Report on Prioritization of Micro-watersheds of 4C3A1 to 4C3A6 Watersheds of 4C3A Subcatchment (non RVP) of 4C3, Pennar Catchment, Cuddapah and Nellore districts, Andhra Pradesh

ABSTRACT

01. Survey area : 4C3A1 to 4C3A6 Watersheds of 4C3A Subcatchment (non RVP) in Cuddapah and Nellore districts, Andhra Pradesh

02. Location : 79°06' to 80° 12' E Longitude
14° 12' to 14° 53' N Latitude

03. Total Area : 4, 75,459 ha

04.No. of Micro Watersheds: 368

05. Agro Climatic Zone : East coast Plain and Hill region (Zone No. XI)

06. Type of Survey : Rapid Reconnaissance Survey

07. Period of Survey : March, 2006 to June, 2006

08. Base Map : Survey of India Toposheets on 1:50,000 scale

09. Toposheets used : 57N/1, 57N/2, 57N/3, 57N/5, 57N/6, 57N/7, 57N/8, 57N/9, 57N/10, 57N/11, 57N/13, 57N/14, 57N/15, 66B/2 and 66B/3

10. Hydrological division : a Region 4 – (Drainage flowing into Bay of Bengal)
b Basin 4C – (Between Cauvery and Krishna)
c Catchment 4C3- (Pennar)
d Sub Catchment 4C3A – (Lower Pennar upto confluence with Cheyyeru)
e Watershed 4C3A1 to 4C3A6
f Sub Watershed 4C3A1a to 4C3A1b etc.
g Micro Watershed 4C3A1a1, 4C3A1a2 etc.

11. Distribution of area (ha) under different Watersheds

Sr. No.	Watersheds	Watershed and Stream	Area (ha)	Percentage
01	4C3A1	R.B. Pennar	35213	7.41
02	4C3A2	L.B. Pennar	64190	13.50
03	4C3A3	Biraperu R	76630	16.12
04	4C3A4	Kaveru & Boggeru	112787	23.72
05	4C3A5	Anant Sagaram	96495	20.30
06	4C3A6	Nallavagu & Katteli	90144	18.96
Total			**475459**	**100.00**

12. Priority Categorization:

Sl. No.	Priority Category	No. of micro water sheds	Area (ha)	Area (%)
01	Very high (above 70)	62	74277	15.62
02	High(66-70)	106	135879	28.58
03	Medium (61-65)	134	168408	35.42
04	Low (56-60)	63	94304	19.83
05	Very low (55 & below)	03	2591	0.54
	Total	**368**	**475459**	**100.0**

13. Watershed wise number of priority micro-watersheds

Sr. No.	Watershed	Very high	High	Medium	Low	Very low	Total
01	4C3A1	-	01	08	15	03	27
02	4C3A2	-	05	10	32	--	47
03	4C3A3	-	21	26	07	--	54
04	4C3A4	21	26	38	03	--	88
05	4C3A5	09	28	38	03	--	78
06	4C3A6	32	25	14	03	--	74
	Total	**62**	**106**	**134**	**63**	**03**	**368**

14. District wise distribution of area (ha) under different watersheds

Sr. No.	Watershed	No. of MWS	Nellore	Cuddapah	Total Area	Percent-age
01	4C3A1	27	35213	--	35213	7.41
02	4C3A2	47	64190	--	64190	13.50
03	4C3A3	54	76630	--	76630	16.12
04	4C3A4	88	91321	22213	113534	23.88
05	4C3A5	78	95748	--	95748	20.14
06	4C3A6	74	58515	31629	90144	18.96
	Total	**368**	**421617**	**53842**	**475459**	**100.00**

15. Areal Extent of different runoff potential mapping units

Sl. No.	RPMU	Runoff potential value	Area (ha)	Area (%)
01	A01	59	26014	5.47
02	A02	57	47328	9.95
03	A03	67	250	0.05
04	CA01	59	3080	0.65
05	CA02	56	411	0.09
06	CA03	56	1522	0.32
07	CA04	54	3849	0.81
08	G01	80	6507	1.37
09	G02	73	2630	0.55
10	G03	71	3345	0.70
11	G04	66	10576	2.22
12	G05	69	5560	1.17
13	G06	69	81287	17.10
14	G07	62	58981	12.41
15	G08	59	28276	5.95
16	G09	61	29388	6.18
17	G10	67	5821	1.22
18	G11	61	2188	0.46
19	G12	68	12680	2.67
20	G13	65	6304	1.33
21	G14	72	4675	0.98
22	G17	64	58	0.01
23	SS03	76	41048	8.63
24	SS04	71	2974	0.63
25	SS06	71	2117	0.45

26	SS07	71	276	0.06
27	SS08	61	1671	0.35
28	SS09	57	269	0.06
29	SS10	67	16539	3.48
30	SS11	69	38	0.01
31	SS12	71	35	0.01
32	SS13	65	1860	0.39
33	SS14	66	1380	0.29
34	SS17	60	2266	0.48
		Total	**41202**	**86.50**
35	River	--	22268	4.68
36	Tank	--	25883	5.44
37	Habitation	--	4502	0.94
38	Road	--	40	0.01
39	Roc	--	69	0.01
40	Res	--	11495	2.42
	Miscellaneous		64257	13.50
		Grand Total	**475459**	**100.0**

Note : The missing mapping units in chronological order are fallen in other part of the 4C3 Catchment.

16. Salient Features

Out of total area of 4,75,459 ha 4,21,617 ha (88.68%) fall in district Nellore (A.P.) followed by 53,842 ha (11.32%) in Cuddapah district of Andhra Pradesh.

Very high and high category of priority micro watersheds cover 2,10,156 ha (44.20%) of the total surveyed area and need immediate treatment measures.

Moderate to severe and severe erosion hazards are prevalent over an area of 1,96,952 ha (41.42%) and 7,590 ha (1.6%) respectively.

An area of 58,750 ha (12.35%) is covered under forests. Pastures and grass lands occupy 1,24,735 ha accounting for 26.24% of the total area. Unculturable waste lands occupy an area of 9,384 ha which is 1.98% of the total area.

Very shallow soils cover an area of 33,604 ha (7.06%) while shallow to moderately deep soils cover an area of 1,60,349 ha (33.74%) of the total area.

Out of total cultivated area of 2,18,333 ha (45.93%), 76,978 ha (16.20%) is under rainfed and 1,41,355 ha (29.73%) is under irrigation.