

Report on Detailed Soil Survey and Land Use of Mh5a Sub-watershed of Mahammadgang Dam Catchment, P.S. Lesligang, District Palamu, Jharkhand State

Abstract

1. **Survey area** : Mh5a Subwatershed of Mahammadganj Dam Catchment, P. S. Lesliganj, District Palamu, Jharkhand State.
2. **Type of Survey** : Detailed Soil Survey
3. **Location and Extent** : $24^{\circ}04'30''$ to $24^{\circ}05'55''$ N Latitude and $84^{\circ}08'30''$ to $84^{\circ}15'10''$ E Longitude
4. **Period of Survey** : March 2005 to April 2005.
5. **Base map used** : Cadastral map (16"=1 mile) or 1 :3960
6. **Total area mapped** : 1194 ha
7. **Toposheet (SOI)** : 72D/4
8. **Agro Climatic Region** : Middle Gangatic plains zone (iv) as per planning commission (1989)

9. Soil Series mapped with extent

Sl.No.	Name of Soil Series	No. of mapping units	Total area (ha)	%
1.	Amwa (AM)	3	110	9.2
2.	Banwa (BN)	6	226	18.9
3.	Darudih (DD)	3	108	9.0
4.	Hara (HR)	3	53	4.4
5.	Jhagarpur (JP)	4	92	7.7
6.	Kanti (KT)	2	33	2.8
7.	Matang (MG)	2	50	4.2
8.	Zalim (Z)	5	297	24.9
9.	Misc.		225	18.8
Grand Total		28	1194	100.0

10. Area under different Erosion Classes

Sl. No.	Erosion Class	Total Area (ha)	Percentage
1.	None to slight	643	53.9
2.	Moderate	326	27.3
3.	Misc.	225	18.8
Grand Total		1194	100

11. Distribution of area under different Land Capability Classes

Sl. No.	Land Capability Class	Area (ha)	Percentage
1.	II	660	55.3
2.	III	309	25.9
3.	Misc.	225	18.8
	Grand Total ⇒	1194	100

12. Salient Features of the area:

- Out of total area of 1194ha, about 969ha was arable land remaining 225ha was under misc. category.
- The survey area is dominated by very deep soils, covering an area 811 ha (67.9%), followed by deep soils, 108 ha (9.05%) and moderately deep soils 50ha (4.2%) respectively.
- In the survey area 8 soil series were established with major area of 297ha under Zalim series followed by Banwa series an area of 226ha, Amwa series 110ha and Duradih series 108ha respectively and rest of the four series under less than 100ha.
- About 660ha (55.3%) of the area is under class II of the LCC, whereas 309ha (25.9%) of the area is under III of the LCC.
- The area has the problem of moderate erosion only over a spread of 326 ha of the whole area(27.3%). Rest of the area has no erosion hazard.