

CHAPTER - IV

4.0 LAND USE PATTERN

The land use data of Madhya Pradesh is given in **Table – 14**. Based on this data, following trends are emerging regarding change in land use :-

1. Madhya Pradesh is very rich in terms of forest wealth, when compared to its neighbors, and is ranked fourth in the country. The national forest area is 25%, whereas Madhya Pradesh has forest area of 28%. The analysis of land use data of last 15 years shows that forest area in the state is increasing, which is due to reforms at local level such as empowerment of JFM committees.
2. The percentage of land put to non agriculture use to the geographical area is 6.33%. There is gradual increase observed in the land put to non agriculture use indicating environmental degradation and change in the land use pattern.
3. The trend line shows increase in the area of barren and unculturable land. This kind of land constitutes 4.69% of the geographical area.
4. Permanent pasture and grazing land have been decreasing continuously and constitutes 4.35% of geographical area.
5. The land under miscellaneous tree crops and grooves is almost static with slight variation.
6. Culturable wasteland constitutes 3.78% of geographical area and its trend line shows a decrease, which indicates the utilisation of such land for agriculture or other productive purpose. The higher area of culturable wasteland from the year 2000-2003 is probably due to droughts in this period.
7. The percentage of fallow land is 3.85% of geographical area. There is gradual decrease in the area of fallow land towards the year 2005-06.
8. The gross cropped area is 64.09% of the total geographical area. The net shown area has a decreasing trend from the year 2000 to 2003, however after the year 2003 it is increasing. Gross cropped area is also having variable trend as shown in **Table - 14**.

Table – 14 : Table - Land Use of Madhya Pradesh

(Area in 000 hectare)

Particular	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	% to Geographical area
Geographical area	307.35	307.33	307.34	307.50	307.50	307.49	307.49	307.45	307.45	307.50	307.55	307.55	307.56	307.56	307.55	307.56	100.00
Forests	81.71	81.78	82.17	84.64	84.86	84.79	85.05	84.95	84.92	86.13	85.52	85.81	85.78	85.80	85.85	85.89	27.93
Not available for cultivable																	
A. Land put to non-agricultural uses	17.41	17.47	17.63	17.69	17.40	18.10	18.13	18.40	18.45	18.35	18.896	18.60	18.90	19.25	19.24	19.47	6.33
B. Barren and unculturable land	16.74	16.56	16.25	14.30	14.55	14.01	13.84	13.66	13.47	13.65	13.49	13.95	14.17	14.25	14.40	14.42	4.69
Total	34.15	34.03	33.88	31.99	31.95	32.11	31.97	32.06	31.92	32.00	32.38	32.55	33.07	33.50	33.64	33.89	11.02
Other Uncultivated land excluding fallow land																	
A. Permanent pasture & other grazing lands	18.69	18.53	18.31	17.86	17.78	17.87	17.61	17.55	16.99	16.58	15.85	14.81	13.95	13.60	13.41	13.39	4.35
B. Land under tree crops & grooves	0.23	0.23	0.18	0.29	0.24	0.22	0.20	0.19	0.17	0.15	0.20	0.18	0.19	0.19	0.20	0.19	0.06
Total	18.92	18.76	18.49	18.15	18.02	18.09	17.81	17.74	17.16	16.73	16.05	14.99	14.14	13.79	13.61	13.58	4.36
Fallow land																	
A. current fallows	5.26	7.21	5.69	4.99	5.97	5.16	4.95	4.91	4.99	4.86	8.18	6.04	9.96	6.21	5.96	5.90	1.92
B. Old fallow	5.97	6.19	6.22	5.81	5.68	5.74	4.51	5.45	5.41	5.38	5.75	6.36	6.26	5.99	5.96	5.95	1.39
Total	11.23	13.40	11.91	10.80	11.65	10.90	9.46	10.36	10.40	10.24	13.93	12.40	16.22	12.20	11.92	11.85	3.85
Cropped Area																	
A. Net area sown	148.65	146.72	148.71	150.19	149.37	150.22	150.68	151.03	151.30	150.70	147.66	149.62	146.21	150.48	150.78	150.74	49.01
B. Area sown more than once	33.54	28.20	33.97	40.73	39.37	42.51	46.71	51.63	53.52	53.49	32.07	41.85	35.60	48.43	52.28	46.37	15.08
C. Gross Cropped Area	182.19	174.92	182.68	190.92	188.74	192.73	197.39	202.66	204.82	204.19	179.73	191.47	181.81	198.91	203.06	197.11	64.09
Cropping intensity in %	123	119	123	127	126	128	131	134	135	135	122	128	124	132	135	131	

Table : SPSP – 8 : District-wise Land Use Status

District-wise Land use Pattern														(Area In Hectares)			
S.No	Name of Districts	Geographical Area	Forests	Not Available For Cultivation			Other Uncultivated Land Excluding Fallow Land			Fallow Land			Net Area Sown	Total Cropped Area	Area Sown More than Once	Net irrigated Area	
				Area Under Non Agricultural Uses	Barren and Unculturable Land	Total	Permanent Pastures and Other Grazing Lands	Land Under Misc Tree Crops and Groves not Included in Net Area	Culturable Waste Land	Total	Fallow Lands Other than Current Fallows	Current Fallow					Total
1	Anuppur	391465	76448	34560	21481	56041	3139	200	26792	30131	25198	25228	50426	261625	269511	31899	19300
2	Ashok Nagar	519843	52701	27531	36241	63772	12366	-	25652	38018	4142	4138	8280	304623	352701	58078	110000
3	Badwani	700714	353789	22470	72479	94949	4366	517	9534	14417	3286	2295	5581	231978	267570	35592	122800
4	Balaghat	924500	504819	46468	9623	56091	32177	668	28080	60925	15344	11860	27204	275461	348922	73461	63600
5	Betul	1007800	396280	46798	25939	72737	27641	4	42325	69970	35998	31684	67682	401131	529293	128162	107200
6	Bhind	445204	8905	36127	21827	57954	16567	493	11290	28350	7146	14847	21993	328002	355531	27529	108700
7	Bhopal	277880	44106	31097	3947	35044	33051	27	4949	38027	3546	4711	8257	152446	214718	62272	85600
8	Burhanpur	342741	202368	15557	6419	21976	10303	-	650	10953	1890	1709	3599	103845	116770	12925	34400
9	Chhatarpur	863036	214215	35798	1609	37407	70513	301	74394	145208	42058	36505	78563	397643	485018	97375	226600
10	Chindwara	1184923	479504	52810	27193	80003	51794	31	18651	70476	32467	38672	71139	483801	541969	108168	110900
11	Damoh	728583	266995	32113	59238	91351	33549	54	14180	47783	7332	6189	13521	308933	388650	79717	111600
12	Datia	295874	24798	21607	14564	36171	4472	2814	13537	20823	7483	7267	14750	199332	237243	37911	133500
13	Dewas	701307	206037	34523	10846	45369	60850	24	2415	63289	1424	773	2197	384415	575273	190858	1500
14	Dhar	819541	120755	47401	75653	123054	46881	33	16274	63188	3583	2559	6142	506402	696563	190161	138300
15	Dindori	358935	25311	26979	11219	38198	12255	60	13493	25808	31833	32440	64273	205345	271815	66470	166000
16	Guna	630766	100911	34246	61529	95775	29378	19	65251	94648	9022	7719	16741	322691	410881	88190	139500
17	Gwalior	456449	110640	33149	50937	84086	14280	75	22906	37261	8682	9542	18224	206238	256501	50263	113900
18	Harda	330579	104597	16402	6921	23323	18328	495	7777	26600	3471	1379	4850	171209	298600	127391	139500
19	Hoshangabad	668689	255675	19474	25792	45266	26580	557	28382	55519	10072	6535	16607	295622	492871	197249	261000
20	Indore	383097	52208	24033	6857	30890	21526	75	14705	36306	2973	2109	5082	258611	425814	167203	93700
21	Jabalpur	519757	77639	31985	36828	68813	40120	53	24155	64328	16984	17517	34501	274476	374533	100057	108500
22	Jhabua	675716	131748	56739	83411	140150	8680	4	25976	34660	5026	4927	9953	359205	415299	56094	57600
23	Katani	493092	100028	31398	37192	68590	39621	129	37669	77419	25767	23264	49031	198024	263555	65531	59000
24	Khandwa	775616	309300	67855	8595	76450	54424	40	187	54651	11961	5988	17949	317266	393711	76445	113900
25	Khargone	647789	75442	36178	31408	67586	58524	13	25788	84325	8792	2305	11097	409339	475786	66447	146000
26	Mandla	965559	592951	42766	10631	53397	19603	66	19642	39311	32656	28914	61570	218330	281048	62718	19900
27	Mandsaur	551790	36585	74494	48183	122677	13184	46	19611	32841	1307	3184	4491	355196	459313	104117	103300
28	Morena	501686	50669	39767	89510	129277	18746	-	23342	42088	6925	8812	15737	263915	326446	62531	168000
29	Narsinghpur	513651	136207	24099	1028	25127	23934	164	16675	40773	5772	4036	9808	301736	400600	98864	174300
30	Nimach	393553	94487	42656	39058	81714	7706	3	19962	27671	971	1584	2555	188126	259009	71883	84100

S.No	Name of Districts	Geographical Area	Forests	Not Available For Cultivation		Other Uncultivated Land Excluding Fallow Land					Fallow Land			Net Area Sown	Total Cropped Area	Area Sown More than Once	Net Irrigated Area
				Area Under Non Agricultural Uses	Barren and Unculturable Land	Total	Permanent Pastures and Other Grazing Lands	Land Under Misc Tree Crops and Groves not Included in Net Area	Cultural Waste Land	Total	Fallow Lands Other than Current Fallows	Current Fallow	Total				
31	Panna	702924	299533	40598	22839	63437	20302	-	41814	62116	15783	15309	31092	246746	282114	35368	84400
32	Raisen	848746	333672	39479	3617	43096	24336	107	12744	37187	3085	1202	4287	430504	500037	69533	194700
33	Rajgarh	616300	17636	40692	30173	70865	68586	50	31435	100071	5415	2417	7832	419896	584650	164754	118900
34	Ratlam	486007	34299	29857	42434	72291	28895	62	18113	47070	1471	1317	2788	329559	461003	131444	92300
35	Rewa	628745	85289	59931	34499	94430	27197	1596	5181	33974	23341	20089	43430	371622	503781	132159	88600
36	Sagar	1022759	296919	54099	18605	72704	76947	1575	15731	94253	14412	10570	24982	543901	709695	175794	236600
37	Satna	742432	203659	61823	14882	76705	19817	3634	46383	69834	16586	15963	32549	359685	475908	116223	136800
38	Sehore	656368	172597	38752	8342	47094	37944	13	11245	49202	4511	957	5468	382007	586902	204895	203600
39	Seoni	875401	328081	48015	11835	59850	19829	31	38403	58263	31324	30123	61447	367760	471005	103245	110500
40	Shahdol	561006	227886	42270	9244	51514	6537	639	38762	45938	27847	35351	63198	172470	201871	29401	21000
41	Shajapur	618539	5980	52725	41696	94421	49206	71	14780	64057	2377	871	3248	450833	662214	211381	147400
42	Sheopur	666650	291187	31440	97164	128604	34457	-	42563	77020	8206	6183	14389	156450	194319	38869	115100
43	Shivpur1	995392	330111	60496	37966	98462	25887	3886	81309	111082	28093	26912	55005	400732	523352	122620	193100
44	Sidhi	1039194	433441	81755	16538	98293	15985	8	64419	80412	27844	38920	66764	360284	492351	132067	62000
45	Tikamgarh	504002	68369	32289	74623	106912	14158	30	18782	32970	16173	21406	37579	268172	350969	135952	163000
46	Ujjain	609874	3149	57616	5981	63597	40823	138	10656	51617	1991	1248	3239	488272	762481	274209	143900
47	Umariya	450329	236714	29764	8663	38427	16312	172	15439	31923	16565	18166	34731	108534	140479	31945	4200
48	Vidisha	730197	108500	36796	9677	46473	18522	114	15490	34126	3250	2805	6055	535607	622355	137312	243100
Total		30825000	8683140	1925477	1424936	3350413	1360298	19091	1177493	2556882	621385	598501	1219886	15078000	19711000	4842732	5681400

4.3 Irrigated Areas

In Madhya Pradesh wells and tubewells are the major source of irrigation covering almost 66% of net irrigated area. Canals constitute 18% and tanks constitutes 2% share of irrigated area. The percentage of irrigated area to the net irrigated area from other sources is 14%. In Madhya Pradesh, Rivers are mostly seasonal and rainfed, receiving maximum water flow during the monsoon season. The non-monsoon flow in some perennial rivers is mainly due to flow from groundwater. The availability of water in the rivers is not uniform spatially or temporally. In Madhya Pradesh there are 3,960 (2001-02) major, medium and minor dams/reservoirs have been constructed on almost all the major rivers. The status of irrigation potential created (2001-02) through various irrigation projects taken up on rivers is given below in **Table - 15** :-

Table – 15 : Irrigation potential through irrigation projects

Number of projects	Irrigation potential created (in ha.)	Total irrigated area (in ha.)
3960	2036934	940222

Table : SPSP -9 : Irrigation Status

S.No.	District	Net Area Sown	Gross Sown Area	Net Irrigated Area	Gross Irrigated Area	(Area in Hectare)	
						% of Gross Irrigated Area to Gross Sown Area	Rainfed Area
1	Anuppur	109700	138900	19300	19300	13.89	119600
2	Ashoknagar	307500	372300	110000	110000	29.55	262300
3	Balaghat	273900	344000	122800	141600	41.16	202400
4	Barwani	228900	254400	63600	142600	56.05	111800
5	Betui	403500	554800	107200	107200	19.32	447600
6	Bhind	329900	359000	108700	112900	31.45	246100
7	Bhopal	153900	227000	85600	85600	37.71	141400
8	Burhanpur	104500	117900	34400	41300	35.03	76600
9	Chhatarpur	403800	511300	226600	226600	44.32	284700
10	Chhindwara	477200	593000	110900	133700	22.55	459300
11	Damoh	311100	398700	111600	114100	28.62	284600
12	Datia	197200	278400	133500	136300	48.96	142100

S.No.	District	Net Area Sown	Gross Sown Area	Net Irrigated Area	Gross Irrigated Area	% of Gross Irrigated Area to Gross Sown Area	Rainfed Area
13	Dendori	204900	273700	1500	154500	56.45	119200
14	Dewas	386100	560600	138300	217200	38.74	343400
15	Dhar	504500	638800	166000	166000	25.99	472800
16	Guna	328600	427900	139500	139800	32.67	288100
17	Gwalior	208800	264000	113900	147000	55.68	117000
18	Harda	179800	316300	139500	139500	44.10	176800
19	Hoshangabad	399100	510000	261000	261000	51.18	249000
20	Indore	258200	370300	93700	145100	39.18	225200
21	Jabalpur	272700	364600	108500	123600	33.90	241000
22	Jhabua	358900	414200	57600	58200	14.05	356000
23	Katni	198300	259600	59000	71900	27.70	187700
24	Khandwa	304400	381700	113900	113900	29.84	267800
25	Khargone	405400	453300	146000	146000	32.21	307300
26	Mandla	219000	280200	19900	19900	7.10	260300
27	Mandsaur	360700	477900	103300	104800	21.93	373100
28	Morena	262600	332200	168000	169200	50.93	163000
29	Narsinghpur	303500	390700	174300	175500	44.92	215200
30	Neemuch	186700	292900	84100	84200	28.75	208700
31	Panna	251500	297600	84400	84400	28.36	213200
32	Raisen	431000	507400	194700	194700	38.37	312700
33	Rajgarh	424500	548400	118900	158400	28.88	390000
34	Ratlam	331900	445900	92300	93300	20.92	352600
35	Rewa	369400	502200	88600	97900	19.49	404300
36	Sagar	539000	710700	236600	236700	33.31	474000
37	Satana	357000	481400	136800	138400	28.75	343000
38	Sehore	383500	579500	203600	203600	35.13	375900
39	Seoni	368000	482700	110500	110500	22.89	372200
40	Shahdol	179700	206800	21000	21000	10.15	185800
41	Shajapur	452400	621800	147400	184200	29.62	437600
42	Sheopurkala	159900	199000	115100	120200	60.40	78800
43	Shivpuri	405900	545000	193100	199100	36.53	345900

S.No.	District	Net Area Sown	Gross Sown Area	Net Irrigated Area	Gross Irrigated Area	% of Gross Irrigated Area to Gross Sown Area	Rainfed Area
44	Sidhi	353800	480300	62000	66800	13.91	413500
45	Tikamgarh	240900	410600	163000	206800	50.37	203800
46	Ujjain	489400	674500	143900	205200	30.42	469300
47	Umaria	161800	195700	4200	18900	9.66	176800
48	Vidisha	531100	662900	243100	222200	33.52	440700
	Madhya Pradesh	15074000	19711000	5681400	6370800		13340200

The source-wise irrigated area in the state is given in following Table – SPSP – 10.

Table : SPSP -10 : Source wise Irrigation Status

(Area in 00 hectare)

District	Canals	Tanks	Tube Wells	Wells	Other Sources	Gross Irrigated Area
Anuppur	7	1	15	2	168	193
Ashok Nagar	98	16	129	282	575	1100
Badwani	44	0	322	159	891	1416
Balaghat	852	299	209	2	64	1426
Betul	117	1	661	95	198	1072
Bhind	256	2	676	184	11	1129
Bhopal	76	5	229	305	241	856
Burhanpur	4	0	263	109	37	413
Chhatarpur	297	50	1468	21	430	2266
Chhindwara	105	24	818	198	192	1337
Damoh	121	4	232	249	535	1141
Datia	306	11	767	43	236	1363
Dewas	44	4	566	813	118	1545
Dhar	86	77	540	1073	396	2172
Dindori	11	32	1	1613	3	1660
Guna	130	39	361	423	445	1398

District	Canals	Tanks	Tube Wells	Wells	Other Sources	Gross Irrigated Area
Gwalior	607	3	324	430	106	1470
Harda	723	2	315	100	255	1395
Hoshangabad	1423	9	472	445	261	2610
Indore	31	42	81	1151	146	1451
Jabalpur	83	1	229	654	269	1236
Jhabua	103	69	208	30	172	582
Katani	156	17	291	25	230	719
Khandwa	45	13	749	112	220	1139
Khargone	159	4	916	187	194	1460
Mandla	127	0	26	0	46	199
Mandsaur	5	1	584	45	413	1048
Morena	360	3	1115	163	51	1692
Narsinghpur	11	0	911	723	110	1755
Nimach	15	0	297	140	390	842
Panna	126	88	212	46	372	844
Raisen	565	7	254	686	435	1947
Rajgarh	51	49	1021	291	172	1584
Ratlam	16	35	340	476	66	933
Rewa	148	20	289	271	251	979
Sagar	79	28	803	463	994	2367
Satna	72	16	370	632	294	1384
Sehore	392	49	851	525	219	2036
Seoni	492	68	298	15	232	1105
Shahdol	40	9	26	16	119	210
Shajapur	76	57	959	541	209	1842
Sheopur	458	10	64	440	230	1202
Shivpuri	317	49	917	431	277	1991
Sidhi	128	4	265	110	161	668
Tikamgarh	162	73	1682	47	104	2068
Ujjain	3	47	459	1289	254	2052
Umaria	28	8	44	29	80	189
Vidisha	353	38	318	874	639	2222
Madhya Pradesh	9905	1352	22945	15348	8251	63708

