

Inventory of Degraded Lands of Jhunjhunu District of Rajasthan State 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 - March - April, 1997
- April - May, 1998
3. Base material - Indian Remote Sensing Satellite (IRS-IB) False Colour Composite (FCC) data and Survey of India toposheets in 1:50,000 scale
4. a) Total area of district - 5, 91,681 ha
- b) Agro climatic Zone - XIV – Western Dry Region (2) Transitional Plain of Inland Drainage Zone
- c) Geographical extent - 27°38' to 28°31' N Latitudes and 75°02' to 76°06' E Longitudes

5. Statement showing nature, extent and percentage of degraded lands in the district

| Mapping Symbol | Description | Area in ha | Percentage |
|----------------------|---|------------|------------|
| Water Erosion | | | |
| A1a | Agriculture, plain lands, severe to very severe erosion | 105 | 0.02 |
| A1b | Agriculture, undulating lands, severe to very severe erosion | 3560 | 0.60 |
| Wind Erosion | | | |
| A2b | Agriculture, non dunal/interdunal lands, severe erosion | 20130 | 3.40 |
| A2c | Agriculture, dunal lands, severe erosion | 4130 | 0.70 |
| Water Erosion | | | |
| F1b | Forest, undulating lands, severe to very severe erosion | 4490 | 0.76 |
| F1c | Forest, hilly lands, severe to very severe erosion | 36600 | 6.18 |
| F(O)1b | Forest changed to open scrub, undulating lands, severe to very severe erosion | 100 | 0.02 |
| F(O)1c | Forest changed to open scrub, hilly lands, severe to very severe erosion | 325 | 0.05 |

| Mapping Symbol | Description | Area in ha | Percentage |
|---------------------------|---|-----------------|---------------|
| WindErosion | | | |
| F2b | Forest, dunal lands, severe to very severe erosion | 215 | 0.04 |
| Water Erosion | | | |
| O1b | Open scrub, undulating lands, severe to very severe erosion | 1825 | 0.31 |
| O1c | Open scrub, hilly lands, severe to very severe erosion | 2110 | 0.36 |
| O(F)1b | Open scrub changed to forest, undulating lands, severe to very severe erosion | 713 | 0.12 |
| O(F)1c | Open scrub changed to forest, hilly lands, severe to very severe erosion | 550 | 0.09 |
| Wind erosion | | | |
| O2b | Open scrub, non dunal/interdunal lands, severe erosion | 4230 | 0.71 |
| O2c | Open scrub, dunal lands, severe erosion | 2215 | 0.37 |
| O(F)2b | Open scrub changed to forest, non dunal/interdunal lands, severe erosion | 180 | 0.03 |
| Sub Total (A) | | 81478 | 13.76 |
| Non-degraded lands | | | |
| AN | Agriculture | 4,51,563 | 76.33 |
| FN | Forest | 3,650 | 0.62 |
| ON | Open scrub | 39,280 | 6.63 |
| F(A)N | Forest changed to Agriculture | 125 | 0.02 |
| O(F)N | Open scrub changed to forest | 2,460 | 0.42 |
| O(P)N | Open scrub changed to plantation | 40 | 0.01 |
| H | Habitation / roads and others | 7,315 | 1.24 |
| R | Rivers / water bodies | 5,770 | 0.97 |
| Sub-Total (B) | | 5,10,203 | 86.24 |
| Grand Total (A+B) | | 5,91,681 | 100.00 |

6. Salient findings

- Out of 591681 hectare area of the district 81478 hect (13.76%) is degraded.
- Water erosion is the main degradation type. Covering 50378 Hect (8.51%) of the total area followed by wind erosion covering an area of 31100 Hect (5.25%)
- LAND USE WISE DEGRADATION IS GIVEN BELOW.

| S.No. | Land Use | Area under degradation (in hect) | Percentage |
|-------|----------------------------|----------------------------------|------------|
| 1. | Agriculture(Water erosion) | 3665 | 0.62 |
| 2. | Agriculture(wind erosion) | 24260 | 4.10 |
| 3. | Forest (water erosion) | 41515 | 7.01 |
| 4. | Forest (wind erosion) | 215 | 0.04 |
| 5. | Open scrub (water erosion) | 5198 | 0.88 |
| 6. | Open scrub (wind erosion) | 6625 | 1.11 |
| Total | | 81478 | 13.76 |

- Out of 591681 hect area, 11823Hect area (1.99%) of open scrub is degraded, whereas 5198 hect area (0.88%) is degraded due to water erosion
- Out of the total area of the district In 86.24% of the district is normal land under various land uses.
- Most of the degraded lands are confined in hilly lands which accounts 38710 hect (6.54%).
- Out of total area 6560 Hect (1.11%) dunal area is affected by wind activities. 4.72% area of agriculture, 7.05% area of forest and 1.99 % area of open scrub is degraded.
- The total population of the District (1991 Census)is 1582421 out of which 819448 Males and 7,62973 females, Rural population of the district is 12,57377 persons and urban population is 325044 persons.