

Abstract

1. **Surveyed area** : Dehradun district, Uttarakhand
2. **Agro-climatic zone** : Hill zone of the Western Himalayan region
3. **Total area** : 3,08,929 ha
4. **Geographical Extent:** 77° 37' E to 78° 22' E longitudes
29° 57' N to 30° 59' N latitudes
5. **Kind of Survey** : Soil Resource Mapping using Remote Sensing Techniques
6. **Period of Survey** : April, 2003 – June, 2003
7. **Base Maps** : High Resolution Satellite Imageries and Survey of India Toposheets
8. **Soil Series/Association mapped and their extent:** 1: 50,000 scale

S. No.	Map Symbol	Name of Series/Association	Area (ha)	Area (%)
1.	ALj3a1	Doiwala - Kedarwala	11409	3.69
2.	ALj3b1	Doiwala - Kedarwala	528	0.17
3.	ALj3c1	Raipur - Doiwala	6210	2.01
4.	ALj3c2	Raipur - Doiwala	327	0.11
5.	ALj3d1	Raipur - Doiwala	710	0.23
6.	ALj3a2	Jassuwala - Kedarwala	14112	4.57
7.	ALj3c3	Jassuwala - Kedarwala	650	0.21
8.	ALj3d2	Jassuwala - Kedarwala	159	0.05
9.	CGd7a1	Karsia - Makhti Pokhri	13485	4.37
10.	CGd7a2	Karsia - Bhirman Kandi	822	0.27
11.	CGd7c1	Karsia - Chakrata	4456	1.44
12.	CGd7c2	Mohabbewala - Chakrata	25	0.01
13.	CGd9a1	Bhirman Kandi - Chakrata	483	0.16
14.	CGd9a2	Bhirman Kandi - Khoya	295	0.10
15.	CGd9c1	Chakrata - Makhti Pokhri	37539	12.2
16.	CGd9c2	Chakrata - Bhangar	754	0.24
17.	CGd9d1	Bhangar - Khoya	18015	5.83
18.	CGd9d2	Khoya - Bhangar	708	0.23
19.	CGe7a1	Karsia - Kairkalli	13008	4.21
20.	CGe7a2	Karsia - Saria	1150	0.37
21.	CGe7c1	Mohabbewala - Bhangar	664	0.21
22.	CGe7c2	Mohabbewala - Bhangar	274	0.09
23.	CGe9a1	Bhirman Kandi - Mat Kangra	509	0.16
24.	CGe9c1	Bhirman Kandi - Mat Kangra	22260	7.21
25.	CGe9c2	Mat Kangra - Lohari	2666	0.86
26.	CGe9d1	Sarla - Lohari	32577	10.5
27.	CGe9d2	Lohari - Sarla	6095	1.97
28.	CGk5c1	Mohabbewala - Chakrata	1999	0.65
29.	CGk5c2	Bhirman Kandi - Sarla	400	0.13

30.	CGk7c1	Khoya - Chakrata	12437	4.03
31.	CGk7c2	Khoya - Chakrata	1993	0.65
32.	CGk9c1	Luhari - Nalkongra	2855	0.92
33.	CGn5a1	Karsia - Makhti Pokhri	63	0.02
34.	CGn5c1	Mohabbewala - Kairkalli	608	0.20
35.	CGn5c2	Mohabbewala - Kairkalli	263	0.09
36.	CGn7c1	Kairkalli - Sarla	7007	2.27
37.	CGn7c2	Kairkalli - Mat Kangra	284	0.09
38.	CGx3a1	Barwa - Jollygram	17586	5.69
39.	CGx3a2	Barwa - Resam Majiri	2355	0.76
40.	CGx3b1	Motipur	864	0.28
41.	CGx3c1	Barkat - Joligrant	36728	11.90
42.	CGx3c2	Barkat - Joligrant	5502	1.78
43.	CGx3d1	Barwa - Resam Majiri	304	0.10
44.	CGx3d2	Barkat - Joligrant	340	0.11
45.	CGx5a1	Barwa - Resam Majiri	3073	0.99
46.	CGx5a2	Barwa - Resam Majiri	102	0.03
47.	CGx5c1	Joligrant - Barkat	1993	0.65
48.	CGx5c2	Joligrant - Barkat	369	0.12
49.	f	Habitation	9860	3.19
50.	g	River	12054	3.90
TOTAL			308929	100

Salient Features:

- Soils of Dehradun district mainly fall under three Physiographic Sub-regions:
 - ✓ Lower/Lesser Mountain Ranges of Western Himalayas (50.43%)
 - ✓ Siwalik Hill Ranges of Western Himalayas (9.03%)
 - ✓ Piedmont/Alluvial of part of northern Plain and Eastern Plain (33.44%)
- Soils of the district fall in four slope classes:
 - ✓ Very gently to gently sloping (1-5%) - 97,784 ha (31.65%)
 - ✓ Moderately to strongly sloping (5-15%) - 8,870 ha (2.87%)
 - ✓ Moderately steep to steeply sloping (15-33%) - 55,605 ha (17.99%)
 - ✓ Very steep to extremely steep sloping (>33%) - 1,24,756 ha (40.38%)
- Various land use/land cover classes of the district are as under:
 - ✓ Agriculture - 78,157 ha (25.29%)
 - ✓ Plantation - 1,392 ha (0.45%)
 - ✓ Forest - 148,558 ha (48.09%)
 - ✓ Open scrub - 58,908 ha (19.07%)
 - ✓ Miscellaneous (river and habitation) - 21,914 ha (7.09%)
- The soils of the area fall under two soil erosion classes. An area of 2, 62,291 ha (84.90%) falls under slight to moderate water erosion and 24,724 ha (8.00%) under severe water erosion class.
- Soils of the area are classified under four orders i.e. Entisols, Inceptisols, Alfisols and Mollisols. All the twenty one soil series identified in the area are further classified in five suborders; six great groups; nine subgroups and thirteen families.