

of Mahanadi Basin, Districts Raipur, Raigarh of Madhya Pradesh and Kalahandi, Sambalpur of Orissa

Abstract

- 1. Survey Area:** Hirakund Dam Catchment (part of 4G2 Catchment) of Mahanadi Basin, Districts Raipur and Raigarh of Madhya Pradesh and Kalahandi and Sambalpur of Orissa
- 2. Location:** $20^{\circ}28'$ to $21^{\circ}44'$ N Latitude
 $82^{\circ}20'$ to $83^{\circ}7'$ E Longitude
- 3. Total Area:** 4,82,076 ha
- 4. Agro-climatic Region:** 7 (Eastern plateau and hills) as per planning commission classification
- 5. Period of Survey:** December 1995 to May 1996
- 6. Type of Survey:** Rapid Reconnaissance
- 7. Base Material:** Survey of India Topographic Map (Scale 1:50,000)

No.	Mapping Units		
1.	A1	7445	1.5
2.	A2	4398	0.9
3.	A3	3751	0.8
4.	A4	69275	14.4
5.	A5	2414	0.5
6.	C1	20519	4.3
7.	C2	41770	8.7
8.	C3	10838	2.2
9.	C4	50757	10.5
10.	C5	23440	4.9
11.	C6	16414	3.4
12.	C7	155534	32.3
13.	C8	29648	6.1
14.	C9	14135	2.9
15.	Misc. (C10, Habitation, River, Reservoir, Rock-cliff, Tank etc.)	31738	6.6
		482076	100.0

9. District wise Distribution of Mapping Units

Sl. No.	Erosion Intensity Mapping Units	District wise Area (ha)			
		Raigarh	Raipur	Sambalpur	Kalahandi
1.	A1	887(1.9)	4709(1.4)	187(2.9)	1662(1.8)
2.	A2	787(1.7)	3611(1.1)	-	-
3.	A3	618(1.3)	3133(0.9)	-	-
4.	A4	22596(48.6)	46679(13.8)	-	-
5.	A5	869(1.9)	1545(0.5)	-	-
6.	C1	3833(8.2)	16508(4.9)	-	178(0.2)
7.	C2	95(0.2)	26742(7.9)	1318(20.3)	13615(15.0)
8.	C3	848(1.8)	9581(2.8)	-	409(0.4)
9.	C4	6452(13.9)	22994(6.8)	80(1.2)	21231(23.5)
10.	C5	278(0.6)	20167(6.6)	23(0.4)	2972(3.3)
11.	C6	-	15349(4.5)	171(2.6)	894(1.0)
12.	C7	3528(7.6)	119693(35.3)	3671(56.5)	28642(31.7)
13.	C8	1236(2.6)	23691(7.0)	655(10.1)	4066(4.5)
14.	C9	-	8903(2.6)	277(4.3)	4955(5.5)
15.	Misc. (C10, Habitation, River, Reservoir, Rock-cliff Tank etc.)	4501(9.7)	15299(4.5)	110(1.70)	11828(13.1)

10. Priority Categorisation

Sl. No.	Priority Category	No. of Subwatersheds	Area in ha	Percentage
1.	Very High	42	134669	27.9
2.	High	15	49272	10.2
3.	Medium	18	62803	13.1
4.	Low	31	100773	20.9
5.	Very Low	42	134559	27.9
Total		148	482076	100.0

11. State wise Distribution of Area under Different Priority Categories

Sl. No.	Priority Categories	Madhya Pradesh	Orissa	Total Area (ha)	%
		Area (ha)	Area (ha)		
1.	Very High (1300 & above)	83805	50864	134669	27.9
2.	High (1200-1299)	42028	7244	49272	10.2
3.	Medium (1100-1199)	48935	13868	62803	13.01
4.	Low (1000-1099)	79128	21645	100773	20.9
5.	Very Low (<1000)	131236	3323	134559	27.9
Total		385132	96944	482076	100.0

12. District wise Distribution of Area under Different Priority Categories

Sl. No.	Priority Categories	Raigarh (MP)	Raipur (MP)	Sambalpur (Orissa)	Kalahandi (Orissa)	Total Area (ha)	%
		Area (ha)	Area (ha)	Area (ha)	Area (ha)		
1.	Very High (1300 & above)	11104	72701	-	50864	134669	27.9
2.	High (1200-1299)	1282	40745	-	7244	49272	10.2
3.	Medium (1100-1199)	48	48887	6492	7376	62803	13.1
4.	Low (1000-1099)	11056	68072	-	21645	100773	20.9
5.	Very Low (<1000)	23037	108199	-	3323	134559	27.9
Total		46528	338604	6492	90452	482076	100.0

13. Salient Findings

- The survey area comprises 148 subwatersheds. Out of which 42 subwatersheds categorised under very high and 15 under high.
- About 40.6% of the total surveyed area suffer from moderate to very severe erosion.
- Area under medium and low priority category is indicative of potential zone for intensive agriculture practices.