

REPORT ON PRIORITIZATION OF SUBWATERSHEDS IN 4H2B (UPPER BAITARNI) SUB - CATCHMENT OF BAITARNI RIVER (NON RVP) CATCH - MENT IN DHENKANAL , KEONJHR, MAYURBHANJ, SUNDERGARH AND SINGHBHUM DISTRICTS OF ORISSA AND BIHAR STATES .

ABSTRACT

1. Survey area :-- 4H2B Subcatchment upper Baitarni Watersheds :-- 4H2B 1 -- 7
2. Location :--
 - a) Longitude -- $85^{\circ} - 11'$ to $86^{\circ} - 22'$ East
 - b) Latitude -- $21^{\circ} - 25'$ to $22^{\circ} - 15'$ North
 - c) Agroclimatic Region -VII -- Eastern plateau & Hill Region.
 - d) Soil conservation Region -- 8 , Eastern Red soil Region.
 - e) Watershed Atlas of India (1990)
Water Resource Region -- 4
Basin -- 4H
Catchment -- 4H2 (Upper Baitarni)
Subcatchment -- 4H2B
Watershed -- 4H2B - 1 To 7
3. Type of Survey :-- Rapid Reconnaissance Soil Survey for Priority Delineation .
4. Period of Survey :-- December 96 to June 97.
5. Base Map :-- Survey of India Topographical maps of 1: 50,000 scale.
6. Hydrological subdivision :--
 - a) Catchment - 4H2
 - d) Sub catchment - 4H2B
 - c) Watersheds - 4H2B -- 1 to 7.
 - d) Sub watersheds -- 210
7. Total area :-- 5,29,292 ha.
8. Area under Mapping :-- 5,11,843 ha.
9. Miscellaneous area :-- 17,449 ha.
(Stream, water bodies, road and habitation etc.)

10. Areal extent of various erosion intensity mapping units.

Sl.No.	Parent material	Mapping units.	Weightage	Delivery ratio	Area (ha.)	Percentage of the total
1.	Alluvium	A5	18	0.71	14126	2.7
2.	Lateritic	L1	16	0.66	4,771	0.9
3.	"	L2	17	0.66	34,199	6.5
4.	"	L3	15	0.64	14,351	2.7
5.	"	L4	10	0.51	67,069	12.7
6.	Quartzite	Q1	14	0.72	1,10,435	20.8
7.	"	Q2	19	0.83	33,687	6.4
8.	"	Q3	15	0.63	29,897	5.6
9.	"	Q4	10	0.51	1,02,637	19.4
10.	"	Q5	14	0.60	55,207	10.4
11.	"	Q6	10	0.52	16,327	3.1
12.	"	Q7	11	0.57	7,461	1.4
13.	"	Q8	15	0.64	21,676	4.1
Total					5,11,843	96.7
Miscellaneous					17,449	3.3
Grand Total					5,29,292	100.0

11. Gradation of subwatershed into priority categories of 4H2B 1 to 7 subcatchment.

Sl.No.	Priority category	SYI value	No.of sub watershed	Area in ha.	Percentage
1	Very High	1200 and above	9	22,447	4.2
2	High	1100 -- 1199	6	14,142	2.7
3	Medium	1000 -- 1099	37	1,03,000	19.5
4	Low	900 -- 999	29	72,127	13.6
5	Very Low	Below 900	129	3,17,576	60.0
Total			210	5,29,292	100.0%

12. Watershed wise distribution pattern of priority subwatershed in 4H2B sub Catchment.

Priority categories /Number /Area in ha./ Percentage

Sl.No.	Watershed code	Very high	High	Medium	Low	Very low	Total
1	4H2B 1	-----	-----	8 24047 4.5	8 24180 4.6	11 23954 4.5	27 72,181 13.6
2	4H2B2	-----	1 3069 0.6	14 44,788 8.5	7 19,912 3.8	20 53,931 10.2	42 1,21,700 23.1
3	4H2B3	-----	-----	-----	2 2922 0.5	16 39604 7.5	18 42,526 8.0
4	4H2B4	-----	-----	-----	-----	19 53,667 10.1	19 53,667 10.1
5	4H2B5	-----	1 1,283 0.2	1 2,936 0.6	2 6,818 1.3	30 78,273 14.8	34 89,310 16.9
6	4H2B6	2 5,707 1.1	2 4,508 0.9	3 9,245 1.7	3 6,922 1.3	25 52,350 9.9	35 78,732 14.9
7	4H2B7	7 16,740 3.1	2 5,282 1.0	11 21,984 4.2	7 11,373 2.1	8 15,797 3.0	35 71,176 13.4
	Total	9 22,447 4.2	6 14,142 2.7	37 1,03,000 19.5	29 72,127 13.6	129 3,17,576 60.0	210 5,29,292 100 %

13. Districtwise distribution of priority Area (ha.) in 4H2B, Subcatchment with percentage.

Sl.No.	Priority Grouping	Orissa				Bihar	Total (%)
		Dhen-Kanal	Keonjhar	Mayurbhanj	Sundargarh	Singhbhum	
1	Very High	1,073 0.2	13,037 2.4	-----	6,178 1.2	2,159 0.4	22,447 4.2
2	High	-----	9,511 1.8	3,069 0.6	1,562 0.3	-----	14,142 2.7
3	Medium	1,352 0.3	30,581 5.8	68,835 13.0	2,232 0.4	-----	1,03,000 19.5
4	Low	-----	31,018 5.9	33,957 6.4	2,770 0.5	4,382 0.8	72,127 13.6
5	Very low	-----	1,74,622 33.0	81,511 15.4	7,029 1.3	54,414 10.3	3,17,576 60.0
TOTAL		2,425 0.5	2,58,769 48.9	1,87,372 35.4	19,771 3.7	60,955 11.5	5,29,292 100 %