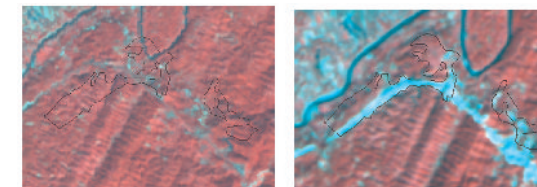
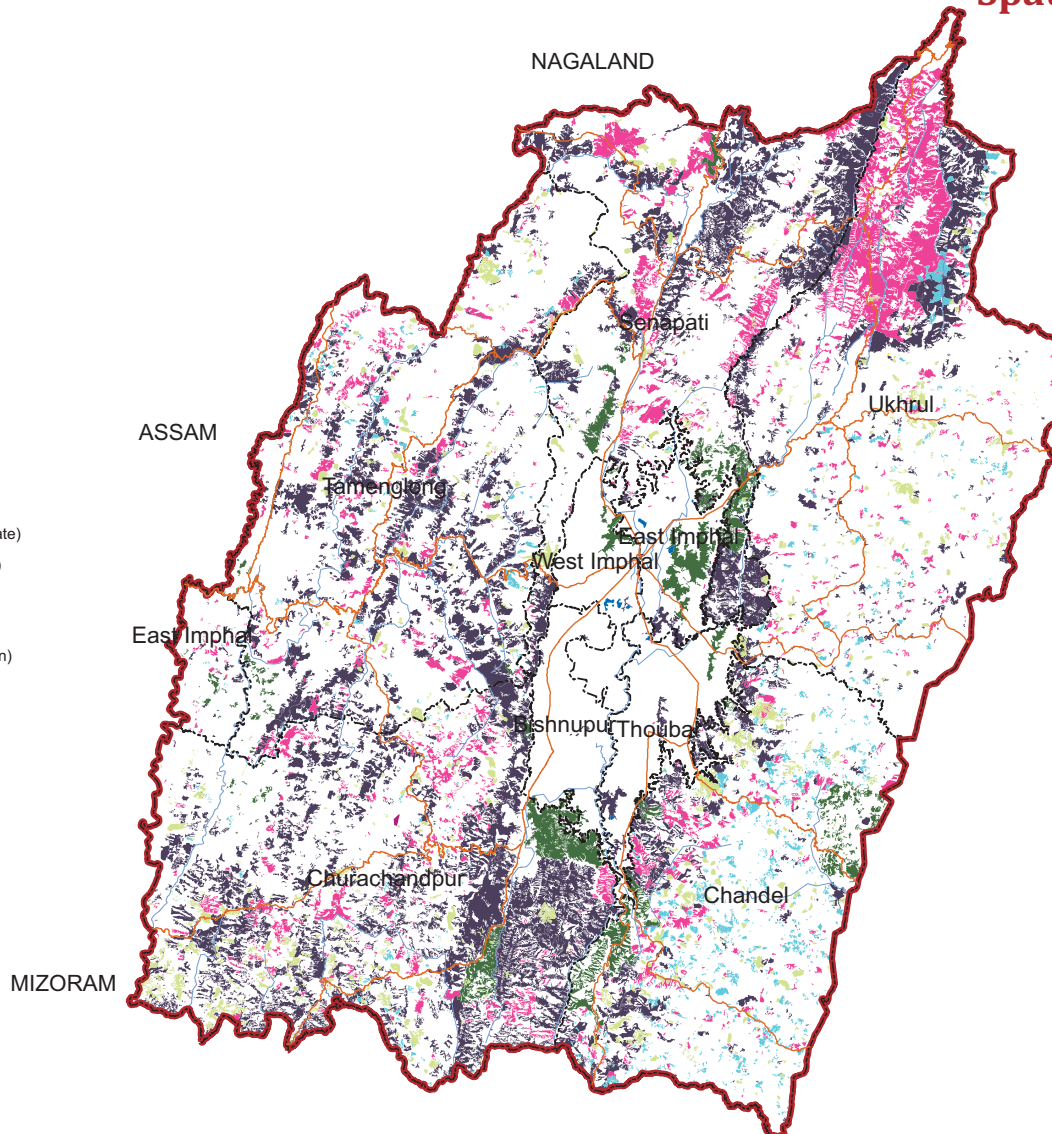


Salient Features

- Increase of wastelands area by 86.96 sq. km. is observed in the state.
- **land with dense scrub** is decreased by 1024.95 sq. km.; followed by **Under utilized/degraded forest (Scrub domin.)** by 13.83sq. km.;
- An area of 53.75sq. km. of wasteland has been converted to crop area during this period, out of this 36.08sq. km. is contributed by **land with open scrub**.
- Senapati district witnessed maximum decrease by 36 sq. km. Maximum contribution is from **land with dense scrub** from 172.99 sq. km.
- Decrease in net wastelands area in East Imphal is 5.96 sq. km. mainly contributed by **land with dense scrub** (4.30 sq. km.) and **Under-utilized/degraded forest (Scrub domin.)** by 4.04 sq. km.
- Chandel district witnessed maximum net increase in wastelands area by 47.75 sq. km. and maximum increase in **Land with open scrub** by 130.18 sq. km.

MANIPUR Spatial Distribution of Wastelands 2015-16

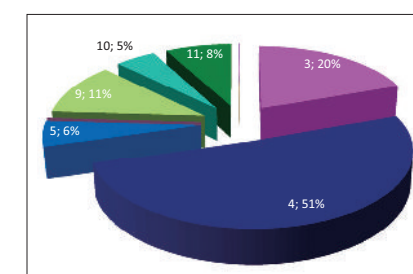


Lat : 24°52'0.905"N Long : 93°48'16.882"E ,
District: East Imphal
08-09 : Under-utilised/degraded forest(Scrub domain.) ;
15-16 : Built-up

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

MYANMAR



Partner Inst.
Manipur Remote Sensing Centre
Room No. 101, New Secretariat, West Block
IMPHAL – 795 001
Manipur

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): 22327.00 sq. km.
Total wasteland area : 5651.89 sq. km.
Wasteland Percentage: 25.31

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

MANIPUR
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	3	4	5	9	10	11	12	13	22	24	26	28	29	30	Category Total	Grand Total	
3		1124.66	1024.04		23.68	0.17				1.39	5.56	7.72	2.06	46.77		2236.07	5564.90	
4		78.03	2049.31		94.98	2.24				0.07	6.98	36.08	0.15	17.01	0.04	2284.89		
5				1.57												1.57		
9		0.32	5.01		197.34	92.25					1.07	0.35		0.33		296.68		
10		4.82	27.28		0.21	203.03					1.83			6.36		243.53		
11					0.42		486.00				3.68	7.46		1.59	0.69	499.83		
12								0.21				2.13				2.34		
999	1.29	3.28	39.47	5.96	183.33	0.96			0.37	0.17								
Category Total (2015-16)	1.29	1211.12	3145.10	7.53	499.96	298.65	486.00	0.21	0.37	1.63	19.12	53.75	2.22	72.06	0.73			
Grand Total (2015-16)	5651.89																	

WL Category	Reduction from 0809 to 1516		Increase from 0809 to 1516	
	Area	No of polygons	Area	No of polygons
1			1.29	1
3	62.12	212	3.28	4
4	60.27	149	39.47	161
5			5.96	2
9	1.75	19	183.33	297
10	8.19	33	0.96	5
11	13.42	44		
12	2.13	2		
13			0.37	6
22			0.17	4
Total	147.87	459	234.84	480

Wastelands becoming Non-wastelands (-) **147.87**
 Non-wastelands becoming Wastelands (+) **234.84**
 NET Change (2015 - 16) - (2008 - 09) (+) **86.96**

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

Manipur

Wastelands Area Changes – 2008-09 and 2015-16

District	WL_Class	1	2	3	4	5	6	7	8	9	10	11
Bishnupur	2008-09	--	--	1.30	6.36	--	--	--	--	0.03		5.48
	2015-16	--	--	0.17	4.76	--	--	--	--	0.02	0.03	5.22
	Change	--	--	-1.14	-1.60	--	--	--	--	-0.01	0.03	-0.27
Chandel	2008-09	--	--	254.51	110.08	--	--	--	--	73.33	178.60	122.63
	2015-16	--	--	130.29	240.26	--	--	--	--	125.62	169.14	121.60
	Change	--	--	-124.22	130.18	--	--	--	--	52.29	-9.46	-1.04
Churachandpur	2008-09	--	--	591.23	716.31	--	--	--	--	67.23	0.53	130.64
	2015-16	1.29	--	189.47	1057.43	--	--	--	--	143.78	15.32	129.00
	Change	1.29	--	-401.76	341.12	--	--	--	--	76.55	14.79	-1.64
East Imphal	2008-09	--	--	7.81	18.14	1.57	--	--	--	0.46		94.32
	2015-16	--	--	3.52	18.95	3.14	--	--	--	0.40	0.06	90.28
	Change	--	--	-4.30	0.81	1.57	--	--	--	-0.06	0.06	-4.04
Senapati	2008-09	--	--	371.66	617.55	--	--	--	--	19.96	9.58	103.46
	2015-16	--	--	198.66	716.42	--	--	--	--	62.85	12.70	97.61
	Change	--	--	-172.99	98.87	--	--	--	--	42.89	3.12	-5.85
Tamenglong	2008-09	--	--	315.28	586.05	--	--	--	--	41.22	8.50	12.66
	2015-16	--	--	161.99	702.91	--	--	--	--	80.87	27.86	12.04
	Change	--	--	-153.29	116.85	--	--	--	--	39.65	19.36	-0.62
Thoubal	2008-09	--	--	15.69	52.65	--	--	--	--	1.87	1.01	14.26
	2015-16	--	--	9.45	57.42	0.91	--	--	--	1.69	1.34	14.06
	Change	--	--	-6.24	4.78	0.91	--	--	--	-0.18	0.33	-0.19
Ukhrul	2008-09	--	--	668.15	173.53	--	--	--	--	92.57	45.30	0.13
	2015-16	--	--	510.62	340.41	--	--	--	--	84.07	72.20	0.13
	Change	--	--	-157.52	166.88	--	--	--	--	-8.50	26.90	0.00
West Imphal	2008-09	--	--	10.43	4.22	--	--	--	--		--	16.25
	2015-16	--	--	6.94	6.55	3.49	--	--	--	0.66	--	16.06
	Change	--	--	-3.49	2.33	3.49	--	--	--	0.66	--	-0.19
Grand Total	2008-09	--	--	2236.07	2284.89	1.57	--	--	--	296.68	243.53	499.83
	2015-16	1.29	--	1211.12	3145.10	7.53	--	--	--	499.96	298.65	486.00
	Change	1.29	--	-1024.95	860.22	5.96	--	--	--	203.28	55.12	-13.84

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
--	--	--	--	--	--	--	--	--	--	--	--	13.18	496
--	--	--	--	--	--	--	--	--	--	--	--	10.19	
--	--	--	--	--	--	--	--	--	--	--	--	-2.98	
--	--	--	--	--	--	--	--	--	--	--	--	739.16	3313
--	--	--	--	--	--	--	--	--	--	--	--	786.91	
--	--	--	--	--	--	--	--	--	--	--	--	47.75	
--	--	--	--	--	--	--	--	--	--	--	--	1505.94	4570
--	--	--	--	--	--	--	--	--	--	0.09	--	1536.37	
--	--	--	--	--	--	--	--	--	--	0.09	--	30.43	
0.02	--	--	--	--	--	--	--	--	--	--	--	122.31	709
0.02	--	--	--	--	--	--	--	--	--	--	--	116.36	
0.00	--	--	--	--	--	--	--	--	--	--	--	-5.96	
2.18	--	--	--	--	--	--	--	--	--	--	--	1124.38	3271
0.05	0.07	--	--	--	--	--	--	--	--	0.02	--	1088.37	
-2.13	0.07	--	--	--	--	--	--	--	--	0.02	--	-36.00	
0.14	--	--	--	--	--	--	--	--	--	--	--	963.87	4391
0.14	--	--	--	--	--	--	--	--	--	1.38	--	987.19	
0.00	--	--	--	--	--	--	--	--	--	1.38	--	23.32	
--	--	--	--	--	--	--	--	--	--	--	--	85.48	514
--	--	--	--	--	--	--	--	--	--	--	--	84.88	
--	--	--	--	--	--	--	--	--	--	--	--	-0.60	
--	--	--	--	--	--	--	--	--	--	--	--	979.68	4544
--	0.15	--	--	--	--	--	--	--	--	0.15	--	1007.74	
--	0.15	--	--	--	--	--	--	--	--	0.15	--	28.06	
--	--	--	--	--	--	--	--	--	--	--	--	30.91	519
--	0.15	--	--	--	--	--	--	--	--	--	--	33.85	
--	0.15	--	--	--	--	--	--	--	--	--	--	2.95	
2.34	--	--	--	--	--	--	--	--	--	--	--	5564.91	22327
0.21	0.37	--	--	--	--	--	--	--	--	1.63	--	5651.89	
-2.13	0.37	--	--	--	--	--	--	--	--	1.63	--	86.98	

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	

