

REPORT ON PRIORITIZATION OF SUBWATERSHEDS IN 4H2A (LOWER BAITARNI) SUBCATCHMENT OF 4H2 (BAITARNI RIVER) CATCHMENT IN BALASORE, CUTTACK, KEONJHAR AND MAYURBHANJ DISTRICTS OF ORISSA STATE.

ABSTRACT

1. Survey area :- 4H2A subcatchment of 4H2 catchment (Baitarni river Basin)
2. Location -
 - a) Longitude - $85^{\circ} 31'$ to $87^{\circ} 1'$ East.
 - b) Latitude - $20^{\circ} 40'$ to $21^{\circ} 44'$ North.
 - c) Agro climatic Region -VII
Eastern Plateau & Hill Region.
 - d) Soil conservation Region -
No 8, Eastern Red Soil Region
 - e) Watershed Atlas of India (1990)
Water resource region-4 (Flowing in the Bay of Bengal)
Basin - H (Mahanadi to Ganges water resources Region.)
Catchment - 4H2 (Baitarni River)
Subcatchment- 4H2A (Lower Baitarni)
Watershed - 4H2A 1 to 8.
3. Types of Survey - Rapid reconnaissance soil survey for priority Delineation.
4. Period of Survey - April - 94 to June - 95
5. Base Map - Survey of India Topographical map of 1: 50,000 Scale.
6. Hydrological subdivision-
 - a) Catchment - 4H2 (Baitarni river)
 - b) Subcatchments - Lower Baitarni 4H2A.
 - c) Watersheds - 8
 - d) Subwatersheds - 238
7. Total area - 6,85,883 (ha).
8. Area under mapping - 6,63,747 (ha).
9. Miscellaneous area - 22,136 (ha).
(Stream, waterbodies, Road & Habitation etc.)

Areal extent of various erosion intensity mapping Units.

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S.No.	Parent Material	Mapping Units	Weightage	Delivery ratio	Area (ha)	Percentage of the total
1	Alluvium	A 1	13	0.59	23,263	3.4
2	"	A2	10	0.50	82,375	12.0
3	"	A3	13	0.58	10,4,004	15.2
4	"	A4	12	0.46	1037	0.1
5	"	A5	18	0.71	21,604	3.1
6	"	A6	15	0.62	8,781	1.3
7	Lateritic	L 1	16	0.66	252	0.1
8	"	L2	17	0.66	22,320	3.3
9	"	L3	15	0.64	5,717	0.8
10	"	L4	10	0.51	19,548	2.9
11	Quartzite	Q1	14	0.72	99,958	14.6
12	"	Q2	19	0.83	8,054	1.2
13	"	Q3	15	0.63	1,00,196	14.6
14	"	Q4	10	0.51	65,222	9.5
15	"	Q5	14	0.60	68,870	10.0
16	"	Q6	10	0.52	9,638	1.4
17	"	Q7	11	0.57	5,728	0.8
18	"	Q8	15	0.64	17,180	2.5
Total			-----	-----	6,63,747	96.8
Miscellaneous			-----	-----	22,136	3.2
Grand Total					6,85,883	100

(II)

11 - Gradation of subwatershed into priority categories of 4H2A 1 to 8 subcatchment.

Sl.No	Priority Category	SY 1 value	No of subwater Shed	Area in (ha).	Percentage
1	Very high	1200 and above	2	2793	0.4
2	High	1100 - 1199	3	7297	1.1
3	Medium	1000 - 1099	20	51701	7.5
4	Low	900 - 999	60	169063	24.6
5	Very low	Below 900	153	455029	66.4
Total			238	6,85,883	100.0

12. Watershed wise distribution pattern of priority subwatershed priority categories of 4H2A Catchments.

Priority catagories

Number/ Area in (ha)
%

S.No.	Watershed code	Very high	High	Medium	Low	Very low	Total
1	4H2A 1	-	-	-	3 13,366 12.0	14 50,153 7.3	17 63519 9.3
2	4H2A2	-	-	-	3 10,966 1.6	40 1,38,184 20.1	43 1,49,150 21.7
3	4H2A3	-	1 1709 0.2	4 10783 1.6	10 28057 4.1	15 43788 6.4	30 84337 12.3
4	4H2A-4	1 1870 0.3	-	4 13532 2.0	16 46944 6.9	16 45547 6.6	37 107893 15.8
5	4H2A-5	1 923 0.1	1 2,144 0.4	6 11,652 1.7	4 14,626 2.0	9 28,168 4.2	21 57,513 8.4

6	4H2A6	-	1	1	5	13	20
			3,444	3,165	14,050	36,955	57,614
			0.5	0.4	2.1	5.4	8.4
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7	4H2A7	-	-	4	16	19	39
				11,097	32,097	50,820	94,014
				1.6	4.6	7.4	13.6
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8	4H2A8	-	-	1	3	27	31
				1,472	8,957	61,414	71,843
				0.2	1.3	9.0	10.5
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		2	3	20	60	153	238
	TOTAL	2793	7,297	51,701	1,69,063	4,55,029	6,85,883
		0.4	1.1	7.5	24.6	66.4	100%
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13 - District wise distribution of priority Area (ha.) in 4H2A Subcatchment with percentage.

S.No.	Priority Grpouping	Balasore	Cuttack	Keonjhar	Mayurbhanj	Total	State
1	Very High	--	--	2,793 0.4	--	2,793 0.4	Orissa
2	High	--	--	7,297 1.1	--	7,297 1.1	"
3	Medium	--	--	38,366 5.6	13,335 1.9	51,701 7.5	"
4	Low	10,108 1.5	10,437 1.5	1,00,374 14.6	48,144 7.0	1,69,063 24.6	"
5	Very Low	1,30,060 19.0	53,622 7.8	2,26,026 33.0	45,321 6.6	4,55,029 66.4	"
	Total %	1,40,168 20.5	64,059 9.3	3,74,856 54.7	1,06,800 15.5	6,85,883 100 %	"