Detailed Soil Survey and Land Use Plan of 2B7B5d1 to d7, f1 to f9 and 2B7B7d1 to d9, f1 to f8, m1 to m8 Microwatersheds in Left Bank and Right Bank, Lower Ramganga Subcatchment, Ramganga Catchment (FPR), Districts- Moradabad and Rampur, Uttar Pradesh

Abstract

1.	***Survey Area***	*:*	2B7B5d1 to d7, f1 to f9 and 2B7B7d1 to d9, f1 to f8, m1 to m8 Microwatersheds in Ramganga Catchment, Districts- Moradabad and Rampur, Uttar Pradesh
2.	***Geographical Location***	*:*	Lies between 28^{o} 45′ 0″ to 29^{0} 2′ 0″ North Latitude and between 78^{o} 49′ 0″ to 79^{o} 3′ 0″ East Longitude
3.	***Type of Survey***	*:*	Detailed Soil Survey using Remote Sensing Techniques
4.	***Base Map Used***	*:*	High Resolution Satellite Imagery and Survey of India Toposheets
5.	***Total Area Mapped***	*:*	28992 ha
6.	***Agro Climatic Region***	*:*	ZONE- V (The Upper Gangetic Plain Region)
7.	***Period of Survey***	*:*	June, 2014 to August, 2014
8.	***Scale of Map***	*:*	1:12500 Scale

❖ **Name of Soil Series and their Extent**

S. no.	Series Name	No. of mapping unit	Area (ha)	Area (%)
1.	**Bhadasana (B)**	10	5490	18.94
2.	**Deory (D)**	5	3767	12.99
3.	**Mundla (M)**	8	14070	48.53
4.	**Nawabpur (N)**	4	3492	12.04
5.	**Habitation (HB)**	-	1628	5.62
6.	**Misc. Lands (ML)**	-	73	0.25
7.	**River (R)**	-	440	1.52
8.	**Tank (T)**	-	32	0.11
TOTAL		**27**	**28992**	**100.00**

❖ **Distribution of Area under different Depth Class**

S. no.	Soil Depth Class	Area (ha)	Area (%)
1.	Very deep (d5)	26819	92.50
2.	Habitation (HB)	1628	5.62
3.	Misc. Lands (ML)	73	0.25
4.	River (R)	440	1.52
5.	Tank (T)	32	0.11
TOTAL		**28992**	**100.00**

❖ **Distribution of Area under different Soil Erosion Class**

S. no.	Erosion Class	Area (ha)	Area (%)
1.	None to slight erosion (e1)	25019	86.30
2.	Moderate erosion (e2)	1800	6.21
3.	Habitation (HB)	1628	5.62
4.	Misc. Lands (ML)	73	0.25
5.	River (R)	440	1.52
6.	Tank (T)	32	0.11
TOTAL		**28992**	**100.00**

❖ **Distribution of Area under different Land Capability Class**

S. no.	Land Capability Class	Name of Soil Series	Area (ha)	Area (%)
1.	II	**Bhadasana, Deory, Mundla and Nawabpur**	25717	88.70
2.	III	**Bhadasana**	1102	3.80
3.	Habitation (HB)	-	1628	5.62
4.	Misc. Lands (ML)	-	73	0.25
5.	River (R)		440	1.52
6.	Tank (T)		32	0.11
TOTAL		**-**	**28992**	**100.00**

❖ **Distribution of Area under different Slope Class**

S. no.	Slope Class	Area (ha)	Area (%)
1.	Plain to nearly level slope (A)	6496	22.41
2.	Very gentle slope (B)	19198	66.22
3.	Gentle slope (C)	1125	3.88
4.	Habitation (HB)	1628	5.62
5.	Misc. Lands (ML)	73	0.25
6.	River (R)	440	1.52
7.	Tank (T)	32	0.11
TOTAL		**28992**	**100.00**

❖ **Salient Features of the Area**

- Out of four soil series identified and mapped in the survey area, Mundla soil series occur in 48.53 % (14070 ha) followed by Bhadasana soil series in 18.94 % (5490 ha).
- 26819 ha (92.50 %) area is covered under very deep soils.
- 25019 ha (86.30 %) area is covered under none to slight erosion and 1800 ha (6.21 %) area is covered under moderate erosion.
- 1628 ha (5.62%) area is covered by habitation, 73 ha (0.25 %) by miscellaneous lands and 472 ha (1.63 %) by water bodies (river and tank).
- About 6496 ha (22.41 %) area falls under plain to nearly level slope, 19198 ha (66.22 %) area is under very gentle slope and 1125 ha (3.88 %) area is under gentle slope.
- Out of total 28992 ha of the survey area, 25717 ha (88.70 %) area is classified as land capability class II while 1102 ha (3.80 %) area fall under land capability class III.

HOW TO USE SOIL SURVEY REPORT

The report present findings of Detailed Soil Survey carried out in 2B7B5d1 to d7, f1 to f9 and 2B7B7d1 to d9, f1 to f8, m1 to m8 microwatersheds of Ramganga Catchment in Moradabad and Rampur Districts of Uttar Pradesh State. It provides complete information on the soil of the area, their distribution, classification and interrelationship. The data presented in this report can be used for various development purposes such as crop planning, preparation and water conservation plans as well as selection of new areas for plantation and mixed farming etc.

The soil and land capability maps are appended with this report. Each soil mapping unit is delineated on the map and represented by a symbol. The abbreviated symbols gives soil information about the soil series name, effective soil depth, surface texture, slope, erosion, stoniness and rockiness in sequence, for example the soil mapping unit M5dB2 denotes M - name of soil series Mundla, 5 - soil depth - very deep (more than 100 cm. depth) d -soil surface texture (sandy loam), B - slope - very gentle slope (1-3 %), 2 -erosion - moderate erosion,

To make use of this report, first the area of interest is located on the map and mapping units are noted down. The list of all the soil mapping units with duly defined characteristics, their area under different microwatersheds and interpretative grouping such as Land Capability Class, Soil and Land Irrigability Class, Paddy Soil Grouping, Hydrological Soil Grouping etc, are given in Appendix- I "Guide to Mapping Units"

Series wise interpretation of Fertility Capability Classification provides a scientific base for judicious application of chemical fertilizers which is necessary for sustainable agricultural productivity. Land Capability Unit wise, both improvable as well as inherent problems have been indicated on the basis of such problems, recommendations have been made which are in broad and suggestive in nature for systematic planning. For specific recommendations a particular use of any site of interest, local conditions and experience should be made use of, by the users of the report. Any comments and suggestions on this report would be welcome. For any detail and clarification, further correspondence or contact may be made to,

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