

Report on Detailed Soil Survey and Land Use of 2C3C2g8, 2C3C3a1, a2, c1, c2, g3, g4, g5, g6, g7, h4, j7, k4, n5, n6, s2, s5, t3, t4, t5, t6, 2C3C4a1, a3, b1, b3, b5 and b7 Microwatersheds of Sind Kunwari (Middle Sind) Catchment, Tehsil Bhitwar and Ghatigaon, District Gwalior, Tehsil Jaura, District Morena and Tehsil Subhaspura and Pohri, District Shivpuri, Madhya Pradesh.

ABSTRACT

1. Surveyed Area : Microwatersheds 2C3C2g8, 2C3C3a1, a2, c1, c2, g3, g4, g5, g6, g7, h4, j7, k4, n5, n6, s2, s5, t3, t4, t5, t6, 2C3C4a1, a3, b1, b3, b5 and b7 Microwatersheds of Sind Kunwari (Middle Sind) Catchment, Tehsil Bhitwar and Ghatigaon, District Gwalior, Tehsil Jaura, District Morena and Tehsil Subhaspura and Pohri, District Shivpuri, Madhya Pradesh.
2. Total Area Mapped and Reported : 21372 ha
3. Type of Survey : Detailed Soil Survey
4. Geographical location : a) Latitude 25° 41' 01" to 26° 00' 08" and 25° 43' 18" to 26° 02' 52" N.
b) Longitude 77° 37' 22" to 77° 54' 02" and 77° 39' 39" to 77° 56' 59" E
5. Base map used : a) True Imagery on 1: 12,500 scale
b) Cadastral Map on 1:8000 scale
6. Topomaps used : SOI Toposheet on 1:50,000 scale
54 F / 12, 16, 54G / 9, 10, 13 & 14
7. Agroclimatic Region : Bundelkhand Zone of Central Plateau & Hill region (VIII) as per planning Commission (Khanna, 1989)
8. Period of Survey : December 2013 to March 2014

9 Serieswise Distribution of Area (ha) in Different Microwatersheds

S. No.	Series Name	No. of Mapping Units	2C3 C2	2C3C3																2C3C4							Total	%age					
				g8	a1	a2	c1	c2	g3	g4	g5	g6	g7	h4	j7	k4	n5	n6	r4	s2	s5	t3	t4	t5	t6	a1			a3	b1	b3	b5	b7
1	Basai (BS5)	6											14	65										66			11		10		166	0.8	
2	Burdha (BD4)	6	50	2									55		17	2				18	12	5		78			7	56	30		593	2.8	
3	Dabka (D2)	6	250	54		52	16	28					58	75	8	42	2	4	5	20	12	32	82	20	19	19	27	28	12	23	3	3589	16.8
4	Dadar (DD2)	3							28				71							29											128	0.6	
5	Imlipura (IM5)	4						55	27			3	50	19													68				222	1.0	
6	Lati (L3)	4	16										3	16	32	1	48	14	9	80	18	25	25	32	7		54		13	19	85	1831	8.6
7	Laci (LC3)	3	6										84	26																	116	0.5	
8	Lalitpur (LL3)	5	16					69	82		24	37	11	8	6		59			62		10		14					45		1329	6.2	
9	Lakhipur (LK3)	5		157	46	28				38	27		14		72					11		16	25	87		32			13		2564	12.0	
10	Nalbag (NB4)	4													3	6				17		46						30	20		122	0.6	
11	Narsinghpur (NR2)	8	240	595	38	42	22	50	28	17	15	41	38		11	3	57	29	27	16	10	92	68	42	17	30	44	29	22		7718	36.1	
12	Narwani (NW5)	4						24					2		71	6							26								129	0.6	
13	Subhaspura (SP2)	3											31	57	6																607	2.8	
	Subtotal	61	578	808	84	76	38	68	42	56	67	79	75	34	78	87	6	62	65	72	78	76	60	99	61	45	65	95	70	67		1911	89.4
	Miscellaneous		22	790	35	11	52	46	44				95	87	34	25	6			16		2		17	71		31	5	17		2258	10.6	
	G. Total		600	1598	11	87	43	73	46	56	67	79	84	42	81	90	6	62	65	89	78	76	60	10	68	45	97	95	72	67		2137	10.0

10. Serieswise Distribution of Area under various Land Capability Classes

S.No.	Series	II	III	IV	VI	VII	Total
1	Basai (BS5)	52 (0.2)	114 (0.5)				166 (0.8)
2	Burdha (BD4)		593 (2.8)				593 (2.8)
3	Dabka (D2)			390 (1.8)	3199 (15.0)		3589 (16.8)
4	Dadar (DD2)			47 (0.2)	81 (0.4)		128 (0.6)
5	Imlipura (IM5)	222 (1.0)					222 (1.0)
6	Lati (L3)		122 (0.6)	1709 (8.0)			1831 (8.6)
7	Laci (LC3)		84 (0.4)	32 (0.1)			116 (0.5)
8	Lalitpur (LL3)		216 (1.0)	1113 (5.2)			1329 (6.2)
9	Lakhipur (LK3)				2564 (12.0)		2564 (12.0)
10	Nalbag (NB4)		84 (0.4)		38 (0.2)		122 (0.6)
11	Narsinghpur (NR2)					7718 (36.1)	7718 (36.1)
12	Narwani (NW5)	94 (0.4)	35 (0.1)				129 (0.4)
13	Subhaspura (SP2)					607 (2.8)	607 (2.8)
	Subtotal	368 (1.7)	1278 (6.0)	3291 (15.4)	5882 (27.6)	8325 (39.0)	19114 (89.4)
	Misc.						2258 (10.6)
	G. Total	368 (1.7)	1278 (6.0)	3291 (15.4)	5882 (27.6)	8325 (39.0)	21372 (100)

The figures in parenthesis are percentages

11. Serieswise Area (ha) under Different Erosion Classes and their percentage

S. No.	Series	Erosion			Total
		e1	e2	e3	
1	Basai (BS5)	38 (0.2)	128 (0.6)		166 (0.8)
2	Burdha (BD4)		593 (0.4)		593 (0.4)
3	Dabka (DK2)		398 (0.4)	3191 (16.2)	3589 (16.8)
4	Dadar (DD2)		128 (0.6)		128 (0.6)
5	Imlipura (IM5)	30 (0.1)	192 (0.9)		222 (1.0)
6	Lati (L3)		1078 (5.0)	753 (3.5)	1831 (8.6)
7	Laci (LC3)		84 (0.4)		84 (0.4)
8	Lalitpur (LL3)		216 (1.0)	1113 (5.2)	1329 (6.2)
9	Lakhipur (LK3)			2564 12.0	2564 (12.0)
10	Nalbag (NB4)		84 (0.4)	38 (0.2)	122 (0.6)
11	Narsinghpur (NR2)			7718 (36.1)	7718 (36.1)
12	Narwani (NW5)	8 (0.0)	121 (0.5)		129 (0.5)
13	Subhaspura (SP2)			607 (2.8)	607 (2.8)
	Subtotal	76 (0.4)	3022 (14.1)	16016 (74.9)	19114 (89.4)
	Misc.				2258 (10.6)
	G. Total	76 (0.4)	3022 (14.1)	16016 (74.9)	21372 (100)

The figures in parenthesis are percentages

12. Salient Features of the Area

S. No.	Particulars	Area in ha	Percentage %
1.	Area under shallow soil	12042	56.2
2.	Area under moderately deep soil	5840	27.3
3.	Area under deep and very deep soil	1232	5.8
4.	Area under moderate erosion hazard	3022	14.1
5.	Area under severe erosion hazard	16016	74.9
6.	Area under cultivation	1116	5.2
7.	Area under forest	14770	69.1
8.	Area susceptible to seasonal water logging	222	1.0
9.	Miscellaneous area	2258	10.6

- Out of total surveyed area around 83.5% i.e. 17882ha lands having shallow to moderately deep soils marginally suited for agriculture can be utilized for forest plantation / pasture development.
- About 74.9% i.e. 16016ha land suffering from severe erosion hazards require urgent soil conservation treatment for eco-restoration.
- About 222ha i.e. 1% of total surveyed area is water logged can be used for creating water harvesting zone to serve need of water in during dry period.

