

Report on detailed soil survey and land use of Br1a, Br1c, Br2a, Br2b, Br2c and Br2d subwatersheds of Upper Bhawani catchment in Mannarghat taluk of Palghat district, Kerala State.

ABSTRACT

1. Survey area : Br1a, Br1c, Br2a, Br2b, Br2c and Br2d subwatersheds of Bhawani catchment in Mannarghat taluk, Palghat district, Kerala State.
2. Total area mapped and reported : 11586 hectares
3. Period of work : December 1984 to March 1985
4. Kind of survey : Detailed soil survey of medium of medium intensity.
5. Soil series mapped and area in hectares covered under each

Sl. No.	Soil series name	Area in hectares						Total	%
		Br1a	Br1c	Br2a	Br2b	Br2c	Br2d		
1.	Arali	40 2.1%	-	34 3.5%	10 0.4%	30 1.6%	15 0.5%	129	1.1
2.	Bommiampalli	55 2.9%	25 1.9%	11 1.1%	189 7.2%	73 3.9%	4 0.1%	358	3.1
3.	Chittur	-	-	-	1784 67.8%	785 42.9%	1452 50.2%	4021	34.7
4.	Gilsi	603 31.2%	5 0.3%	501 51.8%	310 11.8%	84 4.6%	16 0.5%	1519	13.1
5.	Kolapadiyur	-	-	-	-	262 14.3%	-	262	2.3
6.	Malakkombu	559 28.9%	437 32.2%	-	103 3.9%	447 24.4%	59 2.1%	1605	13.9
7.	Nallipadi	-	887 65.3%	-	61 2.3%	44 2.4%	1261 44.1%	2253	19.4
8.	Palaiyur	463 23.9%	-	71 7.4%	100 3.8%	89 4.4%	25 0.9%	739	6.4
9.	Sirakadaru	66 3.4%	-	64 6.6%	-	-	-	130	1.1
10.	Thekpannai	95 4.9%	-	35 3.6%	32 1.2%	-	-	162	1.4
11.	Vadvani	-	-	209 21.6%	-	-	-	209	1.8
12.	Miscellaneous	52 2.7%	4 0.3%	42 4.4%	43 1.6%	27 1.5%	31 1.1%	199	1.7
		1933	1359	967	2632	1632	2863	11586	100

6. Land capability class

Class	Area in hectares						Total	%	Soil series
	Br1a	Br1c	Br2a	Br2b	Br2c	Br2d			
II	73 3.7	21 1.5	45 4.6	157 5.9	54 2.9	19 0.7	369	3.2	1) Arali 2) Bommiampalli
III	104 5.4	5 0.4	138 14.3	44 1.7	41 2.3	-	332	2.9	1) Arali 2) Bommiampalli 3) Gilsu 4) Sirakadaru
IV	280 14.5	599 44.1	233 24.1	702 26.7	403 22.0	852 29.7	3069	26.5	1) Bommiampalli 2) Chittur 3) Gilsu 4) Malakkombu 5) Nallipadi 6) Sirakadaru
VI	390 20.2	348 25.6	90 9.3	1297 49.3	531 28.9	1866 65.2	4522	39.0	1) Chittur 2) Gilsu 3) Malkkombu 4) Nallipadi 5) Sirakadaru
VII	1034 53.5	382 28.1	419 43.3	389 14.8	776 42.4	95 3.3	3095	26.7	1) Gilsu 2) Kolapadiyur 3) Malkkombu 4) Palaiyur
Misc.	52 2.7	4 0.3	42 4.4	43 1.6	27 1.5	31 1.1	199	1.7	5) Thekpannai 6) Vadvani
Total	1933	1359	997	2632	1832	2863	11586	100	

7. Specific problematic area

Sl.No.	Br1a	Br1c	Br2a	Br2b	Br2c	Br2d	Total
1. Moderate to severe erosion on slope above 3% on moderately deep and deeper soil	1768	1355	655	2467	1781	2824	10850
2. Severe erosion	1203*	1318	**464	2324*	1656*	2808*	9773*
3. Stoniness and rockiness	531*	293*	341*	1328*	810*	1891*	5194
4. Shallowness	95	-	244	32	-	-	371
Total	1863	1355	899	2499	1781	2824	11221

*Indicates more than one problem but accounted only once in the total problematic area

8. Among the subwatershed reported on Br1a has a maximum area 463 hectares under forest cover while on the other hand Br2d has minimum area 25 hect. only. In general problematic area are with deep to very deep soils above 3% slope and are infested with moderate to severe erosion almost whole of the area reported upon is having problems of shallow rooting depth, stoniness, rockiness and severe erosion, only 701 hectares area belongs to II and III land capability classes and the remaining 94% of the area needs maximum care for the exploitation of its inherent potential