

Report on Inventory of Degraded Lands of West, South, North and Dhalai Districts of Tripura State using Remote Sensing Techniques.

ABSTRACT

- 1. Survey Area** : West, South, North and Dhalai Districts of Tripura State.
- 2. Type of Survey** : Land Degradation Mapping (L.D.M)
- 3. Total Area** : 1048600 ha.
- 4. Scale** : 1:50,000
- 5. Period of field visit** : November, 2006 to February, 2007
- 6. Base materials** : i) IRS-P6 LISS III Precession Geo-coded FCC (1:50K Scale)
ii) Survey of India Topographical Maps (1:50K Scale)
- 7. Location** : 22^o56' to 24^o32'N Latitude and
91^o09' to 92^o22' E Longitude
- 8. District-wise area** : West District – 303300 ha.
South District – 314000 ha.
North District – 210070 ha.
Dhalai District – 221230 ha.
- 9. Agro climatic Zone** : Humid High rainfall North Eastern Zone (3)
- 10. Aerial Extent of different degraded land as well as normal land**

Sl. No	Land Degradation Mapping Unit	Land Characteristics	Area in ha.	%age
1.	Sc1d2	Hill, >15% slope, current Jhum, poorly terraced cultivation.	12502	1.19
2.	Sc2d2	Hill, >15% slope, abandoned jhum.	12151	1.16
3.	We1d2	Hill, > 15% slope, degraded forest land, severe erosion.	44279	4.22
4.	We1d4	Hill, >15% slope, open scrub land, severe erosion.	368	0.04
5.	We1c2	Rolling land, 5-15% slope, degraded forest, severe land.	32061	3.06
6.	We1c4	Rolling land, 5-15% slope, scrub land, severe erosion.	11071	1.06
7.	We1b2	Undulating land, 3-10% slope, degraded forest, severe erosion.	27164	2.59
8.	We1b4	Undulating land, 3-10%, scrub land, severe erosion.	20901	1.99

<i>Sl. No</i>	<i>Land Degradation Mapping Unit</i>	<i>Land Characteristics</i>	<i>Area in ha.</i>	<i>%age</i>
9.	<i>Wlla1</i>	<i>Seasonal water logging plain land, 0-3% slope, agriculture effecting one crop.</i>	2229	0.21
10.	<i>Bkla1</i>	<i>Brick klin, plain land, 0-5% slope.</i>	110	0.01
11.	<i>AN</i>	<i>Normal agriculture land</i>	117106	11.17
12.	<i>FN</i>	<i>Normal forest land</i>	655088	62.47
13.	<i>ON</i>	<i>Open scrub, waste land, grass/pasture land etc.</i>	77712	7.41
14.	<i>PN</i>	<i>Normal plantation</i>	4901	0.47
15.	<i>O(P)N</i>	<i>Rubber, Tea, Coffee, Horticulture & others.</i>	10344	0.99
16.	<i>Misc. land.</i>	<i>River/stream, water body, settlement.</i>	20613	1.96
	Grand Total		10,48,600	100

11. Land Degradation Mapping Units:

- ◆ *Kind of Degradation (Sc, We, Wl, Bk)*
- ◆ *Degree of severity of degradation (1, 2, 4)*
- ◆ *Major landscape classes (a, b, c, d)*
- ◆ *Major land use classes (1, 2, 4)*

12. Kind of Land Degradation:

<i>Sl. No.</i>	<i>Kind of land Degradation</i>	<i>Name of the Districts</i>				<i>(Area in ha.)</i>	
		<i>West</i>	<i>South</i>	<i>North</i>	<i>Dhalai</i>	<i>Total</i>	<i>% age</i>
1.	<i>Water erosion</i>	18161	28405	52987	36291	135844	12.95
2.	<i>Shifting Cultivation</i>	1916	4334	7382	11021	24653	2.35
3.	<i>Brick klin</i>	-	86	13	11	110	0.01
4.	<i>Water logging</i>	1308	571	350	-	2229	0.21
5.	<i>Normal land</i>	275211	274512	146100	169328	865151	82.51
6.	<i>Misc. land</i>	6704	6092	3238	4579	20613	1.96
	Grand Total	303300	314000	210070	221230	1048600	100

13. Degradation under different major Land Use.

Sl.No.	Major Land Use	Degraded/Normal land	Area in ha.	Percentage.
1.	Agriculture	Degraded	2339	0.22
		Normal	117106	11.17
2.	Forest	Degraded	128157	12.22
		Normal	655088	62.47
3.	Plantation	Degraded	-	
		Normal	15245	1.46
4.	Others.	Degraded	32340	3.09
		Normal	77712	7.41
5.	Misc. lands		20613	1.96
			1048600	100

14. Degradation under different Land form.

Sl. No	Land characteristics	Name of the Districts				Area in ha.	
		West	South	North	Dhalai	Total	%age
1.	Hill (>15% slope)	2348	8068	29364	29520	69300	6.61
2.	Rolling (5-15% slope)	74 22	13011	12555	10144	43132	4.11
3.	Undulating (3-10% slope)	10307	11660	18450	7648	48065	4.58
4.	Plain land (0-5% slope)	1308	657	363	11	2339	0.22
5.	Normal land	209770	268195	144277	165197	787439	82.51
7.	Misc. land	6704	6092	3238	4579	20613	1.96
	Grand Total:	303300	314000	210070	221230	1048600	100.00

15. Salient Feature

- The degraded lands of Tripura cover 162836ha (15.53%) of its total geographical area (1048600 ha.).
- North district of Tripura (28.91%) is the most affected by various type of degradation followed by Dhalai (21.39%) and South (10.64%) districts. West district (7.06%) of Tripura is least affected by land degradation as compared to other.

- *Severe water erosion (12.95%) in the degraded forest and scrub land is the dominant responsible factor for land degradation in Tripura followed by shifting cultivation (2.35%) owing to illicit felling of trees.*
- *Shifting cultivation, locally known as Jhum cultivation, both current and abandoned Jhum land affected mostly Dhalai district (4.98%) followed by North district (3.51%) and South district (1.38%) by the Jhumia families. West district (0.63%) is the least affected by shifting cultivation.*
- *Seasonal water logging (0.21%) and Brick Kiln (0.01%) activities found in flood plain area which affects crop production.*
- *In general, land degradation problems affected mostly North Eastern and Southern part of Tripura i.e. hilly terrain of North, Dhalai and South districts owing to deforestation and mismanagement of land resources which needs immediate attention for food security as well as maintenance of fragile ecosystem.*