

Report on prioritization of subwatersheds in Th, Tk and Tn Subcatchments of Tungabhadra catchment in the parts of Chitradurga, Dharwad and Shimoga districts, Karnataka, State.

i. ABSTRACT

1. Survey area : Th, Tk and Tn subcatchments of Tungabhadra catchment in the parts of Chitradurga, Dharwad & Shimoga districts, Karnataka.
2. Location : 75°8'20" to 75°48'10" east longitude and 13°46'50" to 14°55'30" North latitude
3. Total area : 4,21,996 ha.
4. Period of survey : February 1985 to March 1986
5. Type of survey : Rapid Reconnaissance survey
6. Base material : Survey of India toposheets on 1:50,000 scale
7. Areal extent of different erosion intensity mapping units

Sl. No.	Erosion intensity mapping unit	Area in ha.	%	Sl. No.	Erosion intensity mapping unit	Area in ha.	%
1.	A	15609	3.7	20.	I	582	0.1
2.	A2	28958	6.9	21.	J	294	0.1
3.	A3	877	0.2	22.	M2	751	0.2
4.	A5	9509	2.2	23.	P	2666	0.6
5.	A6	1984	0.5	24.	B1	43582	10.3
6.	A8	11713	2.8	25.	P2	41959	9.9
7.	A9	31122	7.4	26.	P3	1013	0.2
8.	All	21371	5.1	27.	R1	37097	8.8
9.	C	3881	0.9	28.	R2	675	0.2
10.	D	10777	2.6	29.	R3	1117	0.3
11.	E	1781	0.4	30.	T1	32248	7.6
12.	E1	185	0.1	31.	T2	3408	0.8
13.	E2	1835	0.4	32.	T3	2868	0.6
14.	F	1909	0.5	33.	T4	539	0.1
15.	F1	2861	0.7	34.	T5	8589	2.0
16.	F2	5758	1.4	35.	Habitation	847	0.2
17.	F3	313	0.1	36.	River	5390	1.3
18.	F4	46243	11.0	37.	Reservoir	642	0.2
19.	H1	35350	8.3	38.	Tank	5693	1.3
Total						421996	100.0

8) Hydrologic divisions

a) Catchment	Tungabhadra catchment ('T')
b) Subcatchments	Three (Th, Tk, & Tn)
c) Watersheds	15
d) Subwatersheds	114

9. Soil erosion hazards

Sl.No.	Erosion	Area in ha.	Percentage
1.	Slight	203263	48.2
2.	Moderate	188063	44.5
3.	Moderate to severe	18098	4.3
	Miscellaneous lands	12572	3.0
	Total	421996	100.0

10. Gradation of priority subwatersheds (area in hectares)

Sl. No.	Priority category	Silt Yield index range	No. of subwatersheds	Area in hectares	Percentage
1.	Very high	1199 & Above	12	42826	10.2
2.	High	1100 to 1199	19	71497	16.9
3.	Medium	1000 to 1099	26	100216	23.8
4.	Low	900 to 999	20	73550	17.4
5.	Very low	Less than 900	37	133907	31.7
	Total		114	421996	100.0

11. Districtwise gradation of priority subwatersheds (area in hectares)

Sl. No.	Priority category	Districts in subcatchments of						Total	
		'Th'		'Tk'		'Tn'			
		Chitra-durga	Dhar-wad	Shi-moga	Chitra-durga	Dhar-wad	Shi-moga		
1.	Very high	-	36284	-	-	6274	168	-	42826
2.	High	-	41577	817	707	14914	13482	-	71497
3.	Medium	-	42759	9093	-	-	38736	9628	100216
4.	Low	-	27209	12612	-	-	3522	30207	73550
5.	Very low	-	-	107985	-	-	13235	12687	133907
	Total	-	147929	130507	707	21188	69143	52522	421996

12. The extent^{of}/different kinds of soils

Type of soil	Area in ha.	Percentage
a) Black soil	147105	34.9
b) Red soil	258705	61.3
c) Mixed red and black soil	2960	0.7
Rock out crops	582	0.1
Miscellaneous lands	12572	3.0
Total	421996	100.0

13. Area under different land use

Sl.No. Land use category	Area in ha.	Percentage
a) Under cultivation	286654	67.9
b) Under forest	78550	18.6
c) Under grass cover/bushy vegetation	43638	10.4
Under miscellaneous land use	12572	3.0
Rock-out-crops	582	0.1
Total	421996	100.0

14. Extent of area of different groups of soils based on solum thickness mapped in Th, Tk and Tn subcatchments

Soil depth category	Extent in ha.	Percentage
1) Shallow to moderately deep black soils	4552	1.1
2) Deep to very deep black soils	142625	33.8
Total extent of black soils	147177	34.9
3) Rock-out-crops	582	0.1
4) Shallow to moderately gravelly red soils	51533	12.2
5) Moderately deep to very deep gravelly red soils	48693	11.6
6) Deep to very deep gravelly red soils	3776	0.9
Total extent of gravelly red soils	104002	24.7

14. Extent of area (contd.).....

Soil depth category	Extent in ha.	Percen- tage
7) Shallow to moderately deep non-gravelly red soils	877	0.2
8) Moderately deep to deep non-gravelly red soils	44859	10.6
9) Deep to very deep non gravelly red soils	108967	25.8
Total extent of non gravelly red soils	154703	36.6
10) Deep to very deep mixed red and black soils	2960	0.7
Total extent of black and red soils	408842	97.0
11) Miscellaneous lands (river, tanks, habitation and reservoir)	12572	3.0
Total	421996	100.0