

# INVENTORY OF DEGRADED LANDS OF GULBARGA DISTRICT, KARNATAKA 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 : April 1999 to April 2000
3. Base material : IRS-IB (Standard FCC) on 1:50,000 scale
4. Details of area
  - i) Total area of the district : 16, 10,208 ha.
  - ii) Agro-climatic zone : Zone -X. The Southern Plateau and Hill region
  - iii) Geographical extent : 16°12' - 17° 46' N Latitude  
76°04' - 77°42' E Longitude
5. Statement showing nature extent and percentage of degraded and non-degraded lands in Gulbarga district

Mapping Symbol	Description	Area	Percent
<b>We</b>	<b>Water erosion</b>		
We1a1	Severe water erosion, plain, agriculture land	155081	9.63
We1a2	Severe water erosion, plain, forest lands	453	0.03
We1a3	Severe water erosion, plain, plantation lands	292	0.02
We1a4	Severe water erosion, plain, other lands including open scrub & pasture land	14020	0.87
We1b1	Severe water erosion, undulating, agriculture lands	14703	0.91
We1b2	Severe water erosion, undulating, forest lands	583	0.04
We1b4	Severe water erosion, undulating, other lands	4900	0.30
We1c1	Severe water erosion, rolling, agriculture lands	1219	0.08
We1c2	Severe water erosion, rolling, forest lands	807	0.05
We1c3	Severe water erosion, rolling, plantation lands	949	0.06
We1c4	Severe water erosion, rolling, other lands	2877	0.18
We1d2	Severe water erosion, hilly, forest lands	721	0.04
We1d4	Severe water erosion, hilly, other lands	1838	0.11
We2a1	Very severe water erosion, plain, agriculture lands	15566	0.97
We2a4	Very severe water erosion, plain, other lands	1058	0.07
We2b1	Very severe water erosion, undulating, agriculture lands	7984	0.50
We2b2	Very severe water erosion, undulating, forest land	623	0.04
We2b4	Very severe water erosion, undulating, other lands	8699	0.54
We2c1	Very severe water erosion, rolling, agriculture land	308	0.02
We2c2	Very severe water erosion, rolling, forest lands	291	0.02
We2c4	Very severe water erosion, rolling, other lands	2649	0.16
We2d1	Very severe water erosion, hilly, agriculture land	369	0.02
We2d2	Very severe water erosion, hilly, other lands	235	0.01
We2d4	Very severe water erosion, hilly, other lands	971	0.06
	<b>Sub-total</b>	<b>237196</b>	<b>14.73</b>
<b>Sa</b>	<b>Salt affliction</b>		
Sa1a1	Moderately saline- sodic , plain, agriculture lands	6936	0.43
Sa1a4	Moderately saline sodic plain, other lands	687	0.04
Sa2a1	Strongly saline, sodic plain, agriculture lands	6556	0.41
Sa2a2	Strongly saline, sodic plain, forest lands	46	0.01
Sa2a4	Strongly saline, sodic plain, other lands	2018	0.12
Sa2b4	Strongly saline, sodic undulating, other lands	113	0.01
	<b>Sub-Total</b>	<b>16356</b>	<b>1.02</b>

Mapping Symbol	Description	Area	Percent
<b>Sw</b>	<b>Stony waste</b>		
Sw1a1	Stony waste, plain, agricultural lands	570	0.03
Sw1a2	Stony waste, plain, forest	101	0.01
Sw1a4	Stony waste, plain, forest	1806	0.11
Sw1a4	Stony waste, undulating, forest lands, other lands	1222	0.07
Sw1b1	Stony waste, undulating, agricultural lands	751	0.05
Sw1b2	Stony waste, undulating forest lands	19400	1.20
Sw1b4	Stony waste, undulating, other lands	577	0.04
Sw1c1	Stony waste, rolling, agricultural lands	1076	0.07
Sw1c2	Stony waste, rolling, forest lands	108	0.01
Sw1c3	Stony waste, rolling, plantation lands	20220	1.26
Sw1c4	Stony waste, rolling, other lands	5311	0.33
Sw1d2	Stony waste, hilly, forest lands	4411	0.27
Sw1d4	Stony waste, hilly, other lands		
	<b>Sub-Total</b>	<b>55553</b>	<b>3.45</b>
<b>Rq</b>	<b>Rock quarry</b>		
Rq1a1	Rock quarry, plain, agriculture lands	1700	0.10
Rq1a4	Rock quarry, plain, other lands	1809	0.11
Rq1b1	Rock quarry, undulating, agriculture lands	65	0.01
Rq1b4	Rock quarry, undulating, other lands	259	0.02
Rq1c1	Rock quarry, rolling, agriculture lands	60	0.01
Rq1c4	Rock quarry, rolling other lands	281	0.02
Rq1d4	Rock quarry, hilly, other lands	68	0.01
	<b>Sub-Total</b>	<b>4242</b>	<b>0.26</b>
		<b>313347</b>	<b>19.46</b>
	<b>Total degraded lands</b>		
	<b>Normal lands</b>		
		1154143	71.67
1	Agricultural lands	49922	3.10
2	Forest lands	595	0.04
3	Plantation	48956	3.04
4	Other lands		
	<b>Sub-Total</b>	<b>1253616</b>	<b>77.85</b>
	<b>Miscellaneous lands</b>		
	Habitation	9755	0.61
	River/stream	24797	1.54
	Tank	8693	0.54
	<b>Sub-Total</b>	<b>43245</b>	<b>2.69</b>
		<b>1610208</b>	<b>100.0</b>
	<b>Grand Total</b>		

**Salient Features:**

1. Water erosion is the main degradation type covering 237196 ha (14.73%) of the total area out which 198443 ha (12.32%) is affected by severe erosion and 38753 ha (2.41%) is very severe erosion.
2. Salt affliction covers 16356 ha (1.02% of total area
3. Stony waste covers an area of 55553 ha(3.45%) of total area.
4. Rock quarries covers an area of 4242 ha (0.26%) of total area.