

Report on Detailed Soil Survey and Land Use of Md1c, Md1d and Mf2b Subwatersheds of Mayurakshi Dam Catchment (RVP), P.S. Dumka, Jama, Jarmundi and Ramgarh, District Dumka, Jharkhand.

Abstract

1. **Survey Area** : Md1c, Md1d and Mf2b subwatersheds of Mayurakshi Dam Catchment, District Dumka, Jharkhand.
2. **Location** : Latitudes : $24^{\circ}21'30'' - 24^{\circ}31'45''N$
Longitudes : $87^{\circ}9' - 87^{\circ}18'E$
3. **Total Area Mapped and Reported** : 10087 ha
4. **Period of Survey** : May, 1998 to June, 1998
5. **a) Agro-climatic Zone** : Eastern plateau and Hills (Zone no. 7)
(as per Planning Commission)
- b) Climatic Region** : Humid South East (3)
- c) Soil Conservation Region** : Eastern Red Soil Region (8)

6. Soil Series Mapped and their Subwatershed wise Distribution

| Sl. No. | Name of Soil Series | Area (ha) | Percent of Total Area | Subwatershed wise Area (ha) | | |
|--------------|---------------------|--------------|-----------------------|-----------------------------|----------------|----------------|
| | | | | Md1c | Md1d | Mf2b |
| 1. | Amra | 2063 | 20.5 | 1151 (31.9) | 75 (2.8) | 837 (22.3) |
| 2. | Balia | 3694 | 36.6 | 805 (22.3) | 1733 (63.8) | 1156 (30.7) |
| 3. | Bathantoli | 359 | 3.6 | 322 (9.0) | 34 (1.2) | 3 (0.1) |
| 4. | Dumka | 461 | 4.6 | 294 (8.2) | 111 (4.1) | 53 (1.4) |
| 5. | Ghoradanga | 57 | 0.6 | - | - | 57 (1.5) |
| 6. | Karaya | 1384 | 13.7 | 442 (12.2) | 383 (14.1) | 559 (14.8) |
| 7. | Kanchanpur | 749 | 7.4 | - | - | 749 (19.9) |
| 8. | Lakshmipur | 812 | 8.0 | 363 (10.0) | 240 (8.8) | 209 (5.6) |
| 9. | Pusaro | 153 | 1.5 | 86 (2.4) | 59 (2.2) | 8 (0.2) |
| 10. | Misc. | 355 | 3.5 | 144 (4.0) | 79 (3.0) | 132 (3.5) |
| Total | | 10087 | 100 | 3610 | 2714 | 3763 |

Figures in parenthesis indicate percentage of total area of subwatersheds.

7. Subwatershed wise Distribution of Area under Different Land Capacity Classes and their Corresponding Soil Series

| Sl. No. | Land Capability Classes | Subwatershed wise Area in ha | | | Total Area (ha) | Soil Series |
|--------------------|-------------------------|------------------------------|----------------|----------------|-----------------|---|
| | | Md1c | Md1d | Mf2b | | |
| 1. | II | 1337 (37.0) | 1779 (65.5) | 1910 (50.8) | 5026 (49.8) | Balia Bathamtoli Kanchanpur Karaya Pusaro |
| 2. | III | 406 (11.2) | 371 (13.6) | 204 (5.4) | 981 (9.7) | Balia Ghoradanga Kanchanpur Lakshimpur |
| 3. | IV | 277 (7.7) | 108 (4.0) | 158 (4.2) | 543 (5.4) | Bathamtoli Dumka Lakshimpur |
| 4. | VI | 295 (8.1) | 302 (11.1) | 522 (13.9) | 1119 (11.1) | Balia Dumka Pusaro |
| 5. | VII | 1151 (31.9) | 75 (2.8) | 837 (22.2) | 2063 (20.5) | Amra |
| Total | | 3466 | 2635 | 3631 | 9732 | |
| Misc. | | 144 (4.0) | 79 (3.0) | 132 (3.5) | 355 (3.5) | |
| Grand Total | | 3610 | 2714 | 3763 | 10087 | |

Figures in parenthesis indicate percentage of total area of subwatersheds.

8. Specific Problems and other Salient Features

- ◆ Nearly 2524 ha (25.0%) of land is under shallow and 812 ha (8.0%) under moderately deep soils.
- ◆ Deep and very deep soils cover around 359 ha (3.6%) and 6037 ha (59.9%) of the total survey area respectively.
- ◆ About 3579 ha (35.5%) of land are subjected to severe and very severe erosion intensity which need adequate soil conservation measures.
- ◆ Nearly 1384 ha (13.7%) of the submerged land is susceptible to seasonal water flow.