REPORT ON PRIORITIZATION OF MICRO WATERSHEDS IN 4C2C AND 4C2D SUBCATCHMENTS (NON RVP), CHITTOR, CUDDAPAH AND NELLORE DISTRICTS OF ANDHRA PRADESH AND CHENNAI, KANCHIPURAM, THIRVALLUR AND VELLORE DISTRICTS OF TAMILNADU

ABSTRACT

1. Survey area : 4C2C and 4C2D Subcatchments (Non RVP) Chittor, Cuddapah and Nellore Districts of Andhra Pradesh and Chennai, Kanchipuram, Thirvallur and Vellore Districts Of Tamilnadu

2. Location : 12° 30' 25" to 14° 24' 30" N Latitude
79° 6' 30" to 80° 17' 30" E longitude

3. Total area surveyed : 1635665 hectare

4. Hydrological divisions

a) Region - 4
b) Basin - 4C
c) Catchment - 4C2
d) Subcatchments - C2C & 4C2D
e) Watersheds - 4C2C1 to 4C2C7 and 4C2D1 to 4C2D8
f) Subwatersheds

S. No.	Watershed Code	No of Micro-watersheds	Area in ha.	Area in %
1	4C2C1	72	76355	4.67
2	4C2C2	40	46317	2.83
3	4C2C3	74	98761	6.04
4	4C2C4	118	132499	8.10
5	4C2C5	111	129385	7.91
6	4C2C6	93	94689	5.79
7	4C2C7	116	118126	7.22
8	4C2D1	66	71263	4.36
9	4C2D2	106	117823	7.20
10	4C2D3	32	102447	6.26
11	4C2D4	121	134286	8.21
12	4C2D5	136	161348	9.86
13	4C2D6	65	77260	4.72
14	4C2D7	126	158270	9.68
15	4C2D8	94	116836	7.14
Grand Total		1370	**1635665**	**100.0**

5. Agro climatic region : 10 (semiarid subtropical with excessive evapo-transpiration)

6. Type of survey : RR survey for priority delineation

7. Period of survey : May 2000 to June 2002

8. Base maps : 1:50,000 scale survey of India topographic maps

9. Toposheet nos. : 57/O/1,2, 3, 4,5,6, 7,8,9, 10, 11,12,13, 14, 15, 16
57 P/ 5, 9, 13
66B/ 3, 4
66C/ 1, 2, 3, 4, 5, 6, 7, 8,
66D/ 1, 2, 3, 5

10. Distribution of area and number f micro-watersheds in different priority categories

S. No.	Priority Category	No. of Micro-watersheds	Area in ha.	Area Percentage
1	Very High (1300 and above)	20	22961	1.40
2	High (1200-1299)	34	39740	2.43
3	Medium (1100-1199)	74	86498	5.29
4	Low (1000-1099)	91	105564	6.45
5	Very Low (Below 1000)	1151	1380902	84.42
	Grand Total	**1370**	**1635665**	**100.00**

11. Distribution of area in different erosion classes

S. No.	Erosion	Area	Area %
1	Slight erosion	615325	37.62
2	Slight to Moderate erosion	199372	12.19
3	Moderate erosion	331423	20.26
4	Moderate to Severe erosion	121409	7.42
5	Severe erosion	2035	0.12
6	Severe to very severe erosion	4095	0.25
7	Misc.	362006	22.13
	Grand Total	**1635665**	**100.00**

12 District wise distribution of area

S. No.	District Name	Area in ha.	Percentage
1	Chennai	11694	0.71
2	Chittoor	484464	29.62
3	Cuddapah	7578	0.46
4	Kanchipuram	150813	9.22
5	Nellore	568626	34.76
6	Thirvallur	316678	19.36
7	Vellore	95812	5.86
	Total	**1635665**	100.00

13. Soil colour wise distribution of area

S. No.	Soil Colour	Area	Area %
1	Black soils	89420	5.47
2	Mixed Soils	106013	6.48
3	Red Soils	1078226	65.92
4	Misc.	362006	22.13
	Total	**1635665**	100.00

14. Distribution of area under different management classes

S. No.	Management	Area	Area %
1	Unmanaged	459848	28.11
2	Poorly managed	168155	10.28
3	Moderately managed	49061	3.00
4	Well managed	596595	36.47
5	Misc.	362006	22.13
	Grand Total	1635665	100.00

15. Area under different textural classes

S. No.	Textural Class	Area in ha.	Percentage
1	Coarse loamy	129794	7.94
2	Fine	118614	7.25
3	Fine loamy	590041	36.07
4	Fine loamy to Coarse loamy	6765	0.41
5	Fine loamy to Fine	3010	0.18
6	Gravelly coarse loamy	109622	6.70
7	Gravelly fine	8524	0.52
8	Gravelly fine loamy	305850	18.70
9	Gravelly fine silty	1439	0.09
10	Misc.	362006	22.13
	Total	*1635665*	100.00

16. Subwatershed wise distribution of area

S. No.	Sub watershed	Micro watersheds	Area in ha.	Area in %	S. No.	Sub watershed	Micro watersheds	Area in ha.	Area in %
1	4C2C1a	5	6318	0.39	49	4C2C5c	9	9947	0.61
2	4C2C1b	6	6906	0.42	50	4C2C5d	8	9321	0.57
3	4C2C1c	7	8443	0.52	51	4C2C5f	7	7457	0.46
4	4C2C1d	8	7616	0.47	52	4C2C5g	9	7941	0.49
5	4C2C1f	9	9236	0.56	53	4C2C5h	6	7352	0.45
6	4C2C1g	9	9789	0.60	54	4C2C5j	4	3876	0.24
7	4C2C1h	7	7900	0.48	55	4C2C5k	8	8749	0.53
8	4C2C1j	6	5852	0.36	56	4C2C5m	6	7316	0.45
9	4C2C1k	8	8302	0.51	57	4C2C5n	8	8952	0.55
10	4C2C1m	7	5993	0.37	58	4C2C5p	8	11540	0.71
11	4C2C2a	7	6833	0.42	59	4C2C5q	6	5941	0.36
12	4C2C2b	3	4147	0.25	60	4C2C5r	8	10280	0.63
13	4C2C2c	9	7362	0.45	61	4C2C5s	8	12439	0.76
14	4C2C2d	4	4864	0.30	62	4C2C6a	5	5554	0.34
15	4C2C2f	9	12961	0.79	63	4C2C6b	5	5388	0.33
16	4C2C2g	4	5779	0.35	64	4C2C6c	4	3672	0.22
17	4C2C2h	4	4371	0.27	65	4C2C6d	5	4782	0.29
18	4C2C3a	6	6852	0.42	66	4C2C6f	5	6217	0.38
19	4C2C3b	4	4565	0.28	67	4C2C6g	9	10592	0.65
20	4C2C3c	9	10854	0.66	68	4C2C6h	3	2251	0.14
21	4C2C3d	6	8553	0.52	69	4C2C6j	3	3929	0.24
22	4C2C3f	3	2807	0.17	70	4C2C6k	5	4261	0.26
23	4C2C3g	7	10140	0.62	71	4C2C6m	5	8332	0.51
24	4C2C3h	9	15486	0.95	72	4C2C6n	5	5431	0.33
25	4C2C3j	8	9103	0.56	73	4C2C6p	9	7839	0.48
26	4C2C3k	9	11184	0.68	74	4C2C6q	4	3560	0.22
27	4C2C3m	9	14012	0.86	75	4C2C6r	3	2822	0.17
28	4C2C3n	4	5205	0.32	76	4C2C6s	3	2554	0.16
29	4C2C4a	3	3121	0.19	77	4C2C6t	3	1656	0.10
30	4C2C4b	9	9023	0.55	78	4C2C6u	7	6127	0.37
31	4C2C4c	8	7160	0.44	79	4C2C6v	3	2787	0.17
32	4C2C4d	8	8388	0.51	80	4C2C6w	7	6935	0.42
33	4C2C4f	5	7815	0.48	81	4C2C7a	8	7997	0.49
34	4C2C4g	7	7595	0.46	82	4C2C7b	8	10636	0.65
35	4C2C4h	3	3814	0.23	83	4C2C7c	6	5045	0.31
36	4C2C4j	7	7804	0.48	84	4C2C7d	6	4774	0.29
37	4C2C4k	5	3950	0.24	85	4C2C7f	5	5032	0.31
38	4C2C4m	8	7537	0.46	86	4C2C7g	7	7604	0.46
39	4C2C4n	9	13460	0.82	87	4C2C7h	5	5437	0.33
40	4C2C4p	5	4344	0.27	88	4C2C7j	4	4009	0.25
41	4C2C4q	9	8467	0.52	89	4C2C7k	4	3410	0.21
42	4C2C4r	9	14860	0.91	90	4C2C7m	9	8382	0.51
43	4C2C4s	5	3984	0.24	91	4C2C7n	7	8237	0.50
44	4C2C4t	8	9219	0.56	92	4C2C7p	7	7783	0.48
45	4C2C4u	6	8848	0.54	93	4C2C7q	9	9432	0.58
46	4C2C4v	4	3110	0.19	94	4C2C7r	6	6986	0.43
47	4C2C5a	8	9136	0.56	95	4C2C7s	6	5607	0.34
48	4C2C5b	8	9138	0.56	96	4C2C7t	4	3860	0.24

S. No.	Subwater shed	Microwa tersheds	Area in ha.	Area in %	S. No.	Subwater shed	Microwate rsheds	Area in ha.	Area in %
97	4C2C7u	8	7708	0.47	145	4C2D4q	7	4479	0.27
98	4C2C7v	7	6187	0.38	146	4C2D4r	9	11825	0.72
99	4C2D1a	6	5761	0.35	147	4C2D4s	8	9540	0.58
100	4C2D1b	7	8499	0.52	148	4C2D4t	8	6959	0.43
101	4C2D1c	7	9439	0.58	149	4C2D4u	9	13889	0.85
102	4C2D1d	6	7338	0.45	150	4C2D4v	4	4260	0.26
103	4C2D1f	5	5683	0.35	151	4C2D4w	4	2864	0.18
104	4C2D1g	4	5934	0.36	152	4C2D4x	3	2325	0.14
105	4C2D1h	5	4776	0.29	153	4C2D5a	4	4477	0.27
106	4C2D1j	6	5855	0.36	154	4C2D5b	5	4729	0.29
107	4C2D1k	4	3703	0.23	155	4C2D5c	4	4295	0.26
108	4C2D1m	4	3775	0.23	156	4C2D5d	5	6864	0.42
109	4C2D1n	6	4103	0.25	157	4C2D5f	4	5650	0.35
110	4C2D1p	6	6397	0.39	158	4C2D5g	5	5899	0.36
111	4C2D2a	5	4399	0.27	159	4C2D5h	6	9782	0.60
112	4C2D2b	9	13030	0.80	160	4C2D5j	7	8678	0.53
113	4C2D2c	6	6066	0.37	161	4C2D5k	7	8215	0.50
114	4C2D2d	3	3309	0.20	162	4C2D5m	9	15312	0.94
115	4C2D2f	6	6697	0.41	163	4C2D5n	5	5312	0.32
116	4C2D2g	9	12300	0.75	164	4C2D5p	3	4093	0.25
117	4C2D2h	7	6445	0.39	165	4C2D5q	7	8198	0.50
118	4C2D2j	9	10980	0.67	166	4C2D5r	7	8410	0.51
119	4C2D2k	4	3406	0.21	167	4C2D5s	6	6028	0.37
120	4C2D2m	5	4973	0.30	168	4C2D5t	6	6837	0.42
121	4C2D2n	7	8567	0.52	169	4C2D5u	9	9701	0.59
122	4C2D2p	8	10667	0.65	170	4C2D5v	8	6849	0.42
123	4C2D2q	8	6893	0.42	171	4C2D5w	7	9214	0.56
124	4C2D2r	5	3761	0.23	172	4C2D5x	7	7656	0.47
125	4C2D2s	7	8768	0.54	173	4C2D5y	8	7461	0.46
126	4C2D2t	8	7562	0.46	174	4C2D5z	7	7688	0.47
127	4C2D3a	8	14415	0.88	175	4C2D6a	3	2630	0.16
128	4C2D3b	2	2693	0.16	176	4C2D6b	4	3462	0.21
129	4C2D3c	3	5762	0.35	177	4C2D6c	5	6155	0.38
130	4C2D3d	5	3890	0.24	178	4C2D6d	3	2950	0.18
131	4C2D3f	6	8002	0.49	179	4C2D6f	3	6358	0.39
132	4C2D3g	8	67685	4.14	180	4C2D6g	4	5090	0.31
133	4C2D4a	3	3412	0.21	181	4C2D6h	6	6049	0.37
134	4C2D4b	2	2171	0.13	182	4C2D6j	3	2372	0.15
135	4C2D4c	5	5233	0.32	183	4C2D6k	4	6301	0.39
136	4C2D4d	5	7124	0.44	184	4C2D6m	3	4470	0.27
137	4C2D4f	6	3890	0.24	185	4C2D6n	4	4128	0.25
138	4C2D4g	8	11539	0.71	186	4C2D6p	3	1711	0.10
139	4C2D4h	9	10962	0.67	187	4C2D6q	4	3630	0.22
140	4C2D4j	4	5727	0.35	188	4C2D6r	5	9303	0.57
141	4C2D4k	6	4561	0.28	189	4C2D6s	6	6922	0.42
142	4C2D4m	8	8351	0.51	190	4C2D6t	2	3523	0.22
143	4C2D4n	6	6516	0.40	191	4C2D6u	3	2206	0.13
144	4C2D4p	7	8659	0.53	192	4C2D7a	9	18814	1.15

S. No.	Subwatershed Code	No of Microwatersheds	Area in ha.	Area in %	S. No.	Subwatershed Code	No of Microwatersheds	Area in ha.	Area in %
193	4C2D7b	8	10056	0.61	207	4C2D7t	7	7460	0.46
194	4C2D7c	7	8773	0.54	208	4C2D8a	7	10260	0.63
195	4C2D7d	9	10057	0.61	209	4C2D8b	7	8574	0.52
196	4C2D7f	8	7316	0.45	210	4C2D8c	8	10346	0.63
197	4C2D7g	9	7719	0.47	211	4C2D8d	9	11727	0.72
198	4C2D7h	9	13628	0.83	212	4C2D8f	7	8738	0.53
199	4C2D7j	9	7604	0.46	213	4C2D8g	9	11292	0.69
200	4C2D7k	9	7985	0.49	214	4C2D8h	8	11172	0.68
201	4C2D7m	6	8447	0.52	215	4C2D8j	7	8023	0.49
202	4C2D7n	8	8316	0.51	216	4C2D8k	9	9680	0.59
203	4C2D7p	4	6737	0.41	217	4C2D8m	9	13043	0.80
204	4C2D7q	7	10160	0.62	218	4C2D8n	9	9423	0.58
205	4C2D7r	9	15834	0.97	219	4C2D8p	5	4558	0.28
206	4C2D7s	8	9364	0.57	Grand Total		1370	1635665	100.00

17. Distribution of area under different Geological Classes

S. No.	Geology	Area	Area %
1	Alluvium Landscape	88108	5.39
2	Coastal Alluvium Landscape	117381	7.18
3	Granite Landscape	800774	48.96
4	Laterite Landscape	199084	12.17
5	Quartzite Landscape	62661	3.83
6	Schist Landscape	5535	0.34
7	Shale Landscape	116	0.01
8	Others	362006	22.13
	Grand Total	1635665	100

18. Subcatchmentwise

S. No.	Subcatchment Code	No of Subwatersheds	Area in ha.	Area in %
1	4C2C	624	696132	42.56
2	4C2D	746	939533	57.44
Grand Total		1370	11635665	100.00

19. Area Under Different Erosion Intensity Mapping Units

Sl. No.	EIMU	Wt Value	Delivery Ratio	Area in ha.	Area (%)	Sl. No.	EIMU	Wt Value	Delivery Ratio	Area in ha.	Area (%)
1	A2	12	0.55	1272	0.08	49	G15	14	0.62	2282	0.14
2	A3	12	0.54	3564	0.22	50	G16	13	0.63	13639	0.83
3	A4	12	0.55	38005	2.32	51	G19	12	0.55	878	0.05
4	A5	13	0.57	4468	0.27	52	G22	15	0.63	238	0.01
5	A6	14	0.6	24806	1.52	53	G24	15	0.64	10953	0.67
6	A7	15	0.62	1285	0.08	54	G25.1	15	0.67	9633	0.59
7	A8	11	0.53	14708	0.90	55	G25.4	17	0.7	214	0.01
8	CA1	13	0.58	2571	0.16	56	G26	12	0.55	29959	1.83
9	CA2	14	0.6	31950	1.95	57	G26.1	12	0.55	263211	16.09
10	CA3	13	0.57	4592	0.28	58	G26.2	12	0.56	47996	2.93
11	CA4	13	0.58	6029	0.37	59	G26.4	12	0.55	25612	1.57
12	CA5	11	0.55	13382	0.82	60	G26.6	13	0.61	279	0.02
13	CA6	14	0.6	413	0.03	61	G27	14	0.59	2155	0.13
14	CA7	11	0.53	17755	1.09	62	G28	17	0.68	169	0.01
15	CA8	13	0.58	2288	0.14	63	G29.2	14	0.64	1418	0.09
16	CA9	15	0.63	24902	1.52	64	G29.4	11	0.6	138	0.01
17	CA11	11	0.54	13499	0.83	65	G30	13	0.58	125	0.01
18	G1	16	0.79	2788	0.17	66	G30.1	15	0.62	3657	0.22
19	G2	17	0.83	3429	0.21	67	G30.2	12	0.56	10806	0.66
20	G2.2	17	0.82	155	0.01	68	G30.4	12	0.56	366	0.02
21	G2.3	15	0.79	26857	1.64	69	G38	18	0.7	2944	0.18
22	G2.7	12	0.82	7676	0.47	70	G38.1	19	0.74	1834	0.11
23	G3	14	0.69	42	0.00	71	LT1	14	0.61	20122	1.23
24	G4	17	0.82	75446	4.61	72	LT2	14	0.61	6570	0.40
25	G5	13	0.68	5223	0.32	73	LT3	14	0.6	2581	0.16
26	G5.1	16	0.77	5603	0.34	74	LT4	12	0.55	55661	3.40
27	G5.2	18	0.8	2035	0.12	75	LT5	17	0.68	13340	0.82
28	G5.3	14	0.74	6212	0.38	76	LT5.1	16	0.67	89639	5.48
29	G5.4	13	0.74	12413	0.76	77	LT6	21	0.78	4095	0.25
30	G5.6	14	0.63	10863	0.66	78	LT7	14	0.62	2894	0.18
31	G6	18	0.74	1436	0.09	79	LT8	15	0.66	4182	0.26
32	G8.1	16	0.7	987	0.06	80	Q1	19	0.74	1439	0.09
33	G9	12	0.56	95	0.01	81	Q2	15	0.84	47163	2.88
34	G9.1	15	0.65	6765	0.41	82	Q3	15	0.64	5421	0.33
35	G9.3	14	0.61	62719	3.83	83	Q4	22	0.88	5659	0.35
36	G9.5	12	0.57	1397	0.09	84	Q5	13	0.7	2598	0.16
37	G10	15	0.68	74332	4.54	85	Q6	16	0.68	381	0.02
38	G10.1	15	0.63	12364	0.76	86	SC2	16	0.75	898	0.05
39	G10.2	15	0.64	493	0.03	87	SC6	16	0.69	4637	0.28
40	G10.3	16	0.66	1401	0.09	88	SH3	14	0.64	116	0.01
41	G10.8	14	0.62	1083	0.07	89	Tank	10	0.5	201556	12.32
42	G10.9	16	0.67	3412	0.21	90	Bricks	10	0.5	1755	0.11
43	G12	15	0.65	5635	0.34	91	Habit	10	0.5	93842	5.74
44	G12.5	13	0.59	11274	0.69	92	River	10	0.5	26235	1.60
45	G12.7	16	0.67	1157	0.07	93	ROC	10	0.5	9152	0.56
46	G14.1	14	0.62	15851	0.97	94	SD	10	0.5	438	0.03
47	G14.2	17	0.69	13038	0.80	95	ML	10	0.5	29028	1.77
48	G14.5	15	0.69	87	0.01			Grand Total		1635665	100