DETAILED SOIL SURVEY OF POLAR-KA-KHALA WATERSHED (Gb2f AND Gb2h SUBWATERSHEDS), GIRI R.V.P. CATCHMENT, TEHSIL RENUKA, DISTRICT SIRMUR, H.P.

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ABSTRACT FOR Gb2f and Gb2h SUBWATERSHEDS

1. Survey area : Polar-Ka-Khala watershed (Gb2f and Gb2h subwatersheds), Giri R.V.P. Catchment, Tehsil Renuka, District Sirmur H.P.

2. Location : 30°42'-30°45' N.L.
   77°25'-77°32' E.L.

3. Total area : 3302 hectares

4. Period of survey : May -June, 1980

5. Type of survey : Detailed soil survey

6. Soil series mapped and area covered under each series

S.No.	Soil series	Area in ha				Total area	Percentage
		Gb2f	%	Gb2h	%		
1	Arat	-	-	663	29.2	663	20.2
2.	Bhon Kadian	212	20.5	329	14.6	541	16.3
3.	Ludhiana	124	12.0	61	2.7	185	5.6
4.	Sainj	357	34.6	404	17.7	761	23.0
5.	Trimalga	308	30.0	367	16.1	675	20.5
	Subtotal	1001	97.1	1824	80.3	2825	85.6
	Rock outcrops	-		410	18.1	410	12.4
	Miscellaneous lands	30	2.9	37	1.6	67	2.0
	Sub-total	30	2.9	447	19.7	477	14.4
	Grand total	1031	100.0	2271	100.0	3302	100.0

7. Land capability classes

Land capability unit	Subwatershed-wise Area in ha				Total	Percentage	Series
	Gb2f	%	Gb2h	%			
	Arable lands						
IIIe-1	226	21.9	194	8.6	420	12.7	Bhon Kadian Ludhiana
IVe-1	33	3.1	23	1.0	56	1.7	Bhon Kadian
IVe-2	77	7.5	117	5.2	194	5.8	Bhon Kadian & Ludhiana
Subtotal	336	32.5	334	14.8	670	20.2	-

(b) Non-arable Lands

Land capability unit	Subwatershed-wise Area in ha				Total	Percentage	Series
	Gb2f	%	Gb2h	%			
VIe-1	-	-	56	2.5	56	1.7	Bhom Kadian
VIIes-1	72	7.0	62	2.7	134	4.1	Sainj & Trimalga
VIIes-2	524	50.9	633	27.8	1157	35.1	Sainj Trimalga & Arat
Sub-total	596	57.9	751	33.0	1347	40.9	-
Sub-total	932	90.4	1085	47.8	2017	61.1	-
Forests	69	6.7	739	32.5	808	24.5	-
Rock outcrops	-	-	410	18.1	410	12.4	-
Miscellaneous	30	2.9	37	1.6	67	2.0	-
Grand total	1031	100.0	2271	100.0	3302	100.0	-
8. Area under different erosion phases							
Moderate	412	39.9	831	36.6	1243	37.6	-
Severe	589	57.2	993	43.7	1582	48.0	-
Subtotal	1001	97.1	1824	80.3	2825	85.6	-
Rock outcrops	-	-	410	18.1	410	12.4	-
Miscellaneous Land	30	2.9	37	1.6	67	2.0	-
Sub-total	30	2.9	447	19.7	477	14.4	
Grand total	1031	100.0	2271	100.0	3302	100.0	-

9. Salient features

(a) Of the total subwatersheds area of 3302 ha, only 670 ha (20.2%) area is suitable for agriculture.

(b) About 808 ha. (24.5%) area is under forest manifesting past severe erosion on the unprotected steep hill slopes. Gullies, land slides and slips are characteristic for these areas.

(c) About 2825 ha (85.6%) area is affected by moderate and severe erosion sharing 37.6 and 48.0% area respectively. Imperfect terracing with outward slopes is responsible for accelerating erosion in cultivated areas.

(d) Water scarcity problem is chronic and needs water harvesting strategies, particularly in the Gb2h subwatershed, where 18.1 percent of the area is under rock outcrops capable of yielding hundred percent runoff.

(e) The Gb2h watershed is primarily suitable for the development of the grassland and forestry coupled with animal husbandry programme.

(f) On the other hand, the Gb2f subwatershed is suitable for mixed land use planning, and capable of alround development.