

INVENTORY OF DEGRADED LANDS OF CHITTOOR DISTRICT, ANDHRA PRADESH USING REMOTE SENSING TECHNIQUES

ABSTRACT

1. Details of Survey
 - i) Kind of survey : Land Degradation mapping
 - ii) Level of mapping : Reconnaissance
 - iii) Scale : 1:50,000
2. Period of survey : Nov 2000, Feb 2001, Nov 21st to Dec 01
3. Base material : IRS-1C & IDLISS FCC on 1:50,000 scale
4. Details of area
 - i) Total area of the district : 1492644 ha.
 - ii) Agro-climatic zone : Zone -X. The Southern Plateau and hill region
 - iii) Geographical extent : 12° 36' 30" to 13° 49' 45" N Latitude
78° 04' to 80° 3' 30" E Longitude
5. Statement showing nature and extent and percentage of degraded and non-degraded lands in the Chittoor district

Mapping Symbol	Description	Area	Percent
We	Water erosion		
We1a1	Severe water erosion, plain, agriculture land		
We1a2	Severe water erosion, plain, forest lands	5784	0.38
We1a4	Severe water erosion, plain, other lands	1989	0.13
We1b1	Severe water erosion, undulating, agriculture lands	3579	0.24
We1b2	Severe water erosion, undulating, forest lands	7159	0.48
We1b4	Severe water erosion, undulating, other lands	4971	0.38
We1c1	Severe water erosion, rolling, agriculture lands	4040	0.27
We1c2	Severe water erosion, rolling, forest lands	133	0.01
We1c4	Severe water erosion, rolling, other lands	2545	0.17
We1d1	Severe water erosion, hilly, Agriculture lands	1725	0.12
We1d2	Severe water erosion, hilly, forest lands	328	0.02
We1d4	Severe water erosion, hilly, other lands	1579	0.11
	Sub Total	1524	0.10
We2a1	Very severe water erosion, plain, agriculture lands	3535	
We2a2	Very severe water erosion, plain forest	225	0.02
We2a4	Very severe water erosion, plain, other lands	312	0.02
We2b1	Very severe water erosion, undulating, agriculture land	484	0.02
We2b2	Very severe water erosion, undulating, forest lands	834	0.03
We2b4	Very severe water erosion, undulating, other lands	5614	0.38
We2c2	Very severe water erosion, rolling, forest lands	2785	0.18
We2c4	Very severe water erosion, rolling, other lands	2081	0.14
We2d1	Very severe water erosion, hilly, agriculture land	530	0.04
		93	0.01

Mapping Symbol	Description	Area	Percent
We2d2	Very severe water erosion, hilly, forest lands	1849	0.12
We2d4	Very severe water erosion, hilly, other lands	560	0.04
	Sub-total	50723	
We/Sa	Water erosion/Salt affliction		
We1/Sa1a1	Severe water erosion with moderate saline, plain, agriculture lands	377	0.03
We2/Sa1a4	Very Severe water erosion with strongly saline plain, other lands	786	0.05
We1/Sa1a4	Severe water erosion with moderate saline, plain, other lands	735	0.05
We1/Sa1a2	Severe water erosion with moderate saline, plain, forest	52	0.01
	Subtotal	1950	0.13
Sa	Salt affliction		
Sa1a1	Moderately saline, plain, agriculture land	1465	0.10
Sa1a4	Moderately saline, plain, other lands	214	0.01
	Sub-Total	1679	0.11
Sw	Stony waste		
Sw1a4	Stony waste, undulating, forest lands	1191	0.04
Sw1b4	Stony waste, undulating, other lands	3183	0.21
Sw1c4	Stony waste, rolling, other lands	448	0.03
Sw1d4	Stony waste, hilly, other lands	233	0.02
	Sub-Total	5055	0.1
Rq	Rock quarry		
Rq1a1	Rock quarry; plain, agriculture lands	54	0.01
Rq1a4	Rock quarry, plain, other lands	165	0.01
Rq1b1	Rock quarry, undulating, agriculture land	296	0.02
Rq1b2	Rock quarry, undulating, Forest	207	0.01
Rq1b4	Rock quarry, undulating, other lands	1128	0.08
Rq1c1	Rock quarry, rolling, agriculture	29	0.01
Rq1c1	Rock quarry, rolling, Forest	281	0.02
Rq1c4	Rock quarry, rolling other lands	1641	0.11
Rq1d2	Rock quarry, hilly, Forest	773	0.05
Rq1d4	Rock quarry, hilly, other lands	1827	0.12
	Sub-Total	6401	0.43
RW	Rock out Crop/Stony Waste		
Rw1a1	Rock out crop/rocky waste, plain. Agriculture lands	143	0.01
Rw1a4	Rock out crop/rocky waste, plain. Other lands	240	0.02
Rw1b1	Rock out crop/rocky waste, undulating, agriculture lands	515	0.03
Rw1b2	Rock out crop/rocky waste, undulating, Forest	118	0.01
Rw1b4	Rock out crop/rocky waste, undulating, other lands	1712	0.11
Rw1c1	Rock out crop/rocky waste, rolling, agriculture lands	19	0.01
Rw1c2	Rock out crop/rocky waste, rolling, Forest	371	0.02
Rw1c4	Rock out crop/rocky waste, rolling, other lands	4832	0.32
Rw1d2	Rock out crop/rocky waste, hilly, Forest	24743	1.66
Rw1d4	Rock out crop/rocky waste, hilly, other lands	29224	1.86
	Sub total	61917	4.05
	Total degraded lands	127725	

Mapping Symbol	Description	Area	Percent
	Normal lands		
N1	Agricultural lands	728696	48.82
N1(3)	Agricultural, converted to plantation	9582	0.64
N2	Forest lands	377379	25.28
N2(1)	Forest converted to agriculture lands	1447	0.10
N3	Plantation	6416	0.43
N3(1)	Plantation, Converted to agriculture lands	51	0.01
N4	Other lands	156843	10.51
N4(1)	Other lands converted to agriculture lands	7788	0.52
N4(3)	Other lands converted to plantation	4249	0.28
	Sub-Total	1292451	86.59
	Miscellaneous lands		
	Habitation	10456	0.70
	River/stream	13842	0.93
	Tank	48170	3.23
	Sub-Total	72468	4.86
	Grand Total	1492644	100

6. Salient Features:

1. Out of total reported area of 1492,644 ha, 127725 ha (8.56%) is under different types of land degradation. Distribution of different land degradation is furnished below:

Kind of land degradation	Area (ha)	Percentage of Land degraded lands	Percentage of Total land
Rock quarry	6401	5.01	0.43
Rocky waste	61917	48.48	4.15
Moderately saline	1679	1.31	0.11
Stony waste	5055	4.0	0.33
Severe water erosion	35356	27.68	2.37
Very severe water erosion	15367	19.03	1.03
Severe water erosion/moderately saline	1164	0.91	0.08
Very severe water erosion/moderately saline	786	0.62	0.05
Total	127725		
Percentage	8.56		

2. Out of 127725 ha. degraded lands 17454 ha under agriculture, 47485 ha with forest and 62786 ha under other lands

3. Out of 127725 ha degraded lands, 17795 ha is on plain lands, 32562 ha on undulating lands, 14635 ha. on rolling lands and 62733 ha. on hilly lands. Distribution of degraded lands on different landscapes is tabulated below:

Landscape	Area in ha.	Percentage
Plain lands	17795	13.93
Undulating lands	32562	25.49
Rolling lands	14635	11.46
Hilly lands	62733	49.12
Total	127725	100.00

4. Chandragiri taluk is having the maximum area of degraded lands (16194 ha) while Bangarupalyam taluk is having the minimum extent of degraded lands (5291 ha). Chittoor district has sixty six mandals sub-divisioning eleven taluks. Among them Vadurukuppam mandal is having the maximum area of degraded lands (7133 ha) while Nindra mandal is having the minimum extent of degraded lands (32 ha.)
5. None of the taluks or mandals are free from degraded lands
6. Rocky waste covers the highest area of 61917 ha followed by water erosion 50723 ha.