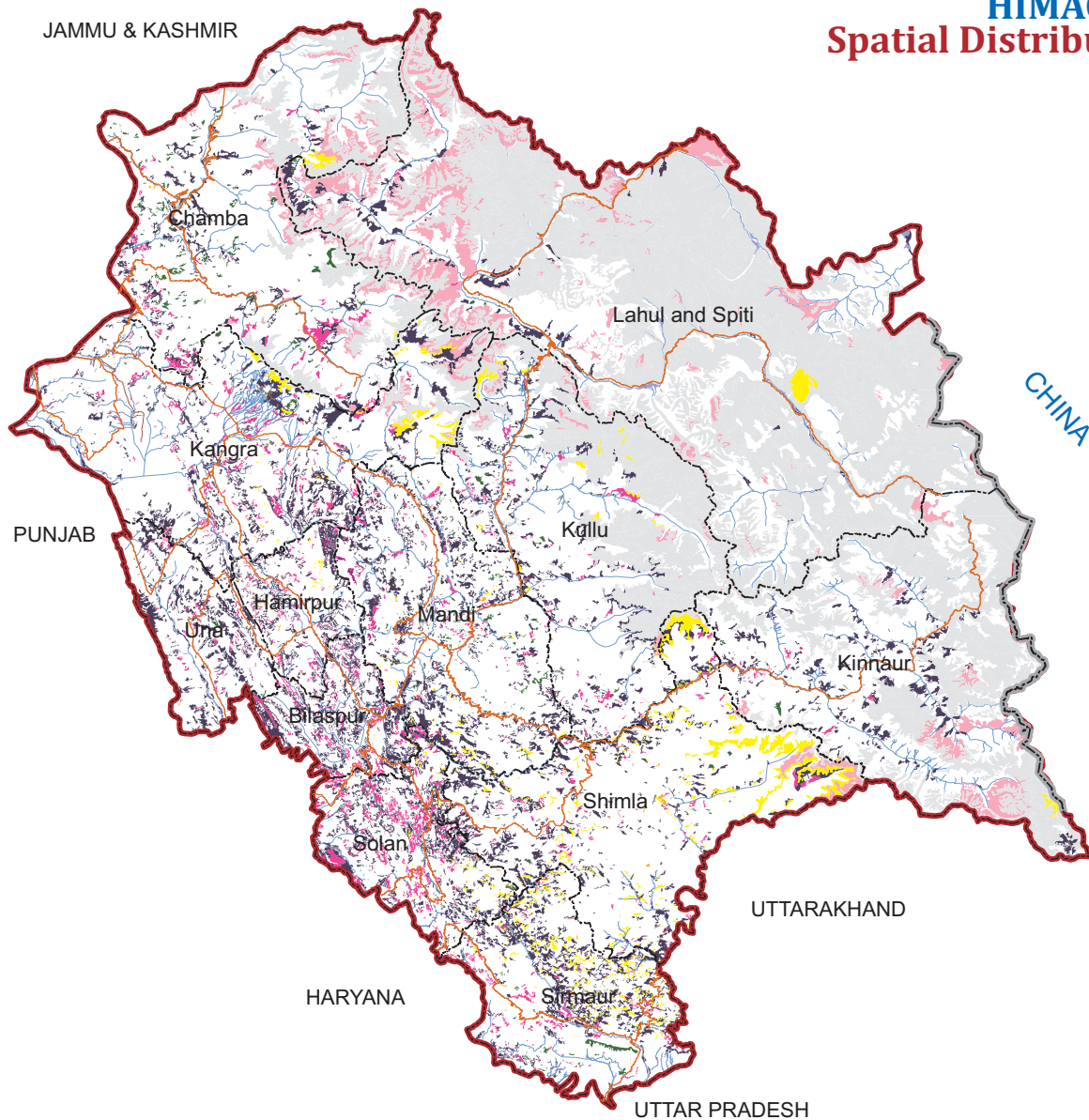


### Salient Features

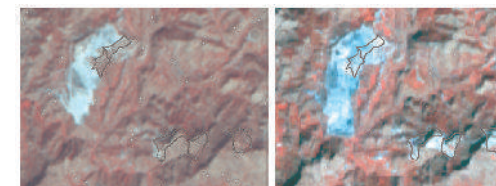
- Decrease in wastelands area by 0.29 sq. km.
- Maximum decrease of wastelands area observed in **land with open scrub** (0.28 sq. km.), followed by barren rocky (0.04 sq. km.).
- Conversion from **open scrub** to industry is also observed in the state.
- Maximum decrease in wastelands area is observed in Solan district.

# HIMACHAL PRADESH Spatial Distribution of Wastelands 2015-16

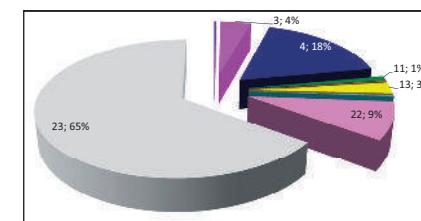


**Legend**

- Gullied and/ or ravinous land (Medium)
- Gullied and/ or ravinous land (Deep)
- Land with Dense Scrub
- Land with Open Scrub
- Waterlogged and Marshy land (Permanent)
- Waterlogged and Marshy land (Seasonal)
- Land Affected by salinity / alkalinity (Moderate)
- Land Affected by salinity / alkalinity (Strong)
- Shifting Cultivation - Current Jhum
- Shifting Cultivation - Abandoned Jhum
- Under-utilised/degraded forest (Scrub domin)
- Under-utilised/degraded forest (Agriculture)
- Degraded pastures/grazing land
- Degraded land under plantation crop
- Sands - Riverine
- Sands - Coastal
- Sands - Desertic
- Sands - Semi Stab:- Stab > 40m
- Sands - Semi Stab:- Stab 15-40m
- Mining Wastelands
- Industrial Wastelands
- Barren Rocky Area
- Snow Covered/ Glacial Area
- Non Wasteland Area
- Water ways
- District Boundary
- Railways
- Major Roads



Lat : 31°14' 30.097"N Long : 76° 58'41.11"E  
District : Solan  
08-09 : Open scrub; 15-16 : Industrial area



**Partner Inst.**  
HP Remote Sensing Centre  
Himachal Pradesh Council of ST&E  
B-34, SDA Complex, Kasumpti  
SHIMLA – 171 009

**Executed By**  
Land Use & Cover Monitoring Divn.  
LRUMG, Remote Sensing Application  
National Remote Sensing Centre  
ISRO, Dept. of Space, GOI  
Balanagar, Hyderabad - 500037

**Sponsored by**  
Dept. of Land Resources  
Min. of Rural Development  
G - Wing, Nirman Bhawan  
GOI, New Delhi - 110 011

Total Geog. Area (TGA): 55673.00 sq. km.  
Total wasteland area : 22831.91 sq. km.  
Wasteland Percentage: 41.01

Source: Wasteland Maps: 2008-09 on 1:50,000 scale,  
Three seasons IRS P6 LISS-III data of Kharif(Oct/Nov-2015),  
Rabi (Jan/Feb-2016) and Zaid (April/May-2016) & Ground truth

## HIMACHAL PRADESH

### Wastelands Area Change Matrix : 2008-09 and 2015-16

Area in sq.km

WL Categories	WL during 2008-09 remaining as WL in 2015-16														WL 2008-09 becoming non WL in 2015-16	2008-09	
	1	2	3	4	6	9	11	12	13	15	20	21	22	23	25	Category Total	Grand Total
1	64.33															64.33	22832.19
2		2.59														2.59	
3			929.53													929.53	
4				4035.82						0.04				0.24	4036.10		
6					0.29										0.29		
9						0.39									0.39		
11							210.09								210.09		
12								18.84							18.84		
13									632.66						632.66		
15										67.69					67.69		
20											11.38				11.38		
21												3.79			3.79		
22													2022.81	0.04	2022.85		
23														14831.65	14831.65		
999																	
Category Total (2015-16)	64.33	2.59	929.53	4035.82	0.29	0.39	210.09	18.84	632.66	67.69	11.42	3.79	2022.81	14831.65			
Grand Total (2015-16)	22831.91																

WL Category	Reduction from 0809 to 1516		Increase from 0809 to 1516	
	Area	No of polygons	Area	No of polygons
1				
2				
3				
4	0.25	5		
6				
9				
11				
12				
13				
15				
20				
21				
22	0.04	1		
23				
Total	0.29	6	0	

Wastelands becoming Non-wastelands (-) 0.29  
 Non-wastelands becoming Wastelands (+) 0  
 NET Change (2015 - 16) - (2008 - 09) (-) 0.29

Green denotes Change from wasteland to non-wasteland  
Red denotes change from non-wasteland to wastelands  
Blue denotes no change in the wasteland category

2008 - 09 Wastelands statistics are revised version.  
 Area under category total is rounded to nearest decimal.

Wasteland Classes	Non-Wasteland Classes
1. Gullied and/ or ravinous land (Medium)	24. Built-up
2. Gullied and/ or ravinous land (Deep)	25. Industrial Area
3. Land with Dense Scrub	26. Cropland
4. Land with Open Scrub	27. Fallow Land
5. Waterlogged and Marshy land (Permanent)	28. Plantation
6. Waterlogged and Marshy land (Seasonal)	29. Forest-Dense/Open
7. Land affected by salinity/alkalinity (Medium)	30. Forest Plantation
8. Land affected by salinity/alkalinity (Strong)	31. Grasslands
9. Shifting Cultivation - Current Jhum	32. Waterbodies
10. Shifting Cultivation - Abandoned Jhum	
11. Under-utilised/degraded forest (Scrub domin)	
12. Under-utilised/degraded forest (Agriculture)	
13. Degraded pastures/ grazing land	
14. Degraded land under plantation crop	
15. Sands-Riverine	
16. Sands-Coastal	
17. Sands-Desertic	
18. Sands-Semi Stab.-Stab>40m	
19. Sands-Semi Stab.-Stab 15-40m	
20. Mining Wastelands	
21. Industrial wastelands	
22. Barren Rocky/Stony waste	
23. Snow covered /Glacial area	
999. Non-Wasteland Area	



## Himachal Pradesh

Wastelands Area Changes – 2008-09 and 2015-16

District	WL_Class	1	2	3	4	5	6	7	8	9	10	11
Bilaspur	2008-09	22.04	--	82.68	260.71	--	--	--	--	0.39	--	2.89
	2015-16	22.04	--	82.68	260.71	--	--	--	--	0.39	--	2.89
	Change	--	--	--	--	--	--	--	--	--	--	--
Chamba	2008-09	--	--	119.76	262.53	--	--	--	--	--	--	87.65
	2015-16	--	--	119.76	262.53	--	--	--	--	--	--	87.65
	Change	--	--	--	--	--	--	--	--	--	--	--
Hamirpur	2008-09	8.54	1.12	38.11	157.18	--	--	--	--	--	--	0.07
	2015-16	8.54	1.12	38.11	157.18	--	--	--	--	--	--	0.07
	Change	--	--	--	--	--	--	--	--	--	--	--
Kangra	2008-09	--	1.47	141.05	547.93	--	0.09	--	--	--	--	13.13
	2015-16	--	1.47	141.05	547.93	--	0.09	--	--	--	--	13.13
	Change	--	--	--	--	--	--	--	--	--	--	--
Kinnaur	2008-09	--	--	18.53	269.73	--	--	--	--	--	--	6.57
	2015-16	--	--	18.53	269.73	--	--	--	--	--	--	6.57
	Change	--	--	--	--	--	--	--	--	--	--	--
Kullu	2008-09	--	--	63.79	327.19	--	--	--	--	--	--	15.60
	2015-16	--	--	63.79	327.19	--	--	--	--	--	--	15.60
	Change	--	--	--	--	--	--	--	--	--	--	--
Lahul and Spiti	2008-09	--	--	5.39	223.30	--	--	--	--	--	--	5.48
	2015-16	--	--	5.39	223.30	--	--	--	--	--	--	5.48
	Change	--	--	--	--	--	--	--	--	--	--	--
Mandi	2008-09	15.94	--	76.84	532.12	--	--	--	--	--	--	36.91
	2015-16	15.94	--	76.84	532.12	--	--	--	--	--	--	36.91
	Change	--	--	--	--	--	--	--	--	--	--	--
Shimla	2008-09	--	--	69.32	457.82	--	--	--	--	--	--	9.55
	2015-16	--	--	69.32	457.82	--	--	--	--	--	--	9.55
	Change	--	--	--	--	--	--	--	--	--	--	--
Sirmaur	2008-09	1.46	--	83.65	407.33	--	--	--	--	--	--	24.45
	2015-16	1.46	--	83.65	407.30	--	--	--	--	--	--	24.45
	Change	--	--	--	-0.04	--	--	--	--	--	--	--
Solan	2008-09	12.23	--	201.23	331.43	--	--	--	--	--	--	3.46
	2015-16	12.23	--	201.23	331.19	--	--	--	--	--	--	3.46
	Change	--	--	--	-0.24	--	--	--	--	--	--	--
Una	2008-09	4.12	--	29.17	258.84	--	0.20	--	--	--	--	4.32
	2015-16	4.12	--	29.17	258.84	--	0.20	--	--	--	--	4.32
	Change	--	--	--	--	--	--	--	--	--	--	--
Grand Total	2008-09	64.33	2.59	929.53	4036.10	--	0.29	--	--	0.39	--	210.09
	2015-16	64.33	2.59	929.53	4035.82	--	0.29	--	--	0.39	--	210.09
	Change	--	--	--	-0.28	--	--	--	--	--	--	--

Note: "--" Denotes this Class is not existing in the District / State

2008-09 Wastelands statistics are revised version.

- |  |  |
|--|--|
| 1. Gullied and/ or ravinous land (Medium)  | 7. Land affected by salinity/alkalinity (Medium) |
| 2. Gullied and/ or ravinous land (Deep)    | 8. Land affected by salinity/alkalinity (Strong) |
| 3. Land with Dense Scrub                   | 9. Shifting Cultivation - Current Jhum           |
| 4. Land with Open Scrub                    | 10. Shifting Cultivation - Abandoned Jhum        |
| 5. Waterlogged and Marshy land (Permanent) | 11. Under-utilised/degraded forest (Scrub domin) |
| 6. Waterlogged and Marshy land (Seasonal)  | 12. Under-utilised/degraded forest (Agriculture) |

Area in sq.km

12	13	14	15	16	17	18	19	20	21	22	23	Total	TGA
0.20	0.75	--	--	--	--	--	--	0.62	0.12	0.03	--	370.43	1167
0.20	0.75	--	--	--	--	--	--	0.62	0.12	0.03	--	370.43	
--	--	--	--	--	--	--	--	--	--	--	--	--	
1.40	23.16	--	--	--	--	--	--	--	--	263.19	1049.16	1806.84	6528
1.40	23.16	--	--	--	--	--	--	--	--	263.19	1049.16	1806.84	
--	--	--	--	--	--	--	--	--	--	--	--	--	
2.24	5.22	--	1.03	--	--	--	--	--	--	--	--	213.51	1118
2.24	5.22	--	1.03	--	--	--	--	--	--	--	--	213.51	
--	--	--	--	--	--	--	--	--	--	--	--	--	
1.25	84.76	--	4.62	--	--	--	--	3.74	--	98.25	263.07	1159.38	5739
1.25	84.76	--	4.62	--	--	--	--	3.74	--	98.25	263.07	1159.38	
--	--	--	--	--	--	--	--	--	--	--	--	--	
--	10.25	--	1.44	--	--	--	--	--	--	291.19	2752.07	3349.78	6401
--	10.25	--	1.44	--	--	--	--	--	--	291.19	2752.07	3349.78	
--	--	--	--	--	--	--	--	--	--	--	--	--	
0.32	42.11	--	--	--	--	--	--	0.07	--	66.31	1918.14	2433.53	5503
0.32	42.11	--	--	--	--	--	--	0.07	--	66.31	1918.14	2433.53	
--	--	--	--	--	--	--	--	--	--	--	--	--	
--	45.17	--	50.64	--	--	--	--	--	--	1202.21	8783.13	10315.32	13835
--	45.17	--	50.64	--	--	--	--	--	--	1202.21	8783.13	10315.32	
--	--	--	--	--	--	--	--	--	--	--	--	--	
2.57	20.77	--	0.08	--	--	--	--	0.50	--	0.63	--	686.36	3950
2.57	20.77	--	0.08	--	--	--	--	0.50	--	0.63	--	686.36	
--	--	--	--	--	--	--	--	--	--	--	--	--	
6.43	294.68	--	--	--	--	--	--	--	--	95.45	66.08	999.33	5131
6.43	294.68	--	--	--	--	--	--	--	--	95.45	66.08	999.32	
--	--	--	--	--	--	--	--	--	--	--	--	--	
1.66	91.24	--	6.84	--	--	--	--	3.08	--	4.82	--	624.54	2825
1.66	91.24	--	6.84	--	--	--	--	3.11	--	4.82	--	624.54	
--	--	--	--	--	--	--	--	0.04	--	--	--	--	
2.74	14.53	--	0.82	--	--	--	--	2.68	1.73	0.77	--	571.62	1936
2.74	14.53	--	0.82	--	--	--	--	2.68	1.73	0.73	--	571.34	
--	--	--	--	--	--	--	--	--	--	-0.04	--	-0.29	
0.03	--	--	2.22	--	--	--	--	0.70	1.94	--	--	301.55	1540
0.03	--	--	2.22	--	--	--	--	0.70	1.94	--	--	301.55	
--	--	--	--	--	--	--	--	--	--	--	--	--	
18.84	632.66	--	67.69	--	--	--	--	11.38	3.79	2022.85	14831.65	22832.19	55673
18.84	632.66	--	67.69	--	--	--	--	11.42	3.79	2022.81	14831.65	22831.91	
--	--	--	--	--	--	--	--	0.04	--	-0.04	--	-0.29	

TGA - Total Geographical Area

13. Degraded pastures/ grazing land	19. Sands-Semi Stab.-Stab 15-40m
14. Degraded land under plantation crop	20. Mining Wastelands
15. Sands-Riverine	21. Industrial wastelands
16. Sands-Coastal	22. Barren Rocky/Stony waste
17. Sands-Desertic	23. Snow covered /Glacial area
18. Sands-Semi Stab.-Stab>40m	

