			NerellaVagu	27.26
31			PillaperuVagu	45.96
32			RallaVagu	2.53
33			UppuVagu	45.49
34	Musi	Musi	Atleru River	38.43
35			ChavitiVagu	11.68
36			Dondleru River	30.27
37			Gadi Vagu	10.18
38			Gajjaleru River	11.81
39			InagaleruNadi	39.04
40			JallaVagu	12.91
41			KappalaVagu	15.35
42			Koyyaleru	3.31
43			KudumalaVagu	3.08
44			Musi River	165.66
45			Nalla Vagu	5.80
46			PeddaVagu	5.94
47			Paleru	Paleru
48	BujuguntaVagu	5.50		
49	CheruvuVagu	12.41		
50	DomaleruNadi	24.38		
51	Gadisaleru River	20.40		
52	GoganaVagu	16.97		

53			KanchiVagu	10.90
54			KanugalaEru	13.00
55			Konda Vagu	6.59
56			KonetiVagu	16.12
57			Makeru River	41.74
58			MurugummiVagu	5.93
59			NarellaVagu	26.14
60			NerellaVagu	30.49
61			Paleru River	153.69
62			PataEru	11.58
63			Puli Vagu	6.63
64			Ragi Vagu	3.68
65			RallaVagu	3.54
66			SomanapalleVagu	4.67
67			UppuVagu	11.96
68	Pennar	Sagileru	Enumaleru River	42.36
69			MalideviVagu	32.24
70			Sagileru River	76.40
Total				1,792.89

Data source: APSAC, Vijayawada

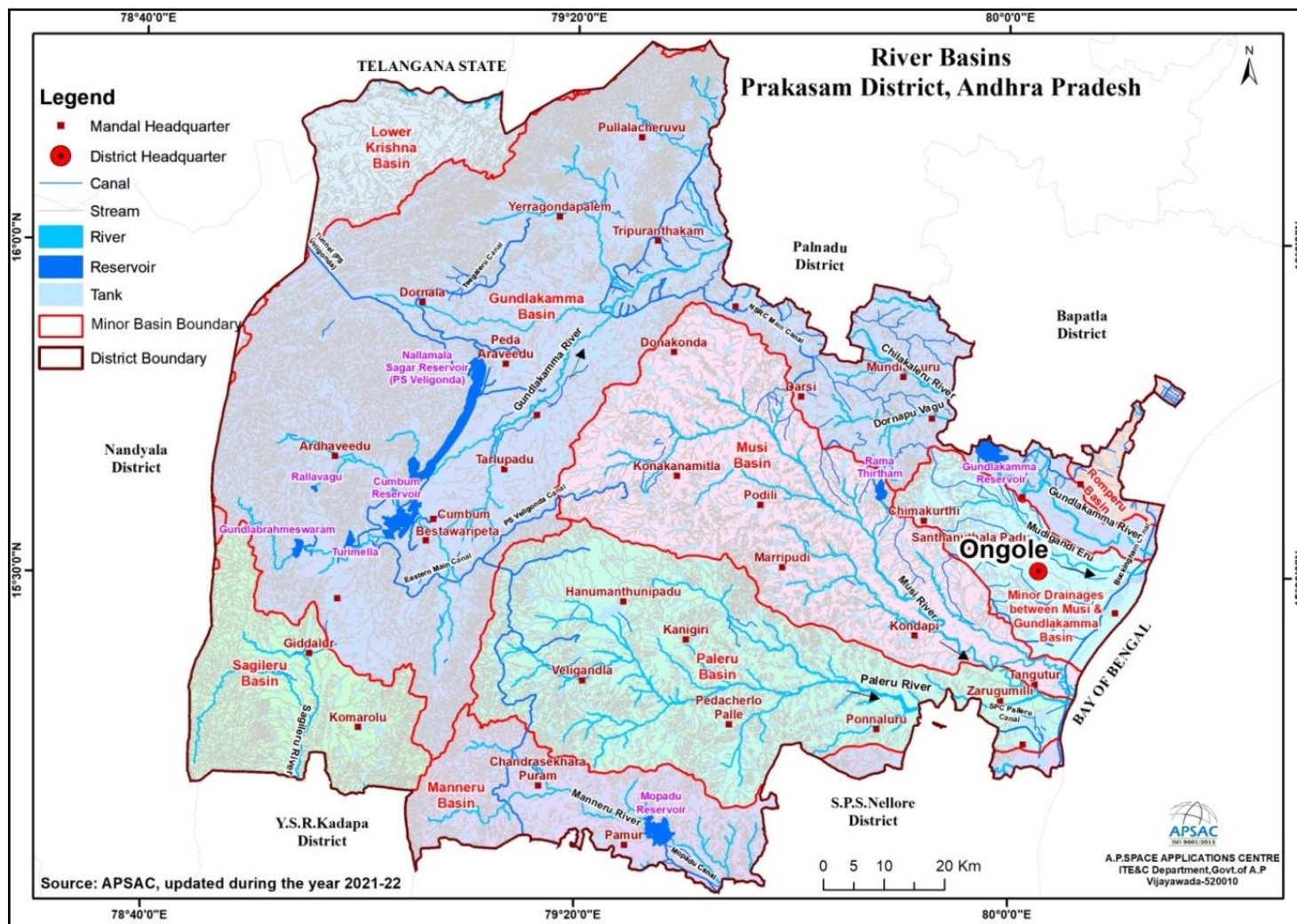


Figure-22: Major and Minor river basin boundaries

3.1.3 Process of Deposition of Sediments in the Rivers of the District

Sediment transport is a natural process, and many have argued that the point of rivers is to move sediment downstream. However, with land use changes, e.g., deforestation and construction; agricultural practices; and development activities, accelerated erosion rates is ubiquitous. Sediment in the water column reduces transparency and can be deposited downstream and exacerbate flooding. Three principal sources of sediment are the following:

Sediment transport is the movement of organic and inorganic particles by water. In general, the greater the flow, the more sediment that will be conveyed. Water flow can be strong enough to suspend particles in the water column as they move downstream, or simply push them along the bottom of a waterway. Transported sediment may include mineral matter, chemicals and pollutants, and organic material. Another name for sediment transport is sediment load. The total load includes all particles moving as bedload, suspended load, and wash load.

3.1.3.1. Bedload

As the name suggests, this element of sediment movement consists of loose, granular particles at the sediment-water interface (such as a stream bed or tidal flat). Air or water that moves across the bed will begin to move grains if the flow velocity is great enough to overcome the force of gravity and any resistance at grain contacts. This is the **threshold velocity** (Figure-23).

The bedload contains two main components:

- the **traction load**, or traction carpet, and
- the **saltation loads**.

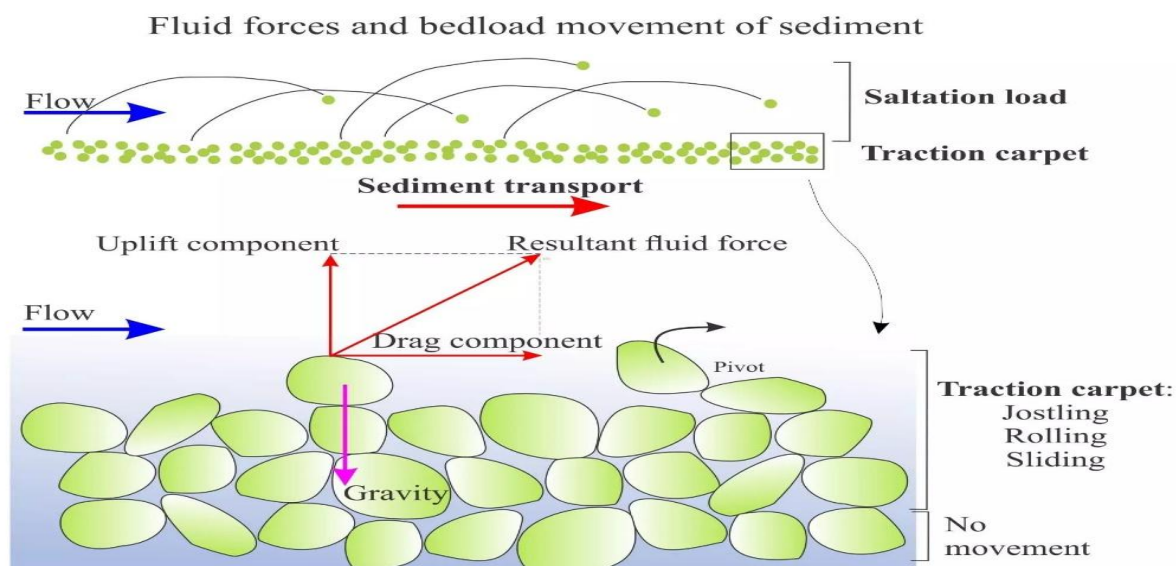


Figure-23: Bedload Movement of Sediment

The various components of force involved in initiation of grain movement are shown above. Here, fluid flowing over a sediment bed produces shear stresses that can be resolved into a component of drag (parallel to the bed) and a lift component normal to the bed. At the threshold velocity when the resultant fluid force on grains is greater than gravity, grains begin to roll, slide and jostle along the bed like a moving carpet – the **traction carpet**.

3.1.3.2. Suspended Load Most natural flows in rivers, shallow marine settings and air are turbulent. Even at low-flow velocities, the speed and trajectories of flow can vary considerably – witness the eddies and boils in seemingly tranquil streams. Very fine particulate sediment (particularly clays) can be kept in suspension for long periods by turbulence; the stresses generated by turbulent flow balance or overcome the gravitational force acting on the particles.

If turbulence decreases significantly, for example when a river empties into a lake, then most particles will gradually settle to the sediment bed. The rate at which a particle settles out of suspension is called the **settling velocity**, where the force of gravity (downwards) exceeds the combined effects of upward-directed **buoyancy forces** acting on a grain and the drag on a particle caused by **fluid (viscous) resistance**. Thus, the rate of settling depends on the size, shape and density of particles, and the viscosity of the fluid. In general, settling through air is much more rapid than through water.

Both bedload and suspension load are important processes in the generation of sedimentary structures. In particular, bedload transport of loose sand is the critical process for growth of bedforms and their internal cross-stratification (crossbedding). The description of **bedforms** (crossbeds) and the flow conditions (**flow regime**) under which they form have been described in other posts (Figure-24).

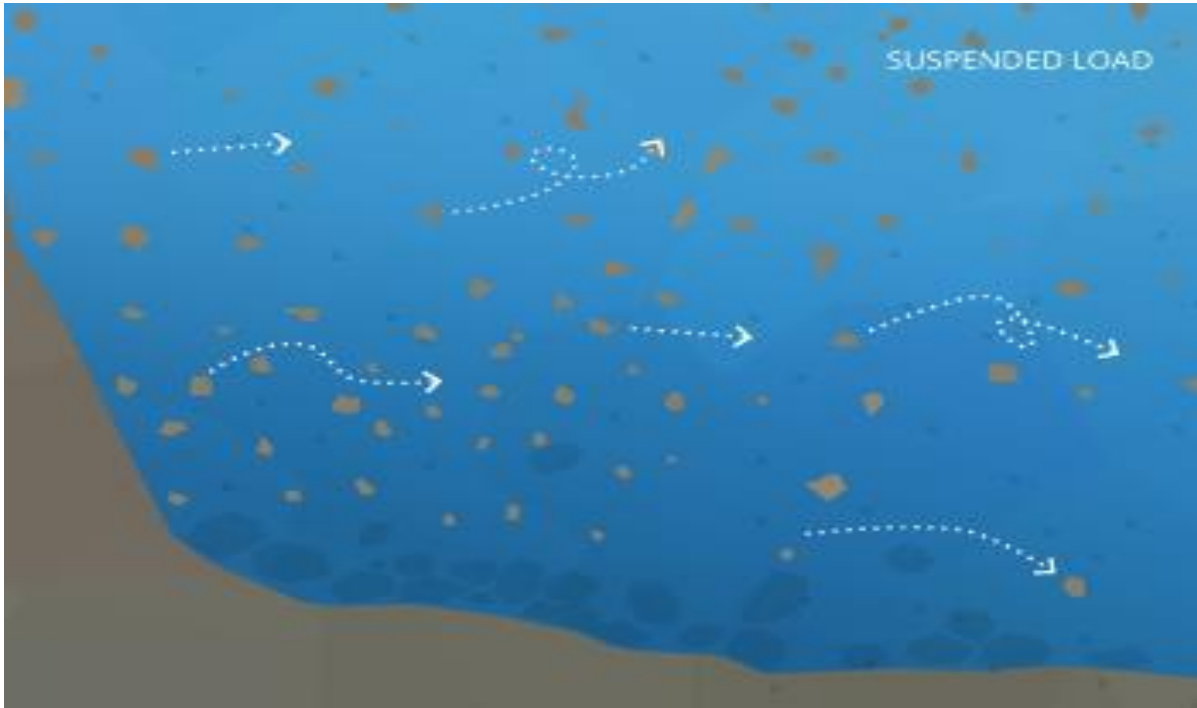


Figure-24: Sediment Load

3.1.3.3. Wash Load

The wash load is the portion of sediment that will remain suspended even when there is no water flow. The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable. Turbidity in lakes and slow-moving rivers is typically due the wash load. When the flow rate increases (increasing the suspended load and overall sediment transport), turbidity also increases. While turbidity cannot be used to estimate sediment transport, it can approximate suspended sediment concentrations at a specific location (Figure-25).

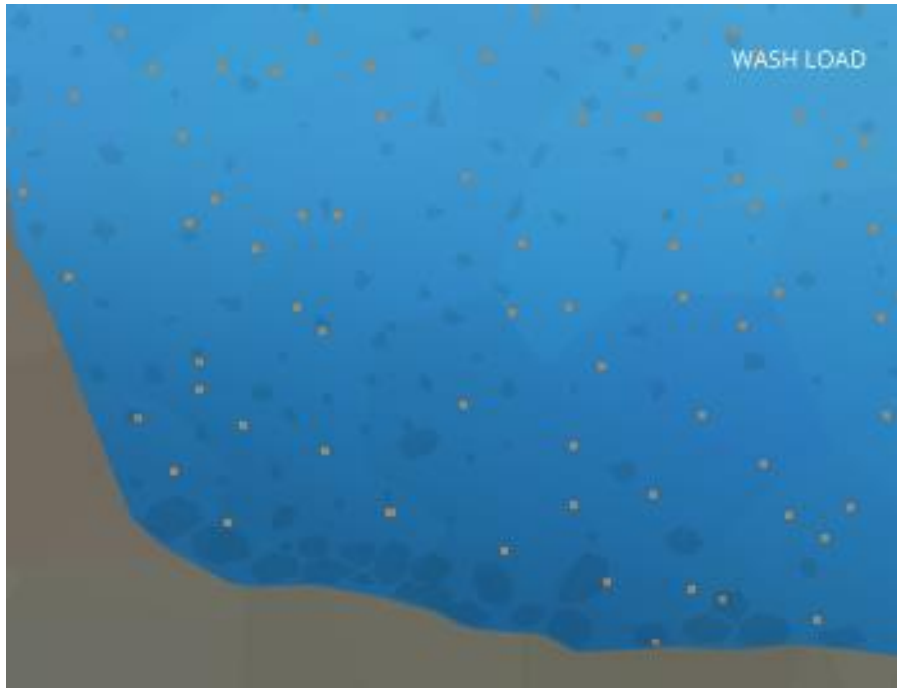


Figure-25: Wash Load

3.1.3.4. Settleable Solids

The suspended particles that fall to the bottom of a water body are called settleable solids. As they are found in riverbeds and streambeds, these settled solids are also known as bedded sediment. The size of settleable solids will vary by water system – in high flow areas, larger, gravel-sized sediment will settle out first. Finer particles, including silt and clay, can be carried all the way out to an estuary or delta (Figure-26).

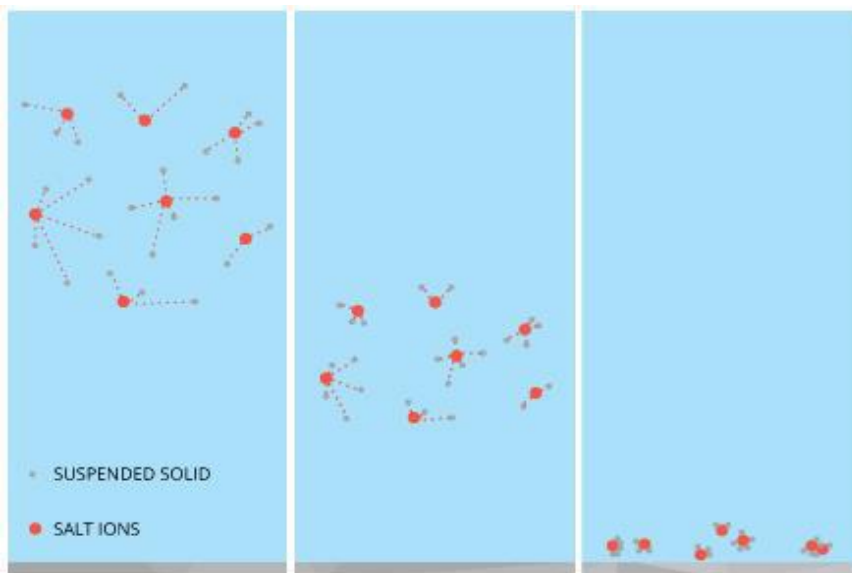


Figure-26: Settleable Solids

3.1.3.5. Sediment Deposition

Sediment is necessary to the development of aquatic ecosystems through nutrient replenishment and the creation of benthic habitat and spawning areas. These benefits occur due to sediment deposition – when suspended particles settle down to the bottom of a body of water. This settling often occurs when water flow slows down or stops and heavy particles can no longer be supported by the bed turbulence. Sediment deposition can be found anywhere in a water system, from high mountain streams, to rivers, lakes, deltas and floodplains. However, it should be noted that while sediment is important for aquatic habitat growth, it can cause environmental issues if the deposition rates are too high, or too low. Sediment transportation and Deposition depends upon various factors like Slope of the Area, Annual Rainfall, Lithology, flow intensity of River, Geomorphology, Soil, Geology and Land use.

In sediment transport a distinction is generally made between fine and coarse sediment, because the transport mechanisms differ. Coarse sediment (grain size $>63\ \mu\text{m}$) tends to be characterised by particles that remain separate and are chemically inert; fine sediments ($<63\ \mu\text{m}$) on the other hand tend to come together as flocculated populations (flocs) and have the tendency to attract organic material and contaminants to their surface. A great deal has been researched and written about the break up and flocculation of these primary particles under turbulence and subsequent settling (e.g., Uncles et al., 2010). These differences imply important variations in the rate of transport and settling characteristics for the same flow conditions for different sediments. The nature of the physical environment also has an important bearing on this, in that fine sediment tend to be found in sheltered environments (shallow, enclosed estuarine systems), while beaches on open coasts are characterised by coarser materials. This reflects the energy of the water in which the particles become suspended and their subsequent fate.

Rates of transport of material are generally expressed in terms of a flux, as kg/s for example, where this figure is generally obtained by considering the product of the flow rate (in m^3/s) and the concentration of material in suspension (kg/m^3). This does not necessarily imply a requirement for the material to be suspended; it is equally possible to express a bed load using the same units, for example, but it does imply that to obtain an estimate of the sediment flux it is necessary to know both the concentration and the flow rate over a given cross section. Both these quantities can be measured and there are a variety of techniques available to do this, using insitu collection or sampling, in situ optical or

acoustic methods, or remote sensing from aircraft or satellites (Uncles and Mitchell, 2017) (Figure-27)

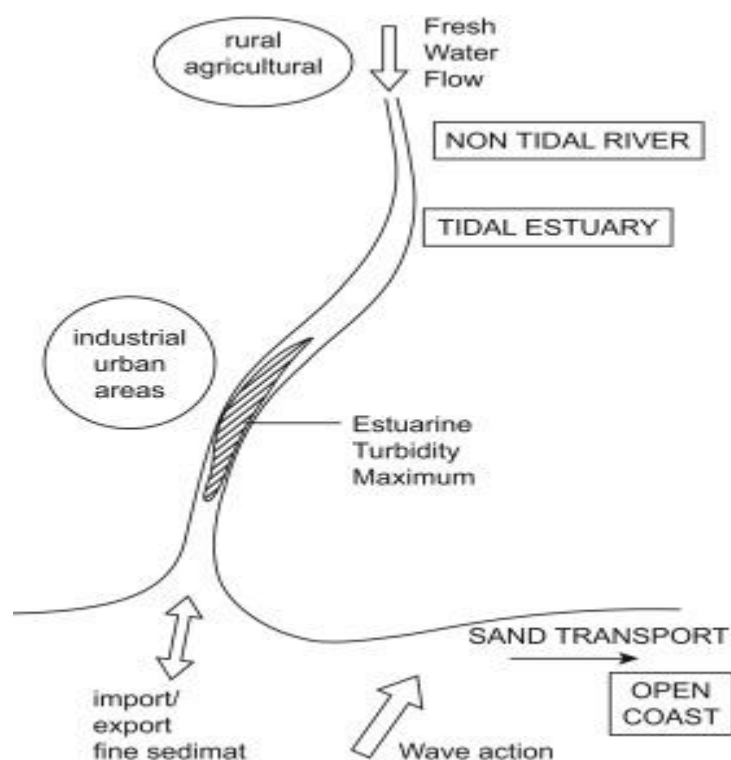


Figure-27: Sediment Deposition Process

Process of Deposition of Sediments in the Rivers of the District Sand is deposited because of the following reasons: (a) Floods: The surface or strip of relatively smooth land adjacent to a river channel constructed (or in the process of being constructed) by the present river in its existing regimen and covered with water when the river overflows its banks at times of high water. It is built of alluvium carried by the river during floods and deposited in the sluggish water beyond the influence of the swiftest current (b) Valley fill: The unconsolidated sediment deposited by any agent so as to fill or partly fill a valley.

3.1.4 Replenishment Study

All the rivers in Prakasam district are of 3rd Order streams. The Sand extraction in Prakasam District shall be as per Rule 23(1)(a) of AP Water Land and Tree Rules, 2004 where the transportation of sand shall be by means of bullock carts/ Tractors for the local use.

In case, if the sand deposition exceeds 5,000 Cu.Min a part of the stretch, then manual mining shall be permitted after obtaining Statutory Clearances. the District Collector shall put in place proper administrative

mechanism for enforcement of WALTA regulations in extraction and transportation of sand in I, II & III order streams.

Sand extraction is permitted for commercial usage in sand reaches of III Order streams having sand deposition of more than 5,000 Cum, after obtaining AMP, EC, CFE & CFO (G.O. Ms. No. 2, PR&RD Dept, dated 06.01.2022).

3.1.5 Details of Sand Mining Leases:

The rivers Gundlakamma, Musi, Manneru, Paleru, Chilakaleru and Ogeru are flowing through the following mandals

Name of the river(3rd Order Streams)	List of Mandals
Gundlakamma	Madipadu, NG Padu, Ongole
Musi	Chimakurthy, S.N. Padu, PodiliDarsi
Manneru	Pamaru
Paleru	Jarugumalli, P.C. Palli
Chilakaleru	Thalluru, Darsi
Ogeru	Chimakurthy

3.1.6 Details of De-Siltation Location: (Lakes/Ponds/Dams etc.)

The details of potential of de-siltation location in Prakasam District are shown in Table-23.

Table 24: List of Potential De-Siltation Location: (Lakes/Ponds/Dams etc.)(Existing and proposed)

De-siltation Points	Quantity (in MTs)	Remarks
Gundlakamma Reservoir (Chinnamallavaram (V) Maddipadu (M) Prakasam District limits)	410000	The same has been allotted to M/s Jaya Prakash Ventures Pvt Ltd for conducting of De-siltation of Sand. Further they have conducted sand De-siltation activity in the jurisdiction of Bapatla District only.

		Not started desiltation activity in the Jurisdiction of Prakasam District limits, due to poor quality of sand.
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Data Source: District Mines and Geology Officer, Prakasam District, Andhra Pradesh

3.1.7 Details of Patta Lands in the District:

The details of Patta Lands in the Prakasam district are shown in Table-24.

Table 25: Details of Patta Lands

Owner	Sy. No.	Area (Ha)	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing/ Proposed
Nil								

Data Source: District Mines and Geology Officer, Prakasam District, Andhra Pradesh

3.1.8 Details of M-Sand Plants in the District:

The details list of Manufacturing Sand in Prakasam district shown in Table-25.

Table 26: Shown Details of Details of M-Sand Plants

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
NIL There are no existing M - Sand units under this Prakasam office jurisdiction						

Data Source: District Mines and Geology Officer, Prakasam District, Andhra Pradesh

3.1.9 Details of Cluster of Sand Mining Leases

The area of Cluster of Mining Leases in Prakasam jurisdiction is shown in Table-26.

Table 27: Details Cluster of Mining Leases in Prakasam District

Sl.No	Name of the Cluster	Location (Latitude and Longitude)	Extent (in Ha)	Total No. of Mining Leases	No. of Leases working	Extent of the working leases
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				in the Cluster		(in Ha)
NIL						

Data Source: District Mines and Geology Officer, Prakasam District, Andhra Pradesh

3.1.10 Details of Contiguous Clusters

The area of Contiguous Cluster of Sand Reaches in Prakasam jurisdiction is shown in Table-27.

Table 28: Details of Contiguous Cluster of Sand Reaches in Prakasam District

Sl.No	Name of the Cluster	Location (Latitude and Longitude)	Extent (in Ha)	Total No. of Mining Leases in the Cluster	No.of Leases working	Extent of the working leases (in Ha)
NIL						

Data Source: District Mines and Geology Officer, Prakasam District, Andhra Pradesh

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