

Inventory of Degraded Lands of Jhabua District, Madhya Pradesh

Using Remote Sensing Techniques

ABSTRACT

- **Kind of Survey** : Land Degradation Survey using Remote Sensing techniques
- **Level of Mapping** : Reconnaissance
- **Scale** : 1:50,000
- **Period of Survey** : November 94 to June 95
- **Base Materials** : IRS-1A LISS - II FCC (band 2,3 & 4) and Survey of India Toposheets on 1:50,000 scale
- **Total Area of District** : 6,46,912 ha
- **Agro-Climatic Zone** : Western plateau and hills region (IX)
- **Geographical Extent** : 21° 55' - 23° 15' N Latitudes and 74° 02' - 75° 01' E Longitudes
- **Nature and Extent of Degraded Lands in Jhabua district:**

Mapping Symbol	Description	Area (ha)	%
Water Erosion			
A1a	Agriculture, plain, severe to very severe erosion	80,997	12.50
A1b	Agriculture, undulating, severe to very severe erosion	92,088	14.20
A1d	Agriculture, plain, 25-50% surface coverage of gullied land	2,390	0.40
A1e	Agriculture, undulating, 25-50% surface coverage of gullied land	1,878	0.30
A1h	Agriculture, undulating, >50 % surface coverage of gullied land	248	0.04
A1j	Agriculture, shallow to moderately deep ravines	93	0.01
O1a	Open scrub, plain, severe to very severe erosion	6,145	1.00
O1b	Open scrub, undulating, severe to very severe erosion	28,187	4.40
O1c	Open scrub, Hills and mountain area, severe to very severe erosion	20,106	3.10
O1d	Open scrub, plain, 25-50% surface coverage of gullied land.	992	0.20
O1f	Open scrub, Hilly, 25-50% surface coverage of gullied land.	12,806	2.00
F1a	Forest, plain, severe to very severe erosion	874	0.13
F(A)1a	Forest (Agriculture), plain, severe to very severe erosion	21,365	3.30

F(A)1b	Forest (Agriculture), undulating, severe to very severe erosion	19,679	3.00
F(A)1c	Forest (Agric.), hilly and mountain, severe to very severe erosion	26,831	4.10
F1c	Forest, hilly, severe to very severe erosion	7,799	1.20
Other Degraded Areas:			
6e	Industrial affluent (Rock -stone quarry activities)	123	0.02
Total degraded land		3,22,601	49.90
Normal Area			
AN	Agriculture, normal land	2,25,243	34.80
FN	Forest, normal land	86,824	13.40
O	Open Scrub, (Industries & stony waste)	2,698	0.40
R	River, Nala and Habitation	9,546	1.50
Grand Total		6,46,912	100.00

Salient Findings:

- Out of total geographical area of 6,46,912 ha, an area of 3,22,601 ha (49.9%) suffers from land degradation problems.
- Soil erosion is major cause of land degradation in agriculture, forest and open scrub that accounts 27.5%, 11.8% and 10.6% of total area, respectively.
- Out of total degraded lands, 2,07,417 ha (32.1%) have the problem of severe to very severe erosion.
- Out of the total degraded lands, 5601 ha (0.9%) suffers from moderate to severe gully erosion.
- Very limited area of 123 ha (0.01%) has the problem of industrial affluents.
- Out of the total normal lands 2,25,243 ha (34.8%) is under agriculture and 86,824 ha (13.4%) is under forest.
- Area under other land uses i.e. including rivers, roads, habitation, etc. is 9,546 ha accounting for 1.5% of the total area of the district.

Degradation Types: The main cause for land degradation is water erosion except very little area is under industrial affluent.

Land use	Area (ha)	Percentage
Agriculture	1,77,694	27.50
Forest	76,548	11.80
Open scrub	68,236	10.60
Others (Industrial affluents)	123	00.01
Total	3,22,601	49.90