

Abstract

1. **Surveyed Area** : Pouri Garhwal district, Uttarakhand
2. **Total Area** : 528531 ha
3. **Geographical Extent** : 29° 45' to 30°15' North Latitude
78° 24' to 79° 23' East Longitude
4. **Kind of Survey** : Soil Resource Mapping using Remote Sensing & GIS Techniques
5. **Period of Survey** : 2009
6. **Agro-climatic Region** : 1 (Western Himalayan Region)

❖ Soil Series/ Association Mapped and their Extent

Mapping Symbol	Mapping Unit	Series Association			Area (ha)	Area (%)
1	ALg3c1	Bajpur	Kaleshwar	-	589	0.11
2	ALj3a1	Nagrasu	Saikot	Pipalkot	2,542	0.48
3	CGf5a1	Dunaghat	Sonla	Karn_Karayat	5,050	0.96
4	CGf5c1	Sat_Tal	Jageshwar	-	867	0.16
5	CGf7a1	Gwalkot	Jasauli	Khan	74,968	14.18
6	CGf7a2	Pipariyana	Ghatia		6,151	1.16
7	CGf7c1	Jageshwar	Chaurangikhal	Sat_Tal	45,996	8.70
8	CGf7c2	Irthram	Naithana	Banjkhali	19,217	3.64
9	CGf7d1	Pirsal	Maniger	-	26,800	5.07
10	CGf9a1	Chamsali	Rampur	-	4,469	0.85
11	CGf9c1	Lidha	Balwakhani	Sauna	53,851	10.19
12	CGf9c2	Kondu	Bedwa	Banjkhali	57,073	10.80
13	CGf9d1	Pirsal	Maniger	Gopeshwar	9,252	1.75
14	SDf5a1	Kilolighat	Saneh	-	5,256	0.99
15	SDf5c1	Papidanda	Delighati	Kalagarh	20,259	3.83
16	SDf5c2	Pokharao	Kumbichaur	Padampur	9,789	1.85
17	SDf5d1	Saneh	Kilolighat	-	201	0.04
18	SDf7a1	Nainital	Mangoli	-	15,637	2.96
19	SDf7c1	Papidanda	Kumbichaur	Delighati	70,834	13.40
20	SDf7c2	Pokharao	Kumbichaur	Papidanda	39,886	7.55

Mapping Symbol	Mapping Unit	Series Association			Area (ha)	Area (%)
21	SDf7d1	Saneh	Gwalkot	-	7,887	1.49
22	SDf9c1	Pokharao	Papidanda	Dhari	4,419	0.84
23	SDf9c2	Chandidevi	Pokharao	-	8,761	1.66
24	SDf9d1	Saneh	Gwalkot	-	1,210	0.23
25	CGx4c1	Kalagarh	Padampur	-	9,118	1.73
26	CGx4d1	Padampur	Kalagarh	-	290	0.05
27	CGx3a1	Kotdwar	Lalpani	-	4,655	0.88
28	CGx3c1	Bhupdevpur	Lalpani	-	8,083	1.53
29	CGx3d1	Kotdwar	Lalpani	-	665	0.13
Habitation					53	0.01
Water bodies					14,703	2.78
TOTAL					5,28,531	100.00

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

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	Stream banks (g)	589	0.11
	River terraces (j)	2,542	0.48
Complex Geology (CG)	Undifferentiated mountain side slope (f)	3,03,694	57.46
	Piedmont planes (x)	22,816	4.32
Sandstone (SD)	Undifferentiated mountain side slope (f)	1,84,139	34.84
Miscellaneous	Habitation	53	0.01
	Water bodies	14,703	2.78
TOTAL		5,28,531	100.00

❖ **Spatial Extent of Slope Class**

Slope classes and code	Slope Range	Area (ha)	Area (%)
Very gently to gently sloping (3)	1-5 %	16,534	3.13
Gently to moderately sloping (4)	3-10 %	9,408	1.78
Moderately to Strongly sloping (5)	5-15 %	41,422	7.83
Moderately steep to steep sloping (7)	15-33 %	3,07,376	58.15
Very steep to extremely steep (9)	33-50 % and above	1,39,035	26.32
Miscellaneous	Habitation	53	0.01
	Water bodies	14,703	2.78
TOTAL		5,28,531	100.00

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

Major Land Use	Area (ha)	Area (%)
Agriculture (a)	1,18,728	22.46
Forest (c)	3,48,742	65.99
Open scrub (d)	46,305	8.76
Habitation	53	0.01
Water bodies	14,703	2.78
TOTAL	5,28,531	100.00

❖ **Spatial Extent of Land Capability Class**

Land Capability Classes (LCC)	Area (ha)	Area (%)
Land Capability Class – II-III	7,197	1.36
Land Capability Class – III-IV	10,306	1.95
Land Capability Class – IV	1,01,225	19.15
Land Capability Class – VI	2,366	0.45
Land Capability Class – VII-VIII	43,939	8.31
Forest	3,48,742	65.99
Habitation	53	0.01
Water bodies	14,703	2.78
TOTAL	5,28,531	100.00

Salient Features

1. The surveyed area fall under different landscape like alluvium, complex geology and sandstone. The landscapes are further divided into five major physiographic subdivisions viz. undifferentiated mountain slope, river terraces, stream banks, foot hill slopes and upper pediplains.
2. Major part of surveyed area mapped under complex geology landscape comprising of undifferentiated mountain slope landform accounting to 57.46 %. Next to complex geology landscape, sandstone landscape comprising of undifferentiated mountain slope with 34.84 %.
3. Soils of the area have been classified under three Orders i.e. Inceptisols, Entisols and Mollisols in order of their dominance. All the fortyfour soil series identified in the area have been further classified into 8 Suborders; 9 Great Groups; 15 Subgroups and 32Families.
4. Land use wise forest land occupied the major area with 65.99 % of total geographical area and it is followed by agriculture (22.46 %) and by open scrub (8.76 %).

5. Land Capability assessment of the district shows that apart from 65.99 % area is under forest, around 19.15 % of the area is under Land Capability Class IV and mainly under agriculture. Around 8.76 % areas are classified under Land Capability Class VI-VIII suited for agroforestry/ pastures. Similarly, around 3.31 % area is classified under Land Capability Class II-IV which is susceptible to flood hazards.