

# Report on Demarcation of Priority Micro-watersheds in the Catchment of Ramganga RVP (above Kalagarh Dam), Uttaranchal

## ABSTRACT

- Survey Area : Ramganga RVP catchment
- Total area of the catchment : 3,12,821 ha
- Period of Survey : April, 1999 to May, 1999
- Kind of Survey : Rapid Reconnaissance Reassessment Survey Using Remote Sensing Techniques
- Location of the Catchment : 29<sup>0</sup>-30' to 30<sup>0</sup>-07' North Latitudes  
78<sup>0</sup>-35' to 79<sup>0</sup>-35' East Longitudes
- Hydrological divisions :
  - (a) Catchment : Ramganga RVP (2B4 Part above Kalagarh Dam), Uttaranchal
  - (b) Sub-catchment : 2B4E (Part)
  - (c) Watersheds : 4-(2B4E3, 4,5,6)
  - (d) Sub-watersheds : 134
  - (e) Micro-watersheds : 288
- Extent of area under different Erosion Intensity Mapping Units (EIMUs)

| Sl. No. | Mapping unit | Area in ha | Percentage |
|---------|--------------|------------|------------|
| 1.      | A1           | 540        | 0.17       |
| 2.      | A2           | 1739       | 0.56       |
| 3.      | A3           | 425        | 0.14       |
| 4.      | CM1          | 1155       | 0.37       |
| 5.      | CM2          | 1145       | 0.37       |
| 6.      | CM3          | 2008       | 0.64       |
| 7.      | CM4          | 1837       | 0.59       |
| 8.      | CM5          | 3040       | 0.97       |
| 9.      | CM6          | 3090       | 0.99       |
| 10.     | CM7          | 2518       | 0.81       |
| 11.     | CM8          | 1441       | 0.46       |
| 12.     | GN1          | 250        | 0.08       |
| 13.     | GN2          | 235        | 0.08       |

| Sl. No. | Mapping unit | Area in ha | Percentage |
|---------|--------------|------------|------------|
| 14.     | GN3          | 410        | 0.13       |
| 15.     | LS1          | 5085       | 1.62       |
| 16.     | LS2          | 3390       | 1.08       |
| 17.     | LS3          | 3260       | 1.04       |
| 18.     | LS4          | 1558       | 0.50       |
| 19.     | LS5          | 650        | 0.21       |
| 20.     | LS6          | 205        | 0.07       |
| 21.     | LS7          | 730        | 0.23       |
| 22.     | LS8          | 830        | 0.27       |
| 23.     | LS9          | 7757       | 2.48       |
| 24.     | LS10         | 6325       | 2.02       |
| 25.     | LS11         | 2442       | 0.78       |
| 26.     | LS12         | 4391       | 1.40       |
| 27.     | LS13         | 3130       | 1.00       |
| 28.     | LS14         | 4941       | 1.58       |
| 29.     | LS15         | 3440       | 1.10       |
| 30.     | LS16         | 415        | 0.13       |
| 31.     | LS17         | 90         | 0.03       |
| 32.     | LS18         | 20         | 0.01       |
| 33.     | LS19         | 183        | 0.06       |
| 34.     | LS20         | 155        | 0.05       |
| 35.     | LS21         | 40         | 0.01       |
| 36.     | SC1          | 8865       | 2.83       |
| 37.     | SC2          | 13100      | 4.19       |
| 38.     | SC3          | 7185       | 2.30       |
| 39.     | SC4          | 12120      | 3.87       |
| 40.     | SC5          | 4660       | 1.49       |
| 41.     | SC6          | 3983       | 1.27       |
| 42.     | SC7          | 12035      | 3.85       |
| 43.     | SC8          | 11116      | 3.55       |
| 44.     | SC9          | 13454      | 4.30       |
| 45.     | SC10         | 19462      | 6.22       |
| 46.     | SC11         | 23970      | 7.66       |
| 47.     | SC12         | 29484      | 9.42       |
| 48.     | SC13         | 13818      | 4.42       |
| 49.     | SC14         | 6457       | 2.06       |
| 50.     | SC15         | 3473       | 1.11       |
| 51.     | SC16         | 770        | 0.25       |
| 52.     | SC17         | 30         | 0.01       |
| 53.     | SC18         | 50         | 0.02       |
| 54.     | SC19         | 75         | 0.02       |
| 55.     | SC20         | 175        | 0.06       |
| 56.     | SC21         | 125        | 0.04       |
| 57.     | SC22         | 125        | 0.04       |

| Sl. No.            | Mapping unit | Area in ha    | Percentage    |
|--------------------|--------------|---------------|---------------|
| 58                 | SC23         | 35            | 0.01          |
| 59                 | SH1          | 1205          | 0.39          |
| 60                 | SH2          | 910           | 0.29          |
| 61                 | SH3          | 3255          | 1.04          |
| 62                 | SH4          | 8168          | 2.61          |
| 63.                | SH5          | 16731         | 5.35          |
| 64.                | SH6          | 12489         | 3.99          |
| 65.                | SH7          | 7804          | 2.49          |
| 66.                | River (Misc) | 8822          | 2.82          |
| <b>Grand total</b> |              | <b>312821</b> | <b>100.00</b> |

### ➤ Priority Classification of Micro-Watersheds

| Sl. No. | Priority class and Range of SYI | No. of micro watersheds | Area in ha    | Percentage |
|---------|---------------------------------|-------------------------|---------------|------------|
| 1.      | Very High (1500 and above)      | 7                       | 6495          | 2.1        |
| 2.      | High (1400-1499)                | 48                      | 49702         | 15.9       |
| 3.      | Medium (1300-1399)              | 67                      | 75984         | 24.3       |
| 4.      | Very Low(1200-1299)             | 57                      | 65240         | 20.8       |
| 5.      | Low (Less than 1200)            | 109                     | 115400        | 36.9       |
|         | <b>Total</b>                    | <b>288</b>              | <b>312821</b> | <b>100</b> |

### ➤ Salient Features of the Catchment

- Of the total area, 6,495 ha (2.1%) and 49,702 ha (15.9%) have been assessed as very high and high priority area respectively.
- Out of the reported area, 20.61% is under forest, 18.27% grazing and grass land, 59.44% falls under cultivation and 1.68% under rivers.
- In so far as the soil depth of the reported area is concerned, nearly 9.20% is under very deep to deep, 45.13% is under moderately deep to deep and 45.67% area is under moderately deep soils.
- Only 10.15% area is conserved, whereas 34.99% is poorly conserved and remaining 54.86% area is moderately conserved.
- About 94.59% area is under strong to very steep slopes, 1.55% and 3.86% area falls under moderate slopes and gentle slopes respectively.
- Nearly 37.28% area is under severe erosion, whereas 56.87% area is under moderate erosion and 5.85% area fall under slight erosion.