

## Abstract

1. **Surveyed area** : Bageshwar district, Uttarakhand
2. **Total area** : 227408 ha
3. **Geographical Extent** : 29°41'11" & 30°18'52" North latitude  
79°28'14" & 80°09'4" East longitude
4. **Kind of Survey** : Soil Resource Mapping using Remote Sensing & GIS Techniques
5. **Period of Survey** : October, 2010

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

Mapping Symbol	Mapping Unit	Series Association			Area (ha)	Area (%)
1	CGf9a1	Chamsali	Nail	Guruali	210	0.09
2	CGf9c1	Lidha	Balwakhani	Sauna	13447	5.91
3	CGf9c2	Kondu	Lidha	Dharamgarh	6424	2.82
4	CGf9c3	Almora	Bhatuli	Khand	236	0.10
5	CGf9d1	Pirsal	Maniger	Gopeshwar	1682	0.74
9	CGf7c1	Jageshwar	Gumla	Sat_Tal	1449	0.64
12	CGf5a1	Dunaghat	Karn_Karayati	Sonla	637	0.28
19	SLf8c1	Kalun	Ratya	-	26578	11.69
20	SLf8c2	Runikhat	Ratya	-	43675	19.21
21	SLf8d1	Ratya	Runikhat	-	4340	1.91
22	SLf7a1	Hartauli	Dangoli	Kajukhet	22570	9.92
23	SLf6b1	Dangoli	Hartauli	-	2535	1.11
25	SLf5a1	Kajukhet	Hartauli	-	5735	2.52
27	ACj2a1	Bomarari	Chapora	-	1089	0.48
28	ACj3a1	Nagrasu	Saikot	Sonargaon	1978	0.87
29	ALg3a1	Baijnath	Chapora	-	1705	0.75
41	CGf9c7	Majikdanda	Rampur-1	-	9807	4.31
42	CGf9c8	Rampur-1	Badethi	-	10338	4.55
43	CGf9d3	Kharsali	Nagtor	-	12489	5.49
44	CGf9a4	Phulibagad	Barkot	Tiloth	500	0.22
101	CGf9a2	Gopeshwar	Jakhari	Rampur	1385	0.61
102	CGf9c4	Pothibasa	Kadukhal	Syalni	917	0.40

Mapping Symbol	Mapping Unit	Series Association			Area (ha)	Area (%)
103	CGf9c5	Silkyara	Bhainsari	Syalni	16594	7.30
104	CGf9c6	Bhainsari	Badethi	Supri	6916	3.04
105	CGf9d2	Kharsali	Nagtor	Supri	738	0.32
107	CGf7a3	Tiloth	Kalyani	Ponkhal	2813	1.24
112	CGf5a2	Odlak	Ponkhal	Sonla	2480	1.09
8282	Snow Cover	-	-	-	27338	12.02
9898	Habitation	-	-	-	65	0.03
9999	Waterbodies	-	-	-	738	0.32
<b>TOTAL</b>					<b>227408</b>	<b>100</b>

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

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	Stream banks (g)	1705	0.75
Alluvium colluviums (AC)	River terraces (j)	3067	1.35
Complex Geology (CG)	Undifferentiated mountain side slope (f)	89062	39.15
Slate (SL)	Undifferentiated mountain side slope (f)	105433	46.36
	Snow Cover	27338	12.02
	Habitation	65	0.03
	Waterbodies	738	0.32
<b>TOTAL</b>		<b>227408</b>	<b>100.00</b>

❖ **Spatial Extent of Slope Class**

Slope Class and Code	Slope Range	Area(ha)	Area (%)
Nearly level to very gently sloping (2)	0-1%	1089	0.48
Very gently sloping to gently sloping (3)	1-5%	3683	1.62
Moderately sloping to strongly sloping (5)	5-15%	8852	3.89
Strongly sloping to moderately steep (6)	10-25%	2535	1.11
Moderately steep to steep sloping (7)	15-33%	26832	11.80
Steep to very steep (8)	25-33%	74593	32.81
Very steep to extremely steep (9)	33-50% and above	81683	35.90
	Snow Cover	27338	12.02
	Habitation	65	0.03
	Waterbodies	738	0.32
<b>TOTAL</b>		<b>227408</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)	41102	18.07
Plantation (b)	2535	1.11
Forest (c)	136381	59.97
Open scrub (d)	19249	8.46
Snow Cover	27338	12.02
Habitation	65	0.03
Waterbodies	738	0.32
<b>TOTAL</b>	<b>227408</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	4772	2.10
Land Capability Class – III	8852	3.89
Land Capability Class – IV	27478	12.08
Land Capability Class – VI	2535	1.11
Land Capability Class – VIII	19249	8.46
Forest	136381	59.97
Snow Cover	27338	12.02
Habitation	65	0.03
Waterbodies	738	0.32
<b>TOTAL</b>	<b>227408</b>	<b>100.00</b>

**Salient Features**

1. Major area covered in the survey area is under slate landscape having undifferentiated mountain side slope accounting to 46.36 % followed by complex geology having undifferentiated mountain side slope (39.15 %).
2. The soils found in the area have been classified under four orders i.e. Alfisols, Entisols, Inceptisols and Mollisols. All the fifty one soil series identified in the area have been further classified into 7 Suborders, 14 Great Groups, 24 Subgroups and 34 Families.
3. The surveyed area fall under three major physiographic subdivisions viz. river terraces, stream banks and undifferentiated hill side slopes.
4. Forest dominated the area with 59.97 % of total geographical area followed by agriculture representing 18.07 % area.
5. The area is classified on the basis of Land Capability Class (LCC), where class IV covered maximum area of 12.08 % followed by class VIII with an area of 8.46 %. Forest was found with an area of 59.97 %.