

Report on Soil Resource Mapping of District Bilaspur, Himachal Pradesh

Abstract

1. **Surveyed area** : **Bilaspur district, Himachal Pradesh**
2. **Total area** : **1,16,733 ha**
3. **Geographical Extent** : **31°12'30" & 31°35'45" North latitude**
76°23'45" & 76°55'40" 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	3743	3.21
2	3	ALg3d1	Gulabpura-Kothi	21	0.02
3	7	CMf5a1	Balakhar-Bhagol-Hamirpur	4070	3.49
4	8	CMf5a2	Balakhar-Bhagol-Hamirpur	2424	2.08
5	9	CMf5a3	Balakhar-Bhagol-Hamirpur	735	0.63
6	11	CMf5d2	Bhagol-Patlander-Sarakar	107	0.09
7	12	CMf5d3	Nanowal-Bhagol-Sarakar	331	0.28
8	14	CMf5c2	Bhagol-Patlander-Sarakar	76	0.07
9	16	CMf7a1	Bhagol-Sarakar-Rajpura	2081	1.78
10	17	CMf7a2	Bhagol-Sarakar-Rajpura	6352	5.44
11	18	CMf7a3	Bhagol-Sarakar-Rajpura	980	0.84
12	19	CMf7d1	Bhagol-Sarakar-Rajpura	377	0.32
13	20	CMf7d2	Bhagol-Sarakar-Rajpura	947	0.81
14	21	CMf7d3	Bhagol-Rajpura-Nanowal	315	0.27
15	22	CMf7c1	Rajpura-Bhagol	425	0.36
16	23	CMf7c2	Rajpura-Bhagol	512	0.44
17	24	CMf7c3	Rajpura-Bhagol	50	0.04
18	25	CMf9a1	Bhagol-Sarakar-Rajpura	35	0.03
19	26	CMf9a2	Bhagol-Sarakar-Rajpura	257	0.22
20	27	CMf9a3	Bhagol-Sarakar-Rajpura	1223	1.05
21	29	CMf9d2	Bhagol-Sarakar-Rajpura	829	0.71
22	30	CMf9d3	Bhagol-Sarakar-Rajpura	3208	2.75
23	31	CMf9c1	Rajpura-Bhagol	155	0.13
24	34	CMx3a1	Khera-Tipra	9426	8.07
25	35	CMx3a2	Khera-Tipra	602	0.52

Sl. No.	Mapping Symbol	Mapping Unit	Series Association	Area (ha)	Area (%)
26	36	CMx3a3	Khera-Tipra	96	0.08
27	43	SCf5a1	Pasal-Kathog	24	0.02
28	44	SCf5a2	Pasal-Kathog	140	0.12
29	52	SCf7a1	Kathog-Dusadaka-Chewa	98	0.08
30	53	SCf7a2	Kathog-Dusadaka-Chewa	799	0.68
31	54	SCf7a3	Kathog-Dusadaka-Chewa	203	0.17
32	55	SCf7d1	Chewa-Dusadaka-Kathog	44	0.04
33	56	SCf7d2	Chewa-Dusadaka-Kathog	386	0.33
34	57	SCf7d3	Chewa-Dusadaka-Kathog	189	0.16
35	60	SCf9c3	Chewa-Dusadaka-Kathog	216	0.19
36	61	SCf9a1	Kathog-Chewa-Dusadaka	157	0.13
37	62	SCf9a2	Kathog-Chewa-Dusadaka	1226	1.05
38	65	SCf9d2	Chewa-Dusadaka-Manjoti	474	0.41
39	66	SCf9d3	Chewa-Dusadaka-Manjoti	622	0.53
40	67	SCf9c1	Chewa-Dusadaka-Kathog	14	0.01
41	68	SCf9c2	Chewa-Dusadaka-Kathog	57	0.05
42	69	SDf5c3	Chewa-Dusadaka-Kathog	29	0.02
43	70	SDf5a1	Kasaru-Parnagal	3282	2.81
44	71	SDf5a2	Kasaru-Parnagal	3724	3.19
45	72	SDf5a3	Kasaru-Parnagal	589	0.50
46	73	SDf5d1	Kasaru-Parnagal	156	0.13
47	74	SDf5d2	Kasaru-Parnagal	14	0.01
48	75	SDf5d3	Kasaru-Parnagal	211	0.18
49	76	SDf5c1	Maihre-Mansai-Shore	61	0.05
50	77	SDf5c2	Maihre-Mansai-Shore	89	0.08
51	78	SDf7c3	Maihre-Mansai-Shore	33	0.03
52	79	SDf7a1	Kasaru-Tarwar	3999	3.43
53	80	SDf7a2	Kasaru-Tarwar	9724	8.33
54	81	SDf7a3	Kasaru-Tarwar	1230	1.05
55	82	SDf7d1	Chhadol-Kasaru	445	0.38
56	83	SDf7d2	Chhadol-Kasaru	7581	6.49
57	84	SDf7d3	Chhadol-Kasaru	3662	3.14
58	85	SDf7c1	Maihre-Shore	2834	2.43
59	86	SDf7c2	Maihre-Shore	2541	2.18
60	87	SDf7c3	Maihre-Shore	92	0.08
61	88	SDf9a1	kasaru-Tarwar	391	0.33
62	89	SDf9a2	Kasaru-Tarwar	502	0.43
63	90	SDf9a3	Kasaru-Tarwar	61	0.05
64	91	SDf9d1	Chhadol-Kasaru	2021	1.73
65	92	SDf9d2	Chhadol-Kasaru	916	0.78
66	93	SDf9d3	Chhadol-Kasaru	1051	0.90
67	94	SDf9c1	Maihre-Shore	3768	3.23

Sl. No.	Mapping Symbol	Mapping Unit	Series Association	Area (ha)	Area (%)
68	95	SDf9c2	Maihre-Shore	595	0.51
69	96	SDf9c3	Maihre-Shore	27	0.02
70	97	SLf5a1	Kiar-Bilaspur-Devghara	735	0.63
71	98	SLf5a2	Kiar-Bilaspur-Devghara	351	0.30
72	99	SLf5a3	Kiar-Bilaspur-Devghara	33	0.03
73	101	SLf5d2	Silru-Bakhari-Solan	37	0.03
74	106	SLf7a1	Bilaspur-Kiar-Devghara	572	0.49
75	107	SLf7a2	Bilaspur-Kiar-Devghara	1788	1.53
76	108	SLf7a3	Devghara-Kiar-Bilaspur	1356	1.16
77	109	SLf7d1	Devghara-Gamrola-Jatoli	73	0.06
78	110	SLf7d2	Devghara-Gamrola-Jatoli	1460	1.25
79	111	SLf7d3	Devghara-Gamrola-Jatoli	147	0.13
80	113	SLf7c2	Bakhari-Chambaghat-Gamrola	53	0.05
81	114	SLf7c3	Bakhari-Chambaghat-Gamrola	33	0.03
82	115	SLf9a1	Bilaspur-Kiar-Gamrola	32	0.03
83	116	SLf9a2	Bilaspur-Kiar-Gamrola	213	0.18
84	117	SLf9a3	Bilaspur-Kiar-Gamrola	688	0.59
85	119	SLf9d2	Devghara-Gamrola-Jatoli	1473	1.26
86	120	SLf9d3	Devghara-Gamrola-Jatoli	558	0.48
87	122	SLf9c2	Bakhari-Chambaghat-Gamrola	395	0.34
88	9898	Habitation		1610	1.38
89	9999	Waterbodies		11472	9.83
TOTAL				116733	100.00

6. Spatial Extent of Landscape/Physiography Classes

Landscape	Physiography	Area (ha)	Area (%)
Alluvium (AL)	Stream banks (g)	3764	3.22
Conglomerate (CM)	Piedmont planes (x)	10124	8.67
Conglomerate (CM)	Undifferentiated mountain side slope (f)	25489	21.84
Sandstone (SD)	Undifferentiated mountain side slope (f)	49628	42.51
Schist (SC)	Undifferentiated mountain side slope (f)	4649	3.98
Slate (SL)	Undifferentiated mountain side slope (f)	9997	8.56
Miscellaneous		13082	11.21
TOTAL		1,16,733	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%	13888	11.90
Moderately sloping to strongly sloping (5)	5-15%	17218	14.75
Moderately steep to steep sloping (7)	15-33%	51381	44.02
Very steep to extremely steep (9)	33-50% and above	21164	18.13
Miscellaneous		13082	11.21
TOTAL		1,16,733	100.00

8. Spatial Extent of Major Land Use/ Land Cover

Major Land Use	Area (ha)	Area (%)
Agriculture (a)	63941	54.78
Forest (c)	12055	10.33
Open scrub (d)	27655	23.69
Miscellaneous	13082	11.21
TOTAL	1,16,733	100.00

9. Spatial Extent of Soil Erosion Classes

Erosion	Area (ha)	Area (%)
Slight to moderate erosion (e1-e2)	26192	22.44
Moderate to severe erosion (e2-e3)	53051	45.45
Severe to very severe erosion (e3-e4)	24408	20.91
Miscellaneous	13082	11.21
TOTAL	1,16,733	100.00

10. Spatial Extent of Land Capability Classes

Land Capability Classes (LCC)	Area (ha)	Area (%)
Land Capability Class - II	3743	3.21
Land Capability Class - II-III	10124	8.67
Land Capability Class - III-IV	24618	21.09
Land Capability Class - IV	25456	21.81
Land Capability Class - VI	21	0.02
Land Capability Class - VII	27634	23.67
Forest	12055	10.33
Miscellaneous	13082	11.21
TOTAL	1,16,733	100.00

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; five Great Groups; six Subgroups and fourteen Families.