

Report on Soil Resource Mapping of District Mandi, Himachal Pradesh

Abstract

1. **Surveyed area** : Mandi district, Himachal Pradesh
2. **Total area** : 3,94,867 ha
3. **Geographical Extent** : 31°12'50" & 32°04'30" North latitude
76°37'20" & 77°23'15" 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	2200	0.56
2	393	CGd8c1	Bitohi-Urla	20809	5.27
3	394	CGd9c1	Urla	12048	3.05
4	395	CGe7c1	Lahla	364	0.09
5	396	CGe8c1	Bitohi-Kotlu1	140	0.04
6	397	CGe9c1	Bitohi	149	0.04
7	398	CGf6c1	Urla	30	0.01
8	399	CGf7c1	Bitohi-kathel	9988	2.53
9	400	CGf8c1	Magar-Keran-kathel	76591	19.40
10	401	CGf9c1	Kippar-Urla	37284	9.44
11	402	CGc5a1	Bharelan	112	0.03
12	404	PDx4a1	Bharmha	1939	0.49
13	405	ALb3a1	Dohandi	2243	0.57
14	406	ALb4a1	Rampur	13	0.00
15	407	CGf3a1	Kalali	500	0.13
16	408	CGf4a1	Mamel-Jhiri	6889	1.74
17	409	CGf6a1	Chail-Mamel	12813	3.24
18	410	CGf7a1	Mamel	24394	6.18
19	411	CGf8a1	Dhamasan-Mamel	59657	15.11
20	412	CGf9a1	Pagwan-Chail	7097	1.80
21	413	ALb5d1	Dhaban	190	0.05
22	414	CGf6d1	Naun	405	0.10
23	415	CGf7d1	Hataun-Naun-Kotlu2	9453	2.39
24	416	CGf8d1	Chambi-Hataun-Naun	35791	9.06
25	417	CGf9d1	Chambi-Badli	36700	9.29

Sl. No.	Mapping Symbol	Mapping Unit	Series Association	Area (ha)	Area (%)
26	1392	CGd7c1	Harabag-1	193	0.05
27	1393	CGd8c1	Bitohi-1-Urla-1	1544	0.39
28	1394	CGd9c1	Urla-1	3265	0.83
29	1396	CGe8c1	Bitohi-1-Kotlu1-1	39	0.01
30	1397	CGe9c1	Bitohi-1	32	0.01
31	1399	CGf7c1	Bitohi-1-kathel-1	1164	0.29
32	1400	CGf8c1	Magar-1-Keran-1-kathel-1	3635	0.92
33	1401	CGf9c1	Kippar-1-Urla-1	11027	2.79
34	1407	CGf4a1	Mamel-1-Jhiri-1	92	0.02
35	1408	CGf5a1	Mamel-1	225	0.06
36	1409	CGf6a1	Chail-1-Mamel-1	190	0.05
37	1410	CGf7a1	Mamel-1	956	0.24
38	1411	CGf8a1	Dhamasan-1-Mamel-1	4260	1.08
39	1412	CGf9a1	Pagwan-1-Chail-1	907	0.23
40	1415	CGf7d1	Hataun-1-Naun-1-Kotlu2-1	159	0.04
41	1416	CGf8d1	Chambi-1-Hataun-1-Naun-1	1930	0.49
42	1417	CGf9d1	Chambi-1-Badli-1	2396	0.61
43	9898	Habitation		520	0.13
44	9999	Water bodies		4534	1.15
TOTAL				394867	100.00

6. Spatial Extent of Landscape/Physiographic Classes

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	Alluvial plains (ALb)	2446	0.62
Complex geology (CG)	Mountain tops (CGx)	112	0.03
Complex geology (CG)	Mountain-northern slopes (CGd)	40059	10.14
Complex geology (CG)	Mountain-southern slopes (CGe)	724	0.18
Complex geology (CG)	Undifferentiated mountain side (CGf)	344533	87.25
Pedidolite (PD)	Piedmont planes (PDx)	1939	0.49
Miscellaneous		5054	1.28
TOTAL		394867	100.00

7. Spatial Extent of Slope Classes

Slope classes and code	Slope Range	Area(ha)	Area(%)
Very gently sloping to gently sloping (3)	1-5%	2743	0.69
Gently sloping to moderate sloping (4)	3-10%	2044	0.52
Moderately sloping to strongly sloping (5)	5-15%	7416	1.88
Strongly sloping to moderately steep (6)	10-25%	13438	3.40
Moderately steep to steep sloping (7)	15-33%	48871	12.38
Steep sloping to very steep sloping (8)	25-50%	204396	51.76
Very steep to extremely steep (9)	33-50% and above	110905	28.09
Miscellaneous		5054	1.28
TOTAL		394867	100.00

8. Spatial Extent of Major Land Use/ Land Cover

Major Land Use	Area (ha)	Area (%)
Agriculture (a)	122175	30.94
Forest (c)	180614	45.74
Open scrub (d)	87024	22.04
Miscellaneous	5054	1.28
TOTAL	394867	100.00

9. Spatial Extent of Soil Erosion Classes

Erosion	Area (ha)	Area (%)
Slight to moderate erosion (e1-e2)	122580	31.04
Moderate water erosion (e2)	180614	45.74
Moderate to severe erosion (e2-e3)	86429	21.89
Very severe erosion (e3-e4)	24408	20.91
Miscellaneous	5054	1.28
TOTAL	394867	100.00

10. Spatial Extent of Land Capability Classes

Land Capability Classes (LCC)	Area (ha)	Area (%)
Land Capability Class - II	500	0.13
Land Capability Class - III	4195	1.06
Land Capability Class - III-IV	20019	5.07
Land Capability Class - IV	97461	24.68
Land Capability Class - VII	87024	22.04
Forest	180614	45.74
Miscellaneous	5054	1.28
TOTAL	394867	100.00

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