

Report on Soil Resource Mapping of District Kullu, Himachal Pradesh

Abstract

1. **Surveyed area** : Kullu district, Himachal Pradesh
2. **Total area** : 5,49,524 ha.
3. **Geographical Extent** : 31°20'25" & 32°25'00" North latitude
76°56'30" & 77°52'20" East longitude
4. **Kind of Survey** : Soil Resource Mapping using Remote Sensing Technique
5. **Soil Series/Association mapped and their extent:**

Sl. No.	Mapping Symbol	Mapping Unit	Series Association	Area (ha)	Area (%)
1	392	CGd7c1	Harabag	8	0.00
2	393	CGd8c1	Bitohi-Urla	148	0.03
3	394	CGd9c1	Urla	1	0.00
4	399	CGf7c1	Bitohi-kathel	1236	0.22
5	400	CGf8c1	Magar-Keran-kathel	8702	1.58
6	401	CGf9c1	Kippar-Urla	2113	0.38
7	408	CGf5a1	Mamel	101	0.02
8	409	CGf6a1	Chail-Mamel	95	0.02
9	410	CGf7a1	Mamel	1153	0.21
10	411	CGf8a1	Dhamasan-Mamel	5408	0.98
11	412	CGf9a1	Pagwan-Chail	2	0.00
12	415	CGf7d1	Hataun-Naun.-Kotlu2	88	0.02
13	416	CGf8d1	Chambi-Hataun-Naun.	7190	1.31
14	417	CGf9d1	Chambi-Badli	599	0.11
15	1392	CGd7c1	Harabag-1	3058	0.56
16	1393	CGd8c1	Bitohi-1-Urla-1	18983	3.45
17	1394	CGd9c1	Urla-1	11991	2.18
18	1396	CGe8c1	Bitohi-1-Kotlu1-1	2422	0.44
19	1397	CGe9c1	Bitohi-1	3631	0.66
20	1398	CGf6c1	Urla-1	149	0.03
21	1399	CGf7c1	Bitohi-1-kathel-1	10485	1.91
22	1400	CGf8c1	Magar-1-Keran-1-kathel-1	79833	14.53
23	1401	CGf9c1	Kippar-1-Urla-1	50873	9.26
24	1403	PDx4a1	Bharmha-1	750	0.14
25	1407	CGf4a1	Mamel-1-Jhiri-1	654	0.12

Sl. No.	Mapping Symbol	Mapping Unit	Series Association	Area (ha)	Area (%)
26	1408	CGf5a1	Mamel-1	771	0.14
27	1409	CGf6a1	Chail-1-Mamel-1	5699	1.04
28	1410	CGf7a1	Mamel-1	9527	1.73
29	1411	CGf8a1	Dhamasan-1-Mamel-1	27384	4.98
30	1412	CGf9a1	Pagwan-1-Chail-1	423	0.08
31	1414	CGf6d1	Naun-1	943	0.17
32	1415	CGf7d1	Hataun-1-Naun-1-Kotlu2-1	1885	0.34
33	1416	CGf8d1	Chambi-1-Hataun-1-Naun-1	24947	4.54
34	1417	CGf9d1	Chambi-1-Badli-1	21797	3.97
35	8282	Snow cover/cloud cover data		244293	44.46
36	9898	Habitation		201	0.04
37	9999	Waterbodies		1981	0.36
TOTAL				549524	100.00

6. Spatial Extent of Landscape/Physiographic Classes

Landscape	Physiography	Area (ha)	Area (%)
Complex geology (CG)	Mountain-northern slopes (CGd)	34189	6.22
Complex geology (CG)	Mountain-southern slopes (CGe)	6053	1.10
Complex geology (CG)	Undifferentiated mountain side (CGf)	262057	47.68
Pedidolite	Piedmont planes (PDx)	750	0.14
Snow cover/cloud cover data		244293	44.46
Miscellaneous		2182	0.40
TOTAL		549524	100.00

7. Spatial Extent of Slope Classes

Slope classes and code	Slope Range	Area (ha)	Area(%)
Gently sloping to moderate sloping (4)	3-10%	1404	0.26
Moderately sloping to strongly sloping (5)	5-15%	872	0.16
Strongly sloping to moderately steep (6)	10-25%	6886	1.25
Moderately steep to steep sloping (7)	15-33%	27440	4.98
Steep sloping to very steep sloping (8)	25-50%	175017	31.85
Very steep to extremely steep (9)	33-50% and above	91430	16.64
Snow cover/cloud cover data		244293	44.46
Miscellaneous		2182	0.40
TOTAL		549524	100.00

8. Spatial Extent of Major Land Use/ Land Cover

Major Land Use	Area (ha)	Area (%)
Agriculture (a)	51967	9.45
Forest (c)	193633	35.24
Open scrub (d)	57449	10.45
Snow cover/cloud cover data	244293	44.46
Miscellaneous	2182	0.40
TOTAL	549524	100.00

9. Spatial Extent of Soil Erosion Classes

Erosion	Area (ha)	Area(%)
Slight to moderate erosion (e1-e2)	52910	9.64
Moderate water erosion (e2)	56506	10.28
Severe to very severe erosion (e3-e4)	24408	20.92
Snow cover/cloud cover data	244293	44.46
Miscellaneous	2182	0.40
TOTAL	549524	100.00

10. Spatial Extent of Land Capability Classes

Land Capability Classes (LCC)	Area (ha)	Area (%)
Land Capability Class - III-IV	2175	0.40
Land Capability Class - IV	49792	9.05
Land Capability Class - VII	57449	10.45
Forest	193633	35.24
Snow cover/cloud cover data	244293	44.46
Miscellaneous	2182	0.40
TOTAL	549524	100.00

11. Soils of the area have been classified under three Orders i.e. Entisols, Inceptisols and Molisols and all the thirty five Soil Series identified in the area have been further classified into three Suborders; three Great Groups; five Subgroups and eighteen Families.