

## Abstract

1.	<b>Surveyed area</b>	:	Uttarkashi district, Uttarakhand
2.	<b>Total area</b>	:	805477 ha
3.	<b>Geographical Extent</b>	:	30° 43'N to 30 °73' North latitude 78 °27'E to 78°45' East longitude
4.	<b>Kind of Survey</b>	:	Soil Resource Mapping using Remote Sensing & GIS Techniques
5.	<b>Period of Survey</b>	:	2009-10
6.	<b>Agro-climatic Zone</b>	:	Western Himalayan Region

### ❖ **Soil Series/ Association Mapped and their Extent**

Sr. No.	Mapping Unit	Series Association			Area (ha)	Area (%)
1.	ALj2a1	Gauchar	Bomarari	-	5820	0.72
2.	CGe5d1	Auli	Odlak	-	881	0.11
3.	CGf5a1	Dunaghat	Sonla	Karn_Karayat	744	0.09
4.	CGf5a2	Odlak	Ponkhal	Sonla	4534	0.56
5.	CGf5c3	Ford	Jarmala	Silkyara	1288	0.16
6.	CGf7a1	Jasauli	Gwalkot	-	10714	1.33
7.	CGf7a2	Jasauli	Pipariyana	Ghatia	10222	1.27
8.	CGf7a3	Tiloth	Kalyani	Ponkhal	18718	2.32
9.	CGf7a4	Kalyani	Syanchatti	Tiloth	5195	0.64
10.	CGf7c1	Jageshwar - 1	Sat_Tal	-	298	0.04
11.	CGf7c2	Irthram	Dharamgarh	Charma	1558	0.19
12.	CGf7c3	Pothibasa	Bendu	Kanthargaon	34470	4.28
13.	CGf7c4	Ford	Phorti	-	15959	1.98
14.	CGf7c5	Majikdanda	Rampur - 1	-	3413	0.42
15.	CGf7d1	Dungar	Gopeshwar	Maniger	2774	0.34
16.	CGf7d2	Nagtor	Supri	Kharsali	8675	1.08
17.	CGf7d3	Kharsali	Nagtor	-	791	0.10
18.	CGf9a1	Chamsali	Nail	Rampur	345	0.04
19.	CGf9a3	Tiloth	Kharsali - 1	-	243	0.03
20.	CGf9a4	Phulibagad	Barkot	Maneri - 1	5858	0.73
21.	CGf9c1	Lidha	Sauna	Balwakhani	13679	1.70
22.	CGf9c2	Kondu	Dharamgarh	Charma	12774	1.59
23.	CGf9c4	Pothibasa	Kadukhal	Syalni	41740	5.18

24.	CGf9c5	Silkyara	Rampur - 1	Syalni	41915	5.20
25.	CGf9c6	Bhainsari	Badethi	Gumla	4381	0.54
26.	CGf9c7	Majikdanda	Rampur - 1	-	34709	4.31
27.	CGf9c8	Rampur - 1	Badethi	-	40300	5.00
28.	CGf9d1	Dungar	Maniger	Gopeshwar	2183	0.27
29.	CGf9d2	Kharsali	Nagtor	Supri	2612	0.32
30.	CGf9d3	Kharsali	Banic	Soman	54729	6.79
31.	CGg3a2	Mondal	Molnau	Maneri	129	0.02
32.	Habitation	-	-	-	139	0.02
33.	Snow Cover	-	-	-	420266	52.18
34.	Waterbodies	-	-	-	3421	0.42
<b>Grand Total</b>					<b>805477</b>	<b>100.00</b>

❖ **Spatial Extent of Landscape/Physiography Class**

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	River terraces (j)	5820	0.72
Complex Geology (CG)	Mountain tops (c)	881	0.11
Complex Geology (CG)	Narrow mountain valleys (g)	129	0.02
Complex Geology (CG)	Undifferentiated mountain side slopes (f)	374821	46.5
Micellaneous	Habitation	139	0.02
	Snow Cover	420266	52.18
	Waterbodies	3421	0.42
<b>TOTAL</b>		<b>805477</b>	<b>100.00</b>

❖ **Spatial Extent of Slope Class**

Slope classes and Code	Slope Range	Area(ha)	Area (%)
Nearly level to very gentle sloping (2)	0-3%	5820	0.72
Very gently sloping to gently sloping (3)	1-5%	129	0.02
Moderately sloping to strongly sloping (5)	5-15%	7447	0.92
Moderately steep to steep sloping (7)	15-33%	112787	13.99
Very steep to extremely steep sloping (9)	33-50% and above	255468	31.7
Micellaneous	Habitation	139	0.02
	Snow Cover	420266	52.18
	Waterbodies	3421	0.42
<b>TOTAL</b>		<b>805477</b>	<b>100.00</b>

❖ **Spatial Extent of Major Land Use/ Land Cover**

<b>Major Land Use</b>	<b>Area (ha)</b>	<b>Area (%)</b>
Agriculture (a)	62522	7.75
Forest (c)	246484	30.60
Open scrub (d)	72645	9.01
Habitation	139	0.02
Snow Cover	420266	52.18
Waterbodies	3421	0.42
<b>TOTAL</b>	<b>805477</b>	<b>100.00</b>

❖ **Spatial Extent of Land Capability Class**

<b>Land Capability Class (LCC)</b>		<b>Area (ha)</b>	<b>Area (%)</b>
Land Capability Class II-III		5949	0.74
Land Capability Class III-IV		5278	0.66
Land Capability Class IV		51295	6.37
Land Capability Class VI-VII		13121	1.63
Land Capability Class VIII		59524	7.39
Micellaneous	Forest	246484	30.60
	Habitation	139	0.02
	Snow Cover	420266	52.18
	Waterbodies	3421	0.42
<b>TOTAL</b>		<b>805477</b>	<b>100.00</b>

**Salient Features of the Area**

1. Major area (46.63 %) covered in the survey area is under complex geology having undifferentiated mountain side slope followed by alluvium-colluviums having river terraces (0.72 %).
2. The soils found in the area have been classified under three orders i.e. Entisols, Inceptisols and Mollisols. All the fifty six soil series identified in the area have been further classified into 7 Suborders, 16 Great Groups, 28 Subgroups and 38 Families.
3. The surveyed area falls under four major physiographic subdivisions viz. river terraces, mountain tops, narrow mountain valley and undifferentiated mountain side slopes. Maximum area is covered under undifferentiated mountain side slopes (46.50 %).
4. As far as land use/ land cover is concerned, forest dominated the area with 30.60 % of total geographical area. Next to forest, open scrub represented 9.01 % area.
5. The area is classified on the basis of Land Capability Class (LCC). Forest land use found to dominate the area with 30.60 % followed by class VIII (7.39 %) and class IV (6.37 %).