

REPORT ON PRIORITIZATION OF MICROWATERSHEDS IN 5A3C1 TO 5A3C5 WATERSHEDS OF 5A3C SUBCATCHMENT (NON RVP) IN SHIMOGA, UDUPI AND UTTAR KANNADA DISTRICTS, KARNATAKA.

ABSTRACT

1. **Survey area** : 5A3C1 to 5A3C5 watersheds of 5A3C Subcatchment (NON RVP) in , , Shimoga ,Udupi and Uttar Kannada districts, Karnataka.
2. **Location** : 74° 24' to 75°11' E Longitude
13° 31' to 14° 26' N Latitude
3. **Total area surveyed** : 328749ha
4. **No. of microwatersheds** : 461
5. **Agro-climatic region** : ZoneXII – The West Coast Plain and Hill region
6. **Type of survey** : Rapid Reconnaissance Survey for priority delineation of microwatersheds
7. **Period of survey** : April 2006 to May 2007
8. **Base maps toposheets** : 1:50,000scale on Survey of India
9. **Toposheets** : 48 J/7, 48 J/8, 48 J/11, 48 J/12, 48 J/15, 48J/16, 48 K/9, 48 K/10, 48 K/13, 48 K/14, 48 O/1, 48 O/2
10. **Hydrological divisions** : a) Region – 5
b) Basin – 5A
c) Catchment – 5A3
d) Subcatchment – 5A3C
e) Watersheds – 5A3C1 to 5A3C5
f) Subwatersheds- 5A3C1a, 5A3C1b etc
g) Microwatersheds- 5A3C1a1, 5A3C1a2... etc

11. Areal extent of different erosion intensity mapping units

Sl.No.	EIMU	Runoff Potential Value	Area in ha.	Percentage
<i>1</i>	CA1	55	214	0.1%
<i>2</i>	CA2	52	1746	0.5%
<i>3</i>	CA3	54	732	0.2%
<i>4</i>	CA4	57	5730	1.7%
<i>5</i>	CA5	58	99	0.0%
<i>6</i>	CA7	56	4481	1.4%
<i>7</i>	G1	67	36580	11.1%
<i>8</i>	G2	68	35898	10.9%
<i>9</i>	G3	79	318	0.1%
<i>10</i>	G4	80	1413	0.4%
<i>11</i>	G5	61	28957	8.8%
<i>12</i>	G6	62	1740	0.5%
<i>13</i>	G7	61	2305	0.7%
<i>14</i>	G8	67	1471	0.5%
<i>15</i>	G9	61	1433	0.4%
<i>16</i>	G10	62	5319	1.6%
<i>17</i>	G11	58	19333	5.9%
<i>18</i>	G12	58	2544	0.8%
<i>19</i>	G13	58	4956	1.5%
<i>20</i>	G14	57	2340	0.7%
<i>21</i>	G15	59	4751	1.5%
<i>22</i>	G16	55	664	0.2%
<i>23</i>	G17	57	20713	6.3%
<i>24</i>	GW1	68	5655	1.7%
<i>25</i>	GW2	67	3402	1.0%
<i>26</i>	GW3	76	217	0.1%
<i>27</i>	GW4	61	4100	1.3%
<i>28</i>	GW5	62	8061	2.5%
<i>29</i>	GW6	60	1163	0.4%
<i>30</i>	GW7	68	714	0.2%

Sl.No.	EIMU	Runoff Potential Value	Area in ha.	Percentage
31	GW8	58	2033	0.6%
32	GW9	58	583	0.2%
33	GW10	55	3451	1.1%
34	LT1	55	2839	0.9%
35	LT2	59	484	0.2%
36	LT3	67	147	0.0%
37	LT4	64	361	0.1%
38	LT5	62	244	0.1%
39	LT6	58	1570	0.5%
40	LT7	60	1011	0.3%
41	LT8	63	1803	0.6%
42	LT9	56	7464	2.3%
43	LT10	58	9226	2.8%
44	LT11	62	11044	3.4%
45	LT12	64	7706	2.3%
46	LT13	68	460	0.1%
47	LT14	65	2424	0.7%
48	LT15	59	4902	1.5%
49	LT16	58	4688	1.4%
50	LT17	58	1502	0.5%
51	LT18	63	3818	1.2%
52	LT19	58	1023	0.3%
53	LT20	54	1282	0.4%
54	LT21	54	18329	5.6%
55	HAB	0	4978	1.5%
56	RES	0	16148	4.9%
57	RIVER	0	7570	2.3%
58	ROC	0	4342	1.3%
59	TANK	0	36	0.0%
60	ML	0	232	0.1%
		Grand Total	328749	100.00

12. Distribution of area (ha) and number of microwatersheds in different priority categories

Sl No.	Priority category	5A3C1	5A3C2	5A3C3	5A3C4	5A3C5	Total	Percentage
1	High No. of MWS	2975 (5)	6277 (10)	0 0	11269 (16)	15694 (21)	36215 (52)	11.0%
2	Medium No. of MWS	46094 (52)	29891 (42)	21558 (32)	37333 (54)	19051 (27)	153927 (207)	46.8%
3	Low No. of MWS	33237 (47)	32259 (47)	54587 (79)	14910 (22)	0 0	134993 (195)	41.1%
4	Very Low No. of MWS	0 (0)	0 (0)	2474 (5)	1140 (2)	0 (0)	3614 (7)	1.1%
	Total	82306 (104)	68427 (99)	78619 (116)	64652 (94)	34745 (48)	328749 (461)	100%

13. District wise distribution of area under different priority categories

Priority category	DISTRICTS						Total No. of MWS	Total area (ha)
	Shimoga		Udupi		Uttar Kannad			
	Area (ha)	No. of MWS	Area (ha)	No. of MWS	22391	No. of MWS		
High	7653	12	6751	10	56488	30	52	36215
Medium	52432	59	45262	65	41842	83	207	153927
Low	3856	6	89295	127	1803	62	195	134993
Very low	0	0	1811	3	1803	4	7	3614
	TOTAL						461	328749

14. Distribution of area in different soil erosion classes

Sl No.	Type of Erosion	Area(ha)	Percentage
1	None to slight erosion	76439	23.3
2	Slight to Moderate erosion	101488	30.9
3	Moderate erosion	90120	27.4
4	Moderate to Severe erosion	16674	5.1
5	Severe erosion	10722	3.3
6	Miscellaneous	33306	10.1
	Total	328749	100.0

15. Salient features

- Out of 461 microwatersheds 52 high, 207 medium, 195 low and 7 falls very low priority category
- Out of total surveyed area 36215 ha(11%) falls under high priority category.
- Moderate to severe and severe erosion hazard are prevalent over an area of 16674ha (5.1%) and 10722 ha (3.3%) respectively.
- Hill side slopes (10-50%) occupy maximum area of 169606 (51.6%)ha in the surveyed area.
- Out of four landscapes such as alluvium, granite gneiss, greywacke and laterite occurring in the area, granite gneiss landscape occupies nearly 52% of the area. ie170735 ha while Costal alluvium landscape occupies very meager area i.e. 13002ha (4%).
- Nearly 2003738 ha(61.2%) area is under moderately dense and dense forest and 41696 ha (12.6%) area is under different type of plantation.
- Deep to very deep soils occupy 291849 ha (89%) area of the total surveyed area.