

Abstract

1. **Surveyed Area** : Haridwar district, Uttarakhand
2. **Total Area** : 237079 ha
3. **Geographical Extent** : 29°96' North Latitude
78°16' 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	ALb1a1	Bhaidapur	Shivgarh	Dhanpura	5,697	2.40
2	ALb1a2	Bedpur	Dehlaki	Bhaidapur	1,9,401	8.18
3	ALb1a3	Sarai	Maachandi	Dudhla	862	0.36
4	ALb1b1	Bahadurpur	Bhandia	Kherli	2,571	1.08
5	ALb1d1	Purowali	Sukhrao	-	3,229	1.36
6	ALb2a1	Dhanuri	Landhaura	Bedpur	53,420	22.53
7	ALb2a2	Sarai	Kabulpuri	-	43,382	18.30
8	ALb2b1	Sukhrao	Kherli	-	4,252	1.79
9	ALb2b2	Bahadurpur	Kherli	-	3,503	1.48
10	ALb2c1	Roorkie	Dhanpura	Kherli	6,656	2.81
11	ALb3a1	Sarai	Thatula	-	25,652	10.82
12	ALb3c1	Maachandi	Roorkie	Kherli	13,203	5.57
13	ALb4d1	Maachandi	Purowali	-	527	0.22
14	ALf2a1	Laksar	Bhogpur	-	1,434	0.60
15	ALh4d1	Imlikhera	Pirankaliyad	-	1,293	0.55
16	SDf7c1	Papidanda	Kumbichaur	Delighati	8,897	3.75
17	SDf7c2	Tigri	Kumbichaur	Papidanda	7,107	3.00
18	SDf9c1	Tigri	Papidanda	Dhari	574	0.24

Mapping Symbol	Mapping Unit	Series Association			Area (ha)	Area (%)
19	SDf9c2	Chandidevi	Tigri	-	7,996	3.37
20	CGx4c1	Kalagarh	Padampur	-	4,635	1.96
21	CGx4d1	Padampur	Kalagarh	-	214	0.09
22	CGx3c1	Bhupdevpur	Kalagarh	-	247	0.10
23	Habitation	-	-	-	6,981	2.94
24	Waterbodies	-	-	-	15,346	6.47
TOTAL					2,37,079	100

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

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	Alluvial plains (b)	1,82,355	76.92
	Paleo channels (f)	1,434	0.60
	Dissected stream banks (h)	1,293	0.55
Sandstone (SD)	Undifferentiated mountain side slope (f)	24,574	10.37
Complex Geology (CG)	Piedmont Planes (x)	5096	2.15
Miscellaneous	Habitation	6,981	2.94
	Water bodies	15,346	6.47
TOTAL		2,37,079	100

❖ **Spatial Extent of Slope Class**

Slope classes and code	Slope Range	Area (ha)	Area (%)
Nearly level (1)	0-1 %	31,760	13.40
Nearly level to very gently sloping (2)	0-3 %	69,265	29.22
Very gently to gently sloping (3)	1-5 %	82,484	34.79
Gently to moderately sloping (4)	3-10 %	6,669	2.81
Moderately steep to steep sloping (7)	15-33 %	16,004	6.75
Very steep to extremely steep sloping (9)	33-50 % and above	8,570	3.61
Miscellaneous	Habitation	6,981	2.94
	Water bodies	15,346	6.47
TOTAL		2,37,079	100

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

Major Land Use	Area (ha)	Area (%)
Agriculture (a)	1,49,848	63.21
Plantation (b)	10,326	4.36
Forest (c)	49,315	20.80
Open scrub (d)	5263	2.22
Habitation	6,981	2.94
Water bodies	15,346	6.47
TOTAL		2,37,079

❖ Spatial Extent of Land Capability Class

Land Capability Classes (LCC)	Area (ha)	Area (%)
Land Capability Class – II	25,961	10.94
Land Capability Class – II-III	1,37,443	57.96
Land Capability Class – VI	2,034	2.72
Forest	49,314	20.80
Habitation	6,981	0.10
Water bodies	15,346	6.47
TOTAL	2,37,079	100

Salient Features

1. The surveyed area fall under various physiographic subdivisions viz. alluvial plains, paleo channels, dissected stream banks, undifferentiated mountain slope, and piedmont planes.
2. Major part of surveyed area mapped under alluvium landscape having alluvial plains landform accounting to 76.92 %. Next to this, sandstone landscape having undifferentiated mountain side slope occupied the area with an area of 24574 ha (10.37 %).
3. Soils of the area have been classified under two Orders i.e. Inceptisols and Entisols in order of their dominance. All the thirty one soil series identified in the area have been further classified into 5 Suborders; 5 Great Groups; 10 Subgroups and 24 Families.
4. Land use wise, nearly 63.21 % of the total geographical area is occupied by agriculture followed by forest with 20.80 % of the area.
5. Land Capability assessment of the district shows that apart from 20.80 % area which is under forest, around 57.96 % of the area is under Land Capability Class II-III which is suitable for agriculture. Around 2.72 % areas are classified under Land Capability Class VI suited for agro-forestry/ pastures.