

Report on Detailed Soil Survey and Land Use of Mh3c, Subwatershed of Mahammadgunj Dam Catchment(RVP), P.S. Lesligunj, Dist. Palamu ,Jharkhand State

Abstract

1. **Survey area** : Mh3c Sub-watershed of Mahammadgunj Dam Catchment (R.V.P) P.S Lesligunj district- Palamu of Jharkhand state.
2. **Location and extent** : 24⁰-02' to 24⁰-04' – 30 " north latitude
84⁰-08' to 84⁰13' East langitude
3. **Total area mapped** : 2000 ha
4. **Type of Survey** : Detailed Soil Survey
5. **Base map used** : Cadastral map (16" = 1 mile)
6. **Period of Survey** : March to April - 2002
7. **a) Agro Climatic Zone** : Middle Gangetic plains zone (iv) as per planning commission

8. Soil Series mapped and their area extent :-

| SL. No. | Soil Series | Area in ha | % |
|---------|----------------|------------|------|
| 1. | Barkagoan (BG) | 1017 | 50.8 |
| 2. | Jaitukhar (JK) | 139 | 7.0 |
| 3. | Jhagarpur (JP) | 93 | 4.7 |
| 4. | Juru (JR) | 52 | 2.6 |
| 5. | Lesligunj (LG) | 27 | 1.3 |
| 6. | Lohora (LH) | 12 | 0.6 |

| | | | |
|-----|---------------|-------------|------------|
| 7. | Misardih (MD) | 43 | 2.1 |
| 8. | Munria (MR) | 26 | 1.3 |
| 9. | Purnadih (PD) | 33 | 1.7 |
| 10. | Turkadih (TK) | 452 | 22.6 |
| 11. | Misc | 106 | 5.3 |
| | Total | 2000 | 100 |

9. Area distribution under different land capability classes

| Sl No. | Land Capability Class | Total area in ha | % |
|--------|-----------------------|------------------|------------|
| 1. | II | 1300 | 65.0 |
| 2. | III | 320 | 16.0 |
| 3. | IV | 170 | 8.5 |
| 4. | VI | 104 | 5.2 |
| 5. | Misc. (ha) | 106 | 5.3 |
| | Total (ha) | 2000 | 100 |

10. Sub watershed area (ha) under different erosion classes and percentage

| Sl No. | Erosion Class | Area in ha | % |
|--------|------------------------|-------------|------------|
| 1. | None to slight erosion | 1356 | 67.8 |
| 2. | Moderate erosion | 370 | 18.5 |
| 3. | Severe erosion | 64 | 3.2 |
| 4. | Very severe erosion | 104 | 5.2 |
| 5. | Misc. | 106 | 5.3 |
| | Total | 2000 | 100 |

11. Specific Problems and other Salient Features :

- ⇒ The survey area is dominated by very deep soils covering an area of 1813 ha (90.7%) followed by deep soils 55 ha (2.7%) and shallow soils 26 ha (1.3%).
- ⇒ Slope distribution very gently sloping 680 ha (34.0%) followed by gently sloping 475 (23.8%) and moderately sloping 105 ha (5.2%) respectively.
- ⇒ 1356 ha (657.8%) is under none to slight erosion followed by 370 ha (18.5%) under moderate erosion, 64 ha (3.2%) under severe and 104 ha (5.2%) under very severe erosion.
- ⇒ Total 168 ha (8.4%) is under severe to very severe erosion which needs immediate attention for soil-water conservation measured.
- ⇒ 1327 ha (66.3%) of the total area is terraced and under paddy cultivation.
- ⇒ 52 ha (2.6%) is susceptible to seasonal water logging.
- ⇒ 1327 ha (66.3%) are under well managed category which can be used for wide variety of crops.
- ⇒ 567 (28.3%) are under poorly to unmanaged which needs proper management along with suitable agronomic practices.