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**Inventory of Soil & Land Resources of
East Godavari District, Andhra Pradesh State
Using Remote Sensing Techniques**

Bangalore Centre

**Soil and Land Use Survey of India
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Ministry of Agriculture
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INVENTORY OF SOIL & LAND RESOURCES MAPPING OF EAST GODAVARI DISTRICT OF ANDHRA PRADESH USING REMOTE SENSING TECHNIQUES

ABSTRACT

1.	Survey Area	:	East Godavari (Andhra Pradesh, India)
2.	Geographical Extent	:	81°30' to 82°36' East Longitudes 16°30' to 18°20' North Latitudes
3.	Agro-climatic Region	:	East Coast Plains & Hills Region (Agro - ecological zone No. XI)
4.	Total Geographical Area	:	10,89,595 ha
5.	Kind of Survey	:	Soil Resource Mapping (SRM) using Remote Sensing Techniques
6.	Base Maps	:	(i) Survey of India Toposheets (scale 1:50,000) (ii) Satellite Imagery (scale 1:50,000) of LISS-III (IRS-1D)
7.	Scale of Mapping	:	1:50,000
8.	Period of Survey	:	December, 2010 to January, 2011 and March to April, 2011

9. Mapping unit wise soil association and their extent

S. No.	Mapping Units	Soil Series Association	Area (ha)	Area (%)
1	ALb2a1	Mandapeta, Katremkona	231103	21.21
2	ALb2b1	Katremkona, Mandapeta	14437	1.32
3	ALd2b1	Narsapur, Vangalapudi, Baduguranlanka	2075	0.19
4	ALg2a1	Baduguranlanka, Vangalapudi, Narsapur	14420	1.32
5	ALg2b1	Vangalapudi, Narsapur, Baduguranlanka	10872	1.00
6	ALl2b1	Mullapalem, Valasapakatu	10178	0.93
7	ALl2d1	Valasapakatu, Mullapalem	15874	1.46
8	BAv3a1	Kotravulapalli, Gandapalli	2182	0.20
9	BAw2a1	Gandapalli, Kotravulapalli	5863	0.54
10	CKn6c1	Madduluru, Maredumilli	7026	0.64
11	CKn6d1	Rayavaram, Santapaidipata	1394	0.13
12	CKn8c1	Maredumilli, Madduluru	40459	3.71
13	CKn8d1	Rayavaram, Santapaidipata	1275	0.12
14	CKo4d1	Uppalapadu, Kundada	3747	0.34
15	CKu4c1	Kundada, Uppalapadu	16347	1.50
16	CKv3a1	Timmapuram, Jaddangi	27982	2.57
17	GGn6c1	Sudikonda, Gotlagudem	6055	0.56
18	GGn6d1	Gotlagudem, Sudikonda	1902	0.17
19	GGn8c1	Sudikonda, Gotlagudem	15289	1.40
20	GGn8d1	Sudikonda, Gotlagudem	2884	0.26
21	GGo4c1	Gopavaram , Purushottapatnam	3009	0.28
22	GGo4d1	Purushottapatnam, Gopavaram	1303	0.12
23	GGu4c1	Gopavaram, Manda Konda, Purushottapatnam	5583	0.51
24	GGu4d1	Purushottapatnam, Gariapadu	4226	0.39
25	GGv3a1	Gariapadu, Purushottapatnam, Sitapalli	36351	3.34
26	GGv3b1	Mahalakshmi Peta, Sitapalli	801	0.07
27	GGw2a1	Sitanagaram, Nellipudi	30926	2.84

28	KHn6c1	Valamuru, Punda Loddi	17992	1.65
	Mapping Units	Soil Series Association	Area (ha)	Area (%)
29	KHn6d1	Lachireddipalem , Punda Loddi	4641	0.43
30	KHn8c1	Valamuru, Punda Loddi	185742	17.05
31	KHn8d1	Lachireddipalem, Valamuru	8850	0.81
32	KHo4b1	Nandivampu, Peda Geddada	1901	0.17
33	KHo4c1	Kakavada, Jaganathapuram	9697	0.89
34	KHo4d1	Bangaripeta, Peda Geddada	4193	0.38
35	KHu4c1	Peda Geddada, Jaganathapuram, Bangaripeta,	11241	1.03
36	KHu4d1	Bangaripeta, Jaganathapuram, Peda Geddada	3148	0.29
37	KHv3a1	Gurrapalem, Kotturu, Uppampalem	70095	6.43
38	KHv3b1	Kotturu, Gurrapalem, Uppampalem	2138	0.20
39	KHw2a1	Vannepudi, Uppampalem	39100	3.59
40	SDu4c1	Rameswaram, Vemulapalli	2091	0.19
41	SDv3a1	Kattamuru, Errampalem, Madhurapudi	27401	2.51
42	SDv3b1	Pallapadiyan, Peddapuram, Errampalem	10839	0.99
43	SDw2a1	Mallavaram, Madhurapudi	49754	4.57
44	SDw2b1	Madhurapudi, Pallapadiyan, Peddapuram	2719	0.25
45	e	Rock out crop	11837	1.09
46	f	Habitation	22053	2.02
47	g	Water body	63243	5.80
48	M	Mud/Salt Pan	7898	0.72
49	Q	Mangrove	19459	1.79
50			1089595	100.0

SALIENT FEATURES:

- ❖ Agriculture has dominant landuse area in the district and occupied 5,35,177 ha (49.1%), followed by forest area of 3,20,531 ha (29.4%).
- ❖ Out of the total area, about 55.5 per cent area is suitable for cultivation and qualified for moderately good to good land with moderate limitations.
- ❖ As per the soil irrigation potential, 20.5 per cent area has moderate soil limitations for sustained use under irrigation; whereas 30.2 per cent lands that have moderate to severe soil limitations.
- ❖ As per the Land Irrigability Class, 37.4 per cent lands have moderate to severe limitations for sustained use under irrigation followed by 18.0 per cent lands with few limitations.
- ❖ The survey area has 35.6 per cent well managed land which is followed by unmanaged (32.6%), poorly managed (11.7%) and moderately managed (8.7%) lands.
- ❖ The soils of most of the district are mostly under Inceptisols order followed by Entisols, Alfisols and Vertisols.
- ❖ The survey area is dominated by nearly level to very gently sloping lands (39.2%), whereas steep to very steep land accounts for 23.4 per cent of the area followed by very gently sloping to gently sloping land (16.3%).
- ❖ The area under very deep soils is 77.5 per cent followed by moderately deep soils covering 8.1 per cent and deep soils with 2.6 per cent area coverage.
- ❖ Nearly 35 per cent of the area is affected by none to slight water erosion followed by moderate to severe (25%), moderate (15%) and slight to moderate erosion (14.0%), respectively.