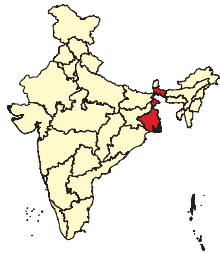


### Salient Features

- Net decrease of wastelands area observed in the state during this period (318.88 sq. km.)
- Maximum decrease was witnessed under **land with dense scrub** (174.39 sq. km.) followed by **Under-utilized/degraded forest (Scrub domin.)** by 152.63 sq. km.
- **Mining wastelands** increased by 17.29 sq. km.
- Puruliya district has a decrease of wastelands area by 130.51 sq. km. followed by Bankura district by 93.50 sq. km.
- An area of 5.13 sq. km. wastelands is increased in South 24 Paraganas district and 2.24 sq. km. in Darjeeling district

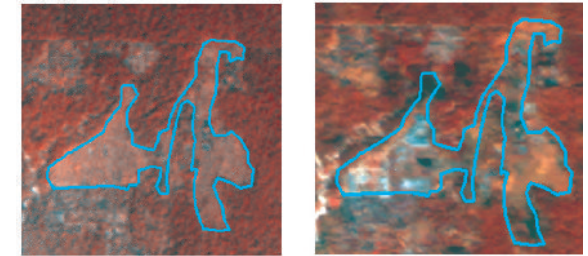
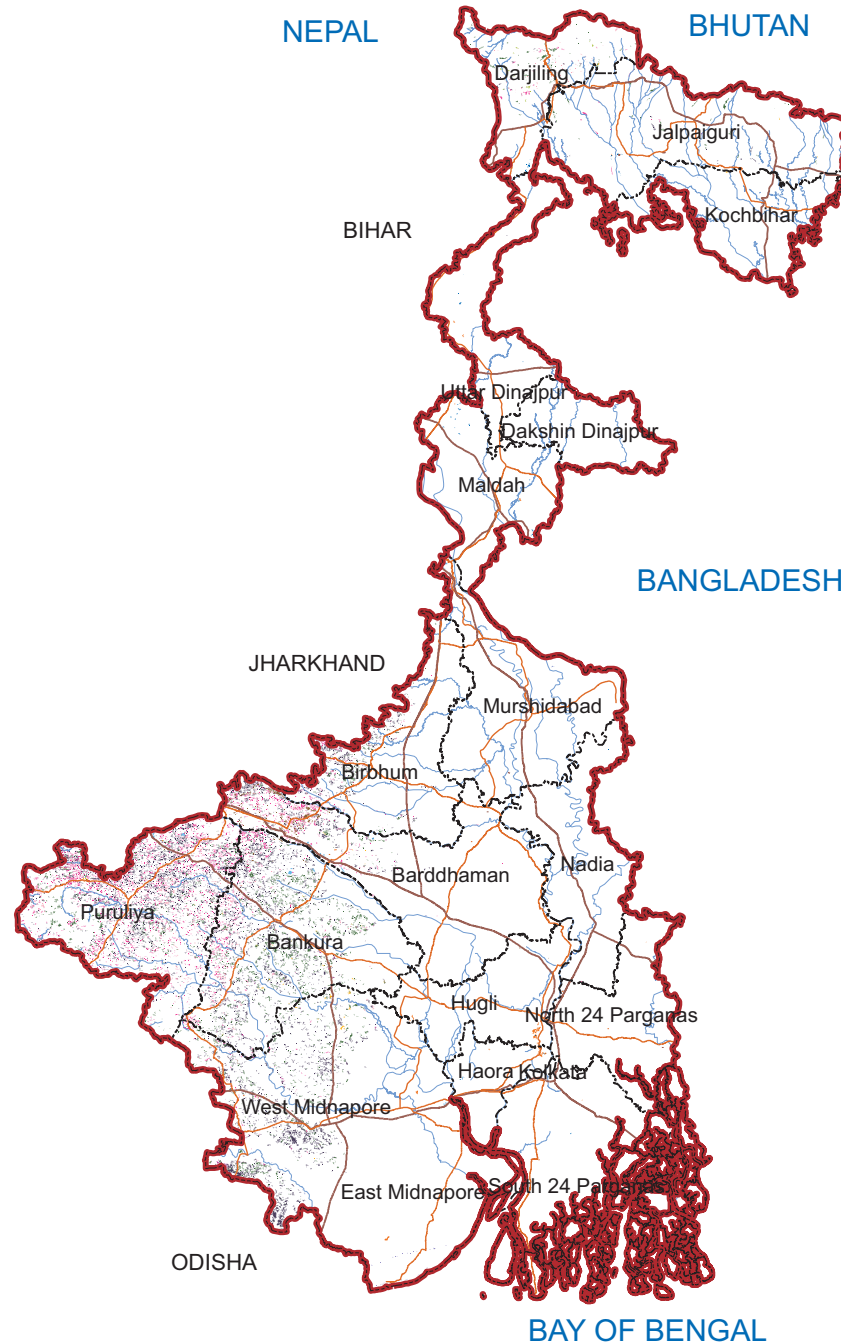


# WEST BENGAL Spatial Distribution of Wastelands 2015-16

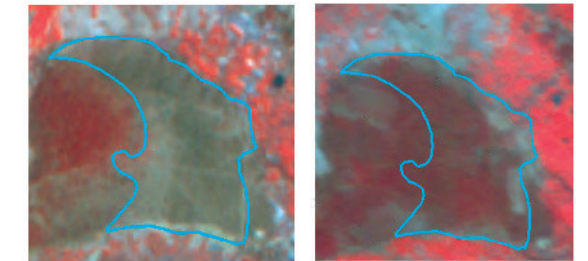


### Legend

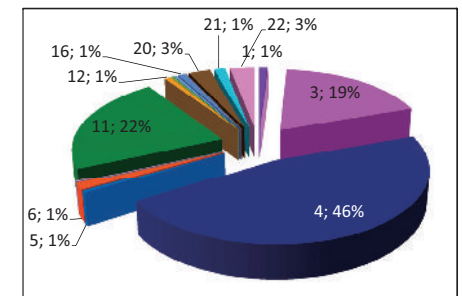
- Gullied and/ or ravine land (Medium)
- Gullied and/ or ravine land (Deep)
- Land with Dense Scrub
- Land with Open Scrub
- Waterlogged and Marshy land (Permanent)
- Waterlogged and Marshy land (Seasonal)
- Land Affected by salinity / alkalinity (Moderate)
- Land Affected by salinity / alkalinity (Strong)
- 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:26°46'16.999"N , Long: 88°28'3.433"E  
District : Jalpaiguri  
08-09 : Under-utilised/degraded forest(scrub domain)  
; 15-16: Built up



Lat : 22°49'17.164"N Long : 87°28'10.031"E,  
District: West Midnapore  
08-09 : Degraded forest (scrub); 15-16 : Forest  
Plantation



**Partner Inst.**  
Geoinformatics & Remote Sensing Cell  
Department of S&T, WB State Council of S&T  
Govt. of West Bengal Bikash Bhavan,  
Bidhannagar, Kolkata - 700 091

**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): 88752.00 sq. km.  
Total wasteland area : 1654.99 sq. km.  
Wasteland Percentage: 1.86

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

## WEST BENGAL

### 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	5	6	8	11	12	14	15	16	20	21	22	24	25	26	27	28	29	30	32	Category Total	Grand Total											
1	16.07		1.05	0.36												0.48	0.03	0.06		2.00		0.02	0.01	20.07	1973.87											
2		0.59																								0.59										
3	0.13		262.24	97.34		0.34							1.71	0.20		6.57	4.85	29.41		78.22	0.08		0.50	481.58												
4	0.58		25.19	630.56									2.01	0.62		16.25	13.62	29.90	0.16	82.07			1.26	802.24												
5					6.66	7.34										0.03	0.37	2.06						16.44												
6					0.51	12.24												0.03						12.78												
7								336.71	8.74							1.64					64.89	106.32	0.62	518.92												
8										3.83										0.10	0.42	0.40		4.75												
11											2.31													2.31												
12			0.01	0.28								5.04					0.07	2.37		0.41			0.16	8.34												
13							0.09						5.40			0.71				3.58			3.65	13.43												
14			0.22	0.65									26.02				0.51			0.04				27.44												
15														14.33										14.33												
20																								50.63												
999	0.30		18.49	40.10	1.48	4.88	2.94	29.58	0.40	1.51	1.70	9.93	14.99	8.69																						
Category Total (2015-16)	17.09	0.59	307.20	769.28	8.66	24.80	3.04	366.28	12.97	3.82	6.73	15.33	44.73	23.85	50.63	30.16	29.24	73.20	0.16	175.14	65.75	106.99	7.09													
Grand Total (2015-16)	1654.99																																			

WL Category	Reduction from 0809 to 1516		Increase from 0809 to 1516	
	Area	No of polygons	Area	No of polygons
1	2.60	51	0.30	7
2				
3	119.62	2069	18.49	304
4	143.27	1859	40.10	670
5	2.45	12	1.48	33
6	0.03	8	4.88	23
8			2.94	4
11	173.47	1511	29.58	240
12	0.93	11	0.40	3
14			1.51	8
15	3.01	49	1.70	20
16	7.94	41	9.93	86
20	0.55	65	14.99	95
21			8.69	28
22				
Total	453.87	5676	135.00	1521

Wastelands becoming Non-wastelands (-) **453.87**  
 Non-wastelands becoming Wastelands (+) **135.00**  
 NET Change (2015 - 16) - (2008 - 09) (-) **318.88**

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

# West Bengal

Wastelands Area Changes – 2008-09 and 2015-16

District	WL_Class	1	2	3	4	5	6	7	8	9	10	11
Bankura	2008-09	3.67	--	90.07	209.99	--	--	--	--	--	--	195.64
	2015-16	3.11	--	54.07	195.60	--	--	--	--	--	--	147.21
	Change	-0.56	--	-36.00	-14.39	--	--	--	--	--	--	-48.43
Bardhaman	2008-09	1.15	--	67.38	65.77	0.42	0.53	--	--	--	--	19.25
	2015-16	1.01	--	54.40	62.99	0.42	1.12	--	--	--	--	8.79
	Change	-0.15	--	-12.97	-2.78	0.00	0.59	--	--	--	--	-10.45
Birbhum	2008-09	0.81	--	25.78	76.09	0.10	--	--	--	--	--	35.21
	2015-16	0.65	--	20.42	63.92	0.10	--	--	--	--	--	17.93
	Change	-0.16	--	-5.36	-12.17	0.00	--	--	--	--	--	-17.28
Dakshin Dinajpur	2008-09	--	--	--	0.14	0.16	--	--	--	--	--	--
	2015-16	--	--	--	0.14	0.16	--	--	--	--	--	--
	Change	--	--	--	0.00	0.00	--	--	--	--	--	--
Darjiling	2008-09	--	--	5.67	3.16	0.64	--	--	--	--	--	17.83
	2015-16	--	--	5.83	3.38	0.64	0.09	--	--	--	--	17.44
	Change	--	--	0.16	0.22	0.00	0.09	--	--	--	--	-0.38
East Midnapore	2008-09	--	--	--	--	--	2.41	--	--	--	--	--
	2015-16	--	--	--	--	--	3.80	--	--	--	--	--
	Change	--	--	--	--	--	1.39	--	--	--	--	--
Haora	2008-09	--	--	--	--	0.26	5.52	--	--	--	--	--
	2015-16	--	--	--	--	0.94	5.92	--	--	--	--	--
	Change	--	--	--	--	0.68	0.40	--	--	--	--	--
Hugli	2008-09	--	--	--	--	9.89	1.56	--	--	--	--	--
	2015-16	--	--	--	--	0.46	10.84	--	--	--	--	--
	Change	--	--	--	--	-9.43	9.28	--	--	--	--	--
Jalpaiguri	2008-09	--	--	10.44	5.86	0.88	0.30	--	--	--	--	19.06
	2015-16	--	--	7.31	4.27	0.82	0.27	--	--	--	--	19.10
	Change	--	--	-3.13	-1.59	-0.06	-0.03	--	--	--	--	0.04
Kochbihar	2008-09	--	--	0.07	0.50	--	--	--	--	--	--	0.36
	2015-16	--	--	0.07	0.23	--	--	--	--	--	--	--
	Change	--	--	0.00	-0.28	--	--	--	--	--	--	-0.36
Kolkata	2008-09	--	--	--	--	--	--	--	--	--	--	--
	2015-16	--	--	--	--	--	--	--	--	--	--	--
	Change	--	--	--	--	--	--	--	--	--	--	--
Maldah	2008-09	--	--	0.01	1.76	2.99	0.88	--	--	--	--	--
	2015-16	--	--	0.59	0.04	3.82	1.01	--	--	--	--	--
	Change	--	--	0.58	-1.72	0.83	0.14	--	--	--	--	--
Murshidabad	2008-09	--	--	0.43	0.39	--	--	--	--	--	--	1.12
	2015-16	--	--	0.66	0.33	--	--	--	--	--	--	--
	Change	--	--	0.23	-0.06	--	--	--	--	--	--	-1.12
Nadia	2008-09	--	--	2.20	0.43	--	--	--	--	--	--	0.24
	2015-16	--	--	2.20	0.43	0.04	--	--	--	--	--	0.22
	Change	--	--	0.00	0.00	0.04	--	--	--	--	--	-0.01

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
1.50	--	--	1.63	--	--	--	--	0.24	2.69	11.43	--	516.87	6882
3.51	--	--	1.09	--	--	--	--	3.44	3.91	11.43	--	423.37	
2.00	--	--	-0.54	--	--	--	--	3.20	1.22	0.00	--	-93.50	
0.44	--	--	1.11	--	--	--	--	24.46	5.73	0.25	--	186.49	7024
0.50	--	--	1.16	--	--	--	--	37.71	6.43	0.25	--	174.80	
0.06	--	--	0.05	--	--	--	--	13.25	0.70	0.00	--	-11.70	
0.04	--	--	2.28	--	--	--	--	0.86	0.91	0.61	--	142.70	4545
0.04	--	--	1.80	--	--	--	--	1.47	1.79	0.61	--	108.73	
0.00	--	--	-0.49	--	--	--	--	0.61	0.88	0.00	--	-33.97	
--	--	--	--	--	--	--	--	--	--	--	--	0.29	2192
--	--	--	--	--	--	--	--	--	--	--	--	0.29	
--	--	--	--	--	--	--	--	--	--	--	--	0.00	
0.20	--	2.31	--	--	--	--	--	--	--	3.91	--	33.71	3149
0.83	--	3.82	--	--	--	--	--	--	--	3.91	--	35.95	
0.64	--	1.51	--	--	--	--	--	--	--	0.00	--	2.24	
--	--	--	--	2.61	--	--	--	--	0.99	--	--	6.01	4480
--	--	--	--	1.75	--	--	--	--	0.99	--	--	6.54	
--	--	--	--	-0.86	--	--	--	--	0.00	--	--	0.53	
--	--	--	--	--	--	--	--	--	--	--	--	5.78	1467
--	--	--	--	--	--	--	--	--	--	--	--	6.86	
--	--	--	--	--	--	--	--	--	--	--	--	1.09	
--	--	--	--	--	--	--	--	1.38	--	--	--	12.82	3149
--	--	--	--	--	--	--	--	1.38	--	--	--	12.67	
--	--	--	--	--	--	--	--	0.00	--	--	--	-0.15	
0.28	--	--	0.77	--	--	--	--	--	--	--	--	37.60	6227
0.69	--	--	0.20	--	--	--	--	--	--	--	--	32.67	
0.42	--	--	-0.57	--	--	--	--	--	--	--	--	-4.93	
0.46	--	--	0.07	--	--	--	--	--	--	--	--	1.47	3387
0.46	--	--	0.07	--	--	--	--	--	--	--	--	0.83	
0.00	--	--	0.00	--	--	--	--	--	--	--	--	-0.64	
--	--	--	--	--	--	--	--	--	--	--	--	--	104
--	--	--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	--	--	
--	--	--	0.19	--	--	--	--	--	--	--	--	5.84	3733
--	--	--	0.10	--	--	--	--	--	--	--	--	5.57	
--	--	--	-0.09	--	--	--	--	--	--	--	--	-0.27	
--	--	--	0.39	--	--	--	--	--	4.01	--	--	6.34	5324
--	--	--	0.31	--	--	--	--	--	6.99	--	--	8.29	
--	--	--	-0.08	--	--	--	--	--	2.98	--	--	1.95	
--	--	--	--	--	--	--	--	--	--	--	--	2.87	3927
--	--	--	--	--	--	--	--	--	--	--	--	2.90	
--	--	--	--	--	--	--	--	--	--	--	--	0.03	

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	



# West Bengal

Wastelands Area Changes – 2008-09 and 2015-16

District	WL_Class	1	2	3	4	5	6	7	8	9	10	11
North 24 Parganas	2008-09	--	--	--	--	--	0.01	--	--	--	--	0.08
	2015-16	--	--	--	--	--	0.09	--	--	--	--	0.08
	Change	--	--	--	--	--	0.08	--	--	--	--	0.00
Puruliya	2008-09	7.21	--	269.89	176.71	--	--	--	--	--	--	113.69
	2015-16	5.20	--	149.45	208.22	--	--	--	--	--	--	70.44
	Change	-2.01	--	-120.44	31.52	--	--	--	--	--	--	-43.25
South 24 Parganas	2008-09	--	--	--	--	0.53	--	--	--	--	--	1.80
	2015-16	--	--	--	--	0.53	0.11	--	3.04	--	--	1.80
	Change	--	--	--	--	0.00	0.11	--	3.04	--	--	0.00
Uttar Dinajpur	2008-09	--	--	0.10	0.13	0.57	1.59	--	--	--	--	--
	2015-16	--	--	0.04	0.12	0.71	1.54	--	--	--	--	--
	Change	--	--	-0.06	-0.01	0.15	-0.05	--	--	--	--	--
West Midnapore	2008-09	7.22	0.59	9.54	261.30	--	--	--	--	--	--	114.65
	2015-16	7.11	0.59	12.15	229.60	--	--	--	--	--	--	83.27
	Change	-0.11	0.00	2.61	-31.70	--	--	--	--	--	--	-31.37
Grand Total	2008-09	20.07	0.59	481.58	802.24	16.44	12.78	--	--	--	--	518.92
	2015-16	17.09	0.59	307.20	769.28	8.66	24.80	--	3.04	--	--	366.28
	Change	-2.99	0.00	-174.39	-32.96	-7.79	12.02	--	3.04	--	--	-152.63

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
--	--	--	--	0.65	--	--	--	--	--	--	--	0.73	3978
--	--	--	--	1.43	--	--	--	--	--	--	--	1.60	
--	--	--	--	0.78	--	--	--	--	--	--	--	0.86	
1.10	--	--	--	--	--	--	--	0.10	--	32.00	--	600.69	6259
0.58	--	--	0.31	--	--	--	--	0.32	3.67	32.00	--	470.19	
-0.52	--	--	0.31	--	--	--	--	0.23	3.67	0.00	--	-130.51	
--	--	--	--	10.17	--	--	--	--	--	--	--	12.51	10158
--	--	--	--	12.15	--	--	--	--	--	--	--	17.64	
--	--	--	--	1.98	--	--	--	--	--	--	--	5.13	
--	--	--	--	--	--	--	--	--	--	--	--	2.39	3166
--	--	--	--	--	--	--	--	--	--	--	--	2.41	
--	--	--	--	--	--	--	--	--	--	--	--	0.02	
0.73	--	--	1.89	--	--	--	--	0.40	--	2.43	--	398.77	9601
6.35	--	--	1.70	--	--	--	--	0.40	0.06	2.43	--	343.68	
5.62	--	--	-0.19	--	--	--	--	0.00	0.06	0.00	--	-55.09	
4.75	--	2.31	8.34	13.43	--	--	--	27.44	14.33	50.63	--	1973.87	88752
12.97	--	3.82	6.73	15.33	--	--	--	44.73	23.85	50.63	--	1654.99	
8.21	--	1.51	-1.60	1.90	--	--	--	17.29	9.52	0.00	--	-318.88	

**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	