

# Report on Soil Resource Mapping of District Hamirpur, Himachal Pradesh

## Abstract

1. **Surveyed area** : Hamirpur district, Himachal Pradesh
2. **Total area** : 1,11,843 ha
3. **Geographical Extent** : 31°24'48" & 31°53'35" North latitude  
76°17'50" & 76°43'42" 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	1	ALg3a1	Gulabpura-Kothi	271	0.24
2	7	CMf5a1	Balakhari-Bhagol-Hamirpur	8002	7.15
3	8	CMf5a2	Balakhari-Bhagol-Hamirpur	4345	3.88
4	9	CMf5a3	Balakhari-Bhagol-Hamirpur	696	0.62
5	10	CMf5d1	Bhagol-Patlander-Sarakar	140	0.13
6	11	CMf5d2	Bhagol-Patlander-Sarakar	849	0.76
7	12	CMf5d3	Nanowal-Bhagol-Sarakar	191	0.17
8	13	CMf5c1	Bhagol-Patlander-Sarakar	911	0.81
9	14	CMf5c2	Bhagol-Patlander-Sarakar	368	0.33
10	16	CMf7a1	Bhagol-Sarakar-Rajpura	7042	6.30
11	17	CMf7a2	Bhagol-Sarakar-Rajpura	10654	9.53
12	18	CMf7a3	Bhagol-Sarakar-Rajpura	2849	2.55
13	19	CMf7d1	Bhagol-Sarakar-Rajpura	1228	1.10
14	20	CMf7d2	Bhagol-Sarakar-Rajpura	2775	2.48
15	21	CMf7d3	Bhagol-Rajpura-Nanowal	1103	0.99
16	22	CMf7c1	Rajpura-Bhagol	289	0.26
17	23	CMf7c2	Rajpura-Bhagol	1171	1.05
18	24	CMf7c3	Rajpura-Bhagol	40	0.04
19	25	CMf9a1	Bhagol-Sarakar-Rajpura	406	0.36
20	26	CMf9a2	Bhagol-Sarakar-Rajpura	492	0.44
21	28	CMf9d1	Bhagol-Sarakar-Rajpura	323	0.29
22	29	CMf9d2	Bhagol-Sarakar-Rajpura	613	0.55
23	30	CMf9d3	Bhagol-Sarakar-Rajpura	98	0.09
24	34	CMx3a1	Khera-Tipra	21409	19.14

Sl. No.	Mapping Symbol	Mapping Unit	Series Association	Area (ha)	Area (%)
25	35	CMx3a2	Khera-Tipra	2110	1.89
26	37	CMx3d1	Khera-Tipra	75	0.07
27	40	CMx3c1	Khera-Tipra	177	0.16
28	70	SDf5a1	Kasaru-Parnagal	6573	5.88
29	71	SDf5a2	Kasaru-Parnagal	6430	5.75
30	72	SDf5a3	Kasaru-Parnagal	653	0.58
31	73	SDf5d1	Kasaru-Parnagal	417	0.37
32	74	SDf5d2	Kasaru-Parnagal	221	0.20
33	75	SDf5d3	Kasaru-Parnagal	329	0.29
34	76	SDf5c1	Maihre-Mansai-Shore	2891	2.58
35	77	SDf5c2	Maihre-Mansai-Shore	2149	1.92
36	78	SDf5c3	Maihre-Mansai-Shore	164	0.15
37	79	SDf7a1	Kasaru-Tarwar	1072	0.96
38	80	SDf7a2	Kasaru-Tarwar	1724	1.54
39	81	SDf7a3	Kasaru-Tarwar	162	0.14
40	82	SDf7d1	Chhadol-Kasaru	29	0.03
41	83	SDf7d2	Chhadol-Kasaru	2207	1.97
42	84	SDf7d3	Chhadol-Kasaru	68	0.06
43	85	SDf7c1	Maihre-Shore	4234	3.79
44	86	SDf7c2	Maihre-Shore	3922	3.51
45	87	SDf7c3	Maihre-Shore	873	0.78
46	88	SDf9a1	kasaru-Tarwar	29	0.03
47	89	SDf9a2	Kasaru-Tarwar	191	0.17
48	90	SDf9a3	Kasaru-Tarwar	117	0.10
49	91	SDf9d1	Chhadol-Kasaru	36	0.03
50	92	SDf9d2	Chhadol-Kasaru	880	0.79
51	93	SDf9d3	Chhadol-Kasaru	120	0.11
52	94	SDf9c1	Maihre-Shore	179	0.16
53	95	SDf9c2	Maihre-Shore	820	0.73
54	9898	Habitation		1895	1.69
55	9999	Waterbodies		4831	4.32
<b>TOTAL</b>				<b>1,11,843</b>	<b>100.00</b>

## 6. Spatial Extent of Landscape/Physiographic Classes

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	Stream banks (g)	271	0.24
Conglomerate (CM)	Piedmont planes (x)	23771	21.25
Conglomerate (CM)	Undifferentiated mountain side slope (f)	44585	39.86
Sandstone (SD)	Undifferentiated mountain side slope (f)	36490	32.63
Miscellaneous		6726	6.01
<b>TOTAL</b>		<b>1,11,843</b>	<b>100.00</b>

## 7. Spatial Extent of Slope Classes

Slope classes and code	Slope Range	Area (ha)	Area (%)
Very gently sloping to gently sloping (3)	1-5%	24042	21.50
Moderately sloping to strongly sloping (5)	5-15%	35329	31.59
Moderately steep to steep sloping (7)	15-33%	41442	37.05
Very steep to extremely steep sloping (9)	33-50% and above	4304	3.85
Miscellaneous		6726	6.01
<b>TOTAL</b>		<b>1,11,843</b>	<b>100.00</b>

## 8. Spatial Extent of Major Land Use/ Land Cover

Major Land Use	Area (ha)	Area (%)
Agriculture (a)	75227	67.36
Forest (c)	18188	16.26
Open scrub (d)	11702	10.46
Miscellaneous	6726	6.01
<b>TOTAL</b>	<b>1,11,843</b>	<b>100.00</b>

## 9. Spatial Extent of Soil Erosion Classes

Erosion	Area (ha)	Area (%)
Slight to moderate erosion (e1-e2)	49332	44.11
Moderate to severe erosion (e2-e3)	51085	45.68
Severe to very severe erosion (e3-e4)	4700	4.20
Miscellaneous	6726	6.01
<b>TOTAL</b>	<b>1,11,843</b>	<b>100.00</b>

## 10. Spatial Extent of Land Capability Classes

Land Capability Classes (LCC)	Area (ha)	Area (%)
Land Capability Class - II	271	0.24
Land Capability Class – II-III	23519	21.03
Land Capability Class - III-IV	25350	22.67
Land Capability Class - IV	26087	23.32
Land Capability Class - VI	1255	1.12
Land Capability Class - VII	10447	9.34
Forest	18188	16.26
Miscellaneous	6726	6.01
<b>TOTAL</b>	<b>1,11,843</b>	<b>100.00</b>

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