

**REPORT ON PRIORITIZATION OF MICROWATERSHEDS IN
4D1C SUB-CATCHMENT, KRISHNA BASIN (NON-RVP)
DISTRICT KARIMNAGAR, KHAMMAM, KRISHNA AND
WARANGAL, ANDHRA PRADESH**

ABSTRACT

1. **Survey area** : 4D1C- Subcatchment (RVP), Part of District Karimnagar, Khammam, Krishna and Warangal, Andhra Pradesh
2. **Location** : a) Latitude : 16⁰ 35' to 18⁰ 06' NL
b) Longitude : 79⁰ 04' to 80⁰ 51' EL
3. **Agroclimatic Zone** : Southern Plateau and hill region (Zone X)
4. **Total area surveyed** : 10,06,550 ha
5. **Type of survey** : Rapid Reconnaissance Survey for Priority Demarcation of Micro-watersheds
6. **Period of Survey** : November, 1997 to June, 1998
7. **Base map used** : Survey of India topographical maps of 1:50,000 scale
8. **Hydrological sub-division** : a) Basin-'4D'
b) Catchment-'4D1'
c) Sub-catchment-4D1C'
d) Watersheds-4D1C1 to 8
e) Sub-watersheds-149
f) Micro-watersheds-963

9. Priority Categorization:-

Sl.No.	Priority Category and Sediment Yield Index Range	No.of Micro-watersheds	Area in ha.	%age
1.	High (1200-1299)	13	13355	1.3
2.	Medium (1100-1199)	141	154643	15.4
3.	Low (1000-1099)	271	298579	29.7
4.	Very Low (Below 1000)	538	539973	53.6
Total		963	1006550	100.0

10. Areal extent of different Erosion Intensity Mapping Units:-

Sl.No.	EIMU	Weightage value	Delivery Ratio	Area in ha.	%age
1.	A1	13	0.58	54341	5.4
2.	A2	17	0.67	17717	1.8
3.	A3	12	0.56	25195	2.5
4.	A4	15	0.64	2378	0.2
5.	A5	17	0.68	1601	0.2
6.	G1	15	0.76	51871	5.2
7.	G2	17	0.84	990	0.1
8.	G3	14	0.69	15701	1.6
9.	G4	13	0.66	116560	11.6
10.	G5	17	0.80	781	0.1
11.	G6	17	0.75	27906	2.8
12.	G7	18	0.72	852	0.1
13.	G8	16	0.68	16272	1.6
14.	G9	17	0.68	197136	19.6
15.	G10	14	0.61	124636	12.4
16.	G11	13	0.59	83558	8.3
17.	G12	17	0.67	90849	9.0
18.	G13	14	0.60	2941	0.3
19.	G14	18	0.71	27696	2.8
20.	G15	15	0.65	1407	0.1
21.	GN1	13	0.58	6456	0.6
22.	GN2	14	0.62	39693	3.9
23.	GN3	14	0.60	2358	0.2
24.	GN4	15	0.63	5875	0.6
25.	GN5	14	0.61	767	0.1
26.	GN6	12	0.57	30225	3.2
27.	S1	15	0.77	3851	0.4
28.	Misc. Land	-	-	56937	5.7
Total				1006550	100.0

11. Distribution of area under different Watersheds:-

Sl.No.	Watershed Code	No. of micro-watersheds	Area(ha)	%age
1.	4D1C1	104	102773	10.2
2.	4D1C2	104	103343	10.3
3.	4D1C3	118	121273	12.0
4.	4D1C4	122	135289	13.4
5.	4D1C5	130	145796	14.5
6.	4D1C6	150	159769	15.9
7.	4D1C7	104	116376	11.6
8.	4D1C8	131	121931	12.1
Total		963	1006550	100.0

12. Watershedwise status of Priority of Microwatersheds :-

Sl. No.	Watersheds	No. of Microwatersheds	Priority grouping			
			High	Medium	Low	Very low
1	4D1C1	104	6	821	26	51
2	4D1C2	104	-	6	6	97
3	4D1C3	118	2	19	21	76
4	4D1C4	122	-	55	29	38
5	4D1C5	130	1	14	43	68
6	4D1C6	150	3	7	33	107
7	4D1C7	104	-	9	50	45
8	4D1C8	131	1	11	63	56
Total		963	13	141	271	538

13. Distribution of prioritywise area under various districts:-

Sl. No.	Districts	Area	Distribution of area under different priority			
			High	Medium	Low	Very low
1.	Karimnagar	1039	-	-	1039	-
2.	Khammam	406808	5131	64925	119424	217328
3.	Krishna	170611	4769	61850	27282	76710
4.	Warangal	428092	3455	27868	15083	245935
	Total	1006550	13355	154643	298579	539973

14. Distribution of microwatersheds and prioritywise area under various districts:-

Sl. No.	Priority category	No. of Micro-watersheds	Area(ha)
District Karimnagar			
1.	High (1200-1299)		
2.	Medium (1100-1199)		
3.	Low (1000-1099)	1	1039
4.	Very low (below 1000)		
	Total	1	1039
District Khammam			
1.	High (1200-1299)		
2.	Medium (1100-1199)	6	5131
3.	Low (1000-1099)	220	64925
4.	Very low (below 1000)	60	119424
	Total	98	217328
		384	406808
District Krishna			
1.	High (1200-1299)		
2.	Medium (1100-1199)	3	4769
3.	Low (1000-1099)	53	61850
4.	Very low (below 1000)	27	27282
	Total	80	76710
		163	170611
District Warangal			
1.	High (1200-1299)		
2.	Medium (1100-1199)	4	3455
3.	Low (1000-1099)	28	27868
4.	Very low (below 1000)	145	150834
	Total	238	245935
		415	428092
	Grand Total	963	1006550

14. Salient Features of the Surveyed Area :-

- There is no micro-watersheds fall under very high priority category. Only 13 micro-watersheds covering 13,355 (1.3%) area fall under high priority category. These micro-watersheds need soil conservation measures.
- 141 micro-watersheds covering 1,54,643 area (15.4% of total area) fall under medium priority category.
- Remaining 809 micro-watersheds with areal extent of 8,38,552 ha (83.3% of total area) fall under low and very low priority category.
- Deep to very deep soils cover 250602 (24.90%) of total area while moderately deep to deep soils cover 19.38% of total area.
- Shallow to moderately deep soils cover 4,02,243 ha (39.95%) area.
- Moderate to severe erosion is the problem in 1,67,794 ha (16.77%) area.
- Area covered by forest is 1,88,750 ha (18.75%).
- Area covered by multi crop potential is 4,13,152 ha (41.5%).
- Grassland and pasture occupy 19,318 ha (19.2%) area.
- 4,01,521 ha (40.2%) area is under fine loamy to fine soils.
- Very gently to gently sloping lands cover 5,21,023 ha (51.76%) area.
- 3,20,896 ha area (31.8%) is well managed and protected from soil erosion.