

Report on Demarcation of Priority Microwatersheds of 2C3A1-5 Watersheds in 2C3A (Pahuj) Subcatchment of 2C3 (Sindh Kunwari) Catchment of Yamuna Basin, Districts Datia, Gwalior, Bhind, Shivpuri and Tikamgarh of M.P. and Jhansi and Jalaun districts of U.P.

ABSTRACT

1. *Survey Area* : 2C3A1-5 Watersheds of 2C3A (Pahuj) Sub-catchments of Sindh Kunwari Catchment of Yamuna Basin, Datia, Gwalior, Bhind, Shivpuri and Tikamgarh Districts of M.P. and Jhansi and Jalaun districts of U.P.
2. *Location* : 78° 18' to 79° 13' E Longitude and 25° 15' to 26° 26' 30" N Latitude
3. *Total Area* : 4,07,788 ha
4. *Agro-climatic Region* : Bundelkhand Zone of Central Plateau and Hill Region (VII) as per Planning Commission (Khanna, 1989)
5. *Period of field visit* : December, 2005 to May, 2006
6. *Type of Survey* : Rapid Reconnaissance Survey
7. *Base Material* : Survey of India Toposheets (1:50,000)
8. *Areal Extent of different Runoff Potential Mapping Units* :

SL No.	Runoff Potential Mapping Unit	Runoff Potential Value	Area in ha.	Area in %age
1	A01	76	8543	2.09
2	A02	74	5310	1.30
3	A03	72	12230	3.00
4	A04	68	15442	3.79
5	A05	68	4957	1.22
6	A06	58	2436	0.60
7	A07	60	11599	2.84
8	A08	59	35438	8.69
9	A09	58	191176	46.88
10	A10	57	1124	0.28
11	G01	97	482	0.12
12	G02	89	910	0.22
13	G03	88	2185	0.54
14	G04	70	146	0.04
15	G05	68	163	0.04
16	G06	70	1882	0.46
17	G07	71	3127	0.77
18	G08	69	1380	0.34

22	G12	67	313	0.08
23	G13	70	323	0.08
24	G14	73	934	0.23
25	G15	60	14119	3.46
26	G16	70	10050	2.46
27	G17	64	5053	1.24
28	G18	66	408	0.10
29	G19	70	1674	0.41
30	G20	66	9071	2.22
31	G21	58	29202	7.16
32	G22	57	114	0.03
33	HA	0	16827	4.13
34	RI	0	2578	0.63
35	W	0	708	0.17
	TOTAL		407788	100.00

Hydrological Divisions :

- i. Water Resource Region (2)
- ii. Basin (2C)
- iii. Catchment (2C3)
- iv. Subcatchment (2C3A)
- v. Watersheds (2C3A1, 2C3A2, ...2C3A5)
- vi. Subwatersheds (2C3A1a, 2C3A1b....., 2C3A4c.....)
- vii. Microwatersheds (2C3A1a1....., 2C3A4a1.....)

Soil Erosion Hazard :

Sl. No.	Erosion Class	Area in ha.	Percentage
1	None to slight erosion	220378	54.04
2	Slight to Moderate erosion	49557	12.15
3	Moderate erosion	15273	3.75
4	Moderate to Severe erosion	41262	10.12
5	Severe erosion	34188	8.38
6	Severe to very severe erosion	27017	6.63
7	Miscl. Land	20113	4.93
	Total	407788	100.00

Priority Categorization :

Sl. No.	Priority Category	No. of Microwatersheds	Area in ha.	Percentage
1	Very High (70 & above)	36	21301	5.22
2	High (65-69)	97	65286	16.01
3	Medium (60-64)	164	101857	24.98
4	Low (55-59)	315	215409	52.82
5	Very Low (Below 55)	4	3935	0.97
	Grand Total	616	407788	100.00

12. *Watershed-wise Priority Watersheds:*

<i>Priority Category</i>	<i>2C3A1</i>	<i>2C3A2</i>	<i>2C3A3</i>	<i>2C3A4</i>	<i>2C3A5</i>	<i>TOTAL</i>
<i>Very High</i>	1332		3411	3677	12881	21301
<i>High</i>	9683	2774	12207	7673	32949	65286
<i>Medium</i>	19717	7929	23579	21393	29239	101857
<i>Low</i>	23442	70800	45165	52825	23177	215409
<i>Very Low</i>					3935	3935
<i>Total</i>	54174	81503	84362	85568	102181	407788

13. *Salient Features:*

- ⇒ The survey area consists of 616 microwatersheds covering about 4,07,788 ha of which only 36 microwatersheds have been demarcated under very high priority category covering 21301 ha (5.22%) and 97 microwatersheds spreading over 65286 ha (16.01%) are under high priority category.
- ⇒ 133 micro-watersheds covering about 86587 ha (21.23%) under very high and high priority categories need immediate attention for suitable soil water conservation measures under integrated watershed development programme.
- ⇒ 8480 ha constituting 2.08% and 27931 ha constituting 6.85% areas of Madhya Pradesh have been demarcated under very high and high priority category respectively.
- ⇒ In Uttar Pradesh, 12821 ha (3.14%) and 37355 ha (9.16%) are under very high & high priority category respectively.
- ⇒ 2C3A5 watershed has the maximum number of very high priority category microwatersheds followed by 2C3A4 and 2C3A3 watersheds. Maximum number of high priority category microwatersheds has been identified in 2C3A5 watershed followed by 2C3A3 and 2C3A1 watersheds.
- ⇒ About 77220 ha (18.94%) area of the survey area is unmanaged while 17646 ha (4.33%) area is unmanaged to poorly managed.
- ⇒ Severely to very severely eroded lands occupy 27017 ha (6.63%) while severely eroded lands occupy 34188 ha (8.38%). These lands along with moderately to severely eroded land covering 41262 ha (10.12%) need proper soil- water conservation practices.
- ⇒ About 5792 ha (1.42%) area comes under degraded forest out of 18588 ha (4.56%) forest land.
- ⇒ Multiple cropped area occupies 267415 ha (65.58%) while rainfed area covers 48656 ha (11.93%). Open scrub lands occupy about 173.54 ha (4.25%).
- ⇒ Very deep soil occupies about 332881 ha (79.42%) while moderately deep to deep soil embraces 40852 ha (10.02%).