Inventory of Degraded Lands of Mathura district, U. P. Using Remote Sensing Techniques

ABSTRACT

1	(a) Kind of Survey	:	Land degradation mapping
	(b) Level of Mapping:		Reconnaissance
	(c) Scale		1 : 50, 000
2	Period of survey	:	October to November, 1996 and April, 1997
3	Base Material	:	(i)IRS – IB LISS- II False Colour Composite at 1:50,000 scale
			(ii)Survey of India toposheets at 1:50,000 scale
4	(a) Total area of district	:	3,76, 432 ha
	(b) Agro – climatic zone		'5' Upper Gangetic plain
	(c) Geographical extent		27° 14 ' to 27° 58 ' N Latitude
			77° 17 ' to 78° 12 ' E Longitude

5. Statement showing nature and extent of degraded lands in Mathura district

S. No.	Kinds of degradation	Area (ha)	Percentage
1.	Water erosion	11,600	3.08
2.	Salt affliction	8,575	2.28
3.	Water logging	2,800	0.74
	Sub-total	**22,975**	**6.10**
4.	Normal lands (non degraded)	3,33,282	88.54
5.	Miscellaneous lands	20,175	5.36
	Total	**3,76,432**	**100.00**

6. Mapping unit wise area of different degraded and normal lands

Mapping Symbol	Description	Area (ha)	Percentage
Water Erosion			
A1a	Agriculture, plain, severe to very severe erosion	3675	1.00
A1d	Agriculture, plain, 25-50% surface coverage of gullied land	2000	0.50
F1a	Forest, plain, severe to very severe erosion	350	0.10
F1c	Forest, hill, severe to very severe erosion	75	0.02
F1d	Forest, plain, 25-50% surface coverage of gullied land	275	0.10
O1a	Open scrub, plain, severe to very severe erosion	3950	1.10
O1b	Open scrub, undulating, severe to very severe erosion	125	0.03
O1c	Open scrub, hill, severe to very severe erosion	500	0.10
O1d	Open scrub, plain, 25-50% surface coverage of gullied land	650	0.20
	Sub-total	**11600**	**3.10**
Salt Affliction			
A3a	Agriculture, 50% surface coverage of salt encrustation	5875	1.60
F3a	Forest, < 50% surface coverage of salt encrustation	50	0.01
O3a	Open scrub, < 50% surface coverage of salt encrustation	2600	0.70
O(A) 3a	Open scrub changed to agriculture, < 50% surface coverage of salt encrustation	50	0.01
	Sub-total	8575	2.30
Waterlogging			
A4a	Agriculture, seasonal water logging	1425	0.40
A4b	Agriculture, permanent water logging	125	0.03
O4a	Open scrub, seasonal water logging	1150	0.30
O4b	Open scrub, permanent water logging	100	0.02
	Sub-total	**2300**	**0.70**
	Total degraded land	**22975**	**6.10**
Normal land (non degraded)			
AN	Agriculture	324828	86.30
FN	Forest	1179	0.30
F(A) N	Forest changed to Agriculture	25	0.00
ON	Open scrub, normal	6950	1.80
O (A) N	Open scrub changed to Agriculture	`250	0.10
PN	Plantation	50	0.01
H	Habitation	9650	2.60
T	Tank	1175	0.30
R	River	9350	2.50
	Sub-total	**353457**	**93.90**
	Grand-total	**376432**	**100.00**

Salient features

- Of the total district area of 376432 ha nearly 22975 ha (6.1%) area suffers from various types of land degradation problem.
- About 333282 ha (88. 5%) is under normal lands and about 20175 ha (5.4%) area is under miscellaneous use.
- Out of the total degraded lands, about 11600 ha (3.1%), 8575 ha (2.3%) and 2800 ha (0.7%) lands are degraded due to water erosion, salt affliction and water logging, respectively.