Detailed Soil Survey and Land Use of Subwatersheds : Mk4b and Mk4c (Above proposed Dhurwara Dam) and Mk4d, Mk4f and Mk5a (Adjoining Rajghat Dam), Matatilla RVP catchment, Tehsil and District - Lalitpur, Uttar Pradesh

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i. A B S T R A C T

1. Survey area - Betwa river watershed, Matatilla RVP catchment, Tehsil & Distt: Lalitpur, Uttar Pradesh.
   Mk4b, Mk4c, Mk4d, Mk4f and Mk5a subwatersheds
   - 24° 42' - 24°52' NL
   - 78° 12' - 78°21' EL

2. Total area - 14580 hactares

3. Period of survey - Dec. 82 to July 83

4. Type of survey - Detailed Soil Survey

5. Soil series mapped and area covered under each series

S. No.	Soil Series	Subwatersheds (Area in ha.) Mk4b Area (%)	Mk4c Area (%)	Mk4d Area (%)	Mk4f Area (%)	Mk5a Area (%)	Total area in ha. (%)
1.	Bedora	222 (6.8)	73 (3.6)	294 (8.4)	38 (1.2)	49 (2.0)	676 (4.6)
2.	Mau	1252 (38.2)	1141 (56.7)	1778 (50.6)	2095 (62.9)	1707 (69.9)	7973 (54.8)
3.	Muktaura	570 (17.3)	211 (10.5)	457 (13.0)	201 (6.0)	154 (6.3)	1593 (10.9)
4.	Rajwan	1090 (33.3)	338 (16.8)	554 (15.7)	653 (19.6)	381 (15.6)	3016 (20.7)
5.	Sarol	-	-	-	149 (4.5)	106 (4.4)	255 (1.7)
	Sub total	3134 (95.6)	1763 (87.6)	3083 (87.7)	3136 (94.2)	2397 (98.2)	13513 (92.7)
	Misc. Land	145 (4.4)	249 (12.4)	432 (12.3)	194 (5.8)	47 (1.8)	1067 (7.3)
	Grand total	3279 (100.0)	2012 (100.0)	3515 (100.0)	3330 (100.0)	2444 (100.0)	14580 (100.0)

6. Area under different Land capability units

S. No.	Capability unit.	Total area in (ha)	Subwatersheds (Area in ha %) Mk4b	Mk4c	Mk4d	Mk4f	Mk5a
1.	II e-1	676 (4.6)	222 (6.8)	73 (3.6)	294 (8.4)	38 (1.2)	49 (2.0)
2.	II es-1	1848 (12.6)	570 (17.3)	211 (10.5)	457 (13.0)	350 (10.5)	260 (10.7)
3.	III es-1	1490 (10.2)	590 (18.0)	102 (5.1)	360 (10.2)	286 (8.6)	152 (6.2)
4.	IV es-1	1247 (8.6)	409 (12.5)	200 (9.9)	164 (4.7)	306 (9.2)	168 (6.9)
5.	IV es-2	279 (1.9)	91 (2.8)	36 (1.8)	30 (0.8)	61 (1.8)	61 (2.5)
6.	VI es-1	618 (4.2)	215 (6.6)	-	301 (8.5)	80 (2.4)	22 (0.9)
7.	VII es-1	7355 (50.6)	1037 (31.6)	1141 (56.7)	1477 (42.1)	2015 (60.5)	1685 (69.0)
Sub total		13513 (92.7)	3134 (95.6)	1763 (87.6)	3083 (87.7)	3136 (94.2)	2397 (98.2)
Misc.lands		1067 (7.3)	145 (4.4)	249 (12.4)	432 (12.3)	194 (5.8)	47 (1.8)
Grand total		14580 (100.0)	3279 (100.0)	2012 (100.0)	3515 (100.0)	3330 (100.0)	2444 (100.0)

7. Salient features and specific proglems

a. Of the total area of 14580 ha. only 5540 hectares (37.9 %) is suitable for agriculture.

b. Of the 5 subwatersheds, Mk4b subwatershed has the maximum agricultural area (57.4%), while, Mk4f and Mk5a records maximum suitable area for grass land and forestry (70%). Thedremaining two subwatersheds have an intermediate status.

c. Nearly 38.3 percent of the land is under very shallow to shallow soils and needs special soil and water conservation measures.

d. About 9499 ha. (65.3 %) area is severely eroded.

e. Man and Rajwan series cover 10989 hectares (75.5 %) of the total area. They mostly occur on hill and foot hill slopes. By virtue of their topography and extent of occurrence, immediate soil conservation measures need to be taken on these soils.

e. In area of 7973 hectares under Mau series require vegetative and engineering measures, such as, enclosure with barbed wire or stone wall, protection from grazing etc.