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VIDARBHA: PATTERN CHANGE OF LAND UTILIZATION

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Abstract
Vidarbha is the eastern region of Maharashtra state. It comprises Buldhana, Akola, Amravati, Yavatmal districts with black cotton soil. Nagpur, Bhandara, Wardha, Chandrapur and Gadchiroli districts. Change in Landuse pattern over fifteen years has studied in this attempt. The emphasis is given from rural landuse point of view in Vidarbha. Forest area has decreased where as fallow land has increased during investigation period. Rather Net sown area has increased. It seems that Vidarbha region needs increase in forest area and some measures in dry land farming should be taken to decrease fallow land.

Key Words: Land Use, Rural Land Use, Geographical Area.

Introduction

Landuse is the surface utilization of all developed and vacant land on a specific point, at a given time and space. It is the change with time and space. Land is the basic resource of human society. Its utilization shows a reciprocal relation between the prevailing ecological conditions of a particular region and man. For human existence, within certain biotic, ecological and economic condition the utilization of land is of prime importance. It involves a relationship that exists between the society on the one hand cultural advancement and cultural advancement, resource planning and carrying capacity of land on the other land. The intensive use of land depends upon population concentration, economic prosperity, through better agricultural production, human establishment, industrial location, communication and transport lines, while extensive use of the land is isolated to sparse population dispersed settlement, the absence of communication lines and the crude forms of transport. In rural areas, the major types of landuse are as 1)agricultural land, a)non-agricultural land, b)irrigated lands c)dry farming areas d) grazing areas, 2) Forest land a) forest covered, b) forest reclaimed land, c) cultural land.

Study Region

Vidarbha region has taken as study region. It is eastern region of Maharashtra State.

Objectives

The Prime objectives of study is to study temporal change in rural land use over a period of twenty years from 1990 to 2011.

Data Source & Methodology

Secondary Data of land use of Vidarbha was collected form District Statistical abstract. Change over period was computed on present basis. Analysis is done on computed percentage.

Discussion

Classification of Land

In the light of physical-socio-economic environments, man determines the uses of land. These are taken into consideration while classifying the land under different categories and sub-categories. The Census of India has classified the land into nine different categories, as forest, barren, cultivable waste, cultivable area etc. But for the present study they have grouped into five land use categories viz. i) Forest, ii) Area not available for cultivation, iii) Other cultivated excluding follow land, iv) Fallow land, v) Net sown area, because areas under other categories are insignificant. Out of these categories the first and the second comprise the total non-agricultural land, third is the potential agricultural land & fourth and fifth constitute the agricultural land. Table No. 1 reveals the trends of these categories on Vidarbha.

District wise Land use in Vidarbha

Due to the location and physical setting the land use pattern of the region under study differs from the district wise land use pattern. The existing pattern of land use as shown in Table No. 1 appears to have been resulted from a process of land exploitation within compose and modified by the expansion of irrigation and the growth of population. There is a difference in the total geographical area of the region due to changes in the administrative boundaries after the formation of new districts. There are eleven districts in Vidarbha region. New districts like Washim and Gondia are not considered for the study due to non-availability of time series data.

Table No. 1 gives us idea about the general land use pattern in Vidarbha region. With this generalized picture of general land use pattern of the region, a detailed analysis of the same is given below.

District wise Distribution of land use pattern in Vidarbha

Area in 00' hectors (Table No.1)

Districts	Years	Area Under Forest	Area not available for cultivation	Other Cultivate (excluding Follow) land	Fallow land	Net Sown Area	Total Geographical Area
Buldhana	1990-91	1168(12.08)	712 (7.36)	604(6.25)	335(3.46)	6852(70.85)	9671(100)
	1995-96	1145(11.83)	729(7.54)	525(5.43)	341(3.53)	6931(71.67)	9671(100)
	2000-01	1145(11.83)	728(7.53)	526(5.43)	365(3.77)	6907(71.42)	9671(100)
	2010-11	883(9.13)	999(10.33)	665(6.88)	449(4.64)	6675(69.02)	9671(100)
Akola	1990-91	706(6.68)	737(6.98)	727(6.88)	326(3.09)	8064(76.36)	10560(100)
	1995-96	649(6.15)	766(7.25)	562(5.32)	376(3.56)	8207(77.72)	10560(100)
	2000-01	649(6.15)	771(7.30)	526(5.43)	365(3.77)	6907(71.42)	10560(100)
	2010-11	649(6.15)	797(7.55)	570(5.44)	414(4.0)	8130(76.90)	10560(100)
Amravati	1990-91	3288(26.91)	604(4.94)	843(6.900	274(2.24)	7208(58.99)	12217(100)
	1995-96	3099(25.36)	622(5.09)	696(5.70)	275(2.25)	7525(61.59)	12217(100)
	2000-01	3101(25.38)	624(5.11)	695(5.69)	279(2.28)	7518(61.54)	12217(100)
	2010-11	3098(25.36)	641(5.25)	492(4.03)	467(3.82)	7519(61.55)	12217(100)
Yavatmal	1990-91	2654(19.63)	815(6.03)	988(7.31)	565(4.18)	8497(62.85)	13519(100)
	1995-96	2563(18.81)	91(6.75)	975(7.21)	587(4.34)	8502(62,89)	13519(100)
	2000-01	2542(18.80)	930(6.88)	974(7.20)	584(4.32)	8489(62.79)	13519(100)
	2010-11	2429(17.97)	1041(7.70)	968(7.16)	605(4.480	8376(62.70)	13519(100)
Wardha	1990-01	699(11.11)	500(7.95)	639(10.16)	594(9.440	3857(61.32)	6289(100)
	1995-96	624(9.9)	541(8.60)	623(9.9)	830(8.41)	3671(58.37)	6289(100)
	2000-01	621(.87)	539(8.57)	625(9.94)	858(13.64)	3646(57.98)	6289(100)
	2010-11	624(9.9)	533(8.48)	621(9.87)	846913.45)	3645(57.96)	6289(100)
Nagpur	1990-91	1945(19.72)	825(8.36)	1235(12.52)	371(3.76)	5488(55.63)	9864(100)
	1995-96	1843(18.68)	913(9.26)	1179(11.95)	452(4.58)	5477(55.52)	9864(100)
	2000-01	1842(18.67)	913(9.25)	1177(11.93)	450(4.56)	5482(55.58)	9864(100)
	2010-11	1642(16.65)	1064(10.76)	1235(12.52)	450(4.56)	5473(55.48)	9864(100)
Bhandara	1990-91	2648(28.54)	1125(12.12)	1739(18.34)	169(1.82)	3598(38.78)	9279(100)
	1995-96	2667(28.74)	1050(11.32)	1704(18.36)	322(3.47)	3536(38.11)	9279(100)
	2000-01	2679(28.87)	1056(11.38)	1677(18.07)	249(2.68)	3618(38.99)	9279(100)
	2010-11	2695(26.78)	1802(11.77)	1650(17.31)	240(2.68)	3612(41.68)	9279(100)
Chandrapur	1990-01	3811(34.91)	1084(9.93)	989(9.06)	219(2.0)	4745(43.46)	10916(100)
	1995-96	3934(36.03)	1076(9.89)	947(8.67)	318(2.91)	4643(42.53)	10916(100)
	2000-01	3934(36.03)	1073(9.83)	970(8.88)	352(3.22)	4584(41.99)	10916(100)
	2010-11	3882(35.55)	1179(10.88)	840(7.69)	502(4.60)	4515(41.35)	10916(100)
Gadchiroli	1990-91	11093(74.37)	629(4.22)	1097(7.35)	293(1.43)	1804(12.09)	14916(100)
	1995-96	11062(74.16)	661(4.43)	990(6.64)	398(2.67)	1805(12.10)	14916(100)
	2000-01	11050(74.08)	657(4.40)	995(6.67)	486(3.26)	1733(11.62)	14916(100)
	2010-11	10992(73.69)	848(5.75)	782(5.24)	572(3.83)	1712(11.48)	14916(100)

Vidarbha	1990-91	28012(28.81)	6018(6.19)	8861(9.11)	3146(3.23)	50113(51.54)	97233(100)
	1995-96	27566(28.35)	7270(7.48)	8210(8.43)	3899(4.0)	50297(51.73)	97233(100)
	2000-01	27563(28.35)	7291(7.50)	8203(8.44)	4026(4.14)	50150(51.58)	97233(100)
	2010-11	26894(27.66)	8194(8.430	7823(8.05)	4545(4.67)	49757(51.17)	97233(100)

Source: District statistical abstract 1991 to 2006 *Note: Figures in the brackets indicate percentage*

Changing land Use pattern in Vidarbha

Figures in %(Table No. 2)

Districts	Years	Area Under Forest	Area not available for cultivation	Other Cultivate (excluding Follow) land	Fallow land	Net Sown Area	Total Geographical Area
Buldhana	1990-91 to 1995-96	-0.25	0.18	-0.82	0.07	0.82	0
	1995-06 to 2000-01	0	-0.01	0	0.24	-0.25	0
	2000-01 to 2010-11	-2.7	2.8	1.45	0.87	-2.4	0
Akola	1990-91 to 1995-06	-0.53	0.27	-1.56	0.47	1.36	0
	1995-96 to 2000-01	0	0.05	0.11	0.21	-6.3	0
	2000-01 to 2010-11	0.02	0.25	0.01	0.23	5.48	0
Amravati	1990-91 to 1995-96	-1.55	0.15	-1.2	0.01	2.6	0
	1995-95 to 2000-01	0.02	0.02	-0.01	0.03	-0.05	0
	2000-01 to 2010-11	-0.02	0.14	-1.66	1.54	0.01	0
Yavatmal	1990-91 to 1995-96	-0.82	0.72	-0.10	0.16	0.04	0
	1995-95 to 2000-01	-0.01	0.13	-0.01	-0.02	-0.1	0
	2000-01 to 2010-11	-0.83	0.82	-0.04	0.16	-0.09	0
Wardha	1990-91 to 1995-96	-1.21	0.65	-0.26	-0.03	-2.95	0
	1995-95 to 2000-01	-0.03	-0.03	0.04	5.23	-0.39	0
	2000-01 to 2010-11	0.05	-0.09	-0.07	-0.19	-0.02	0
Nagpur	1990-91 to 1995-96	-1.04	0.9	-0.57	0.82	-0.11	0
	1995-95 to 2000-01	-0.01	-0.01	-0.02	-0.02	0.06	0
	2000-01 to 2010-11	-2.02	1.54	0.59	0	-0.01	0
Bhandara	1990-91 to 1995-96	0.02	-0.8	0.02	1.65	-0.67	0
	1995-95 to 2000-01	0.13	0.06	-0.29	-0.79	0.88	0

	2000-01 to 2010-11	-2.09	0.39	-0.76	-0.2	2.69	0
Chandrapur	1990-91 to 1995-96	1.12	-0.07	-0.39	0.91	-0.93	0
	1995-95 to 2000-01	0	-0.03	0.21	0.31	-0.54	0
	2000-01 to 2010-11	-0.48	0.97	-1.19	1.38	-0.64	0
Gadchiroli	1990-91 to 1995-96	-0.21	0.21	-0.71	1.24	0.01	0
	1995-95 to 2000-01	-0.08	-0.03	0.03	0.59	-0.48	0
	2000-01 to 2010-11	-0.39	1.35	-1.43	0.57	-0.14	0
Vidarbha	1990-91 to 1995-96	-0.46	1.29	-0.68	0.77	0.19	0
	1995-95 to 2000-01	0	0.02	0.01	0.14	-0.15	0
	2000-01 to 2010-11	-0.69	0.93	-0.39	0.53	-0.41	0

Source: Compiled by Researcher

A) Area under Forest

Area under Forest was 2801200 hectors in 1990-91 and it is decreased 2756600 hectors in 1995-96. It means that 0.46% negative change in Forest area was recorded during investigation, whereas area under Forest was 2756300 hectors in 2000-01 and it is decreased 2689400 hectors in 2010-11. It means that 0.69% negative change in Forest area was recorded during investigation period. Table 1 & 2 indicates that out of the total geographical area below 15% area was found under Forest in Akola, Wardha and Buldhana districts whereas 15% to 30% area was recorded under Forest in Yavatmal, Nagpur, Amravati & Buldhana districts. Above 30% geographical area was observed under Forest in Chandrapur (35.55% to 36.03%) and Gadchiroli (73.69% to 74.37%) districts during 1990-91 to 2005-06. Chandrapur and Gadchiroli districts covers more area under Forest hence, the economic condition of the people is not strong. These districts have also favorable climatic condition for Forest. Besides, rugged topography prevents expansion of cultivation.

B) Area not available for cultivation

Out of the total geographical area about 601800 hectors land was under this categories and it was increased up to 72700 hectors. It means that 1.29% positive change in Area not available for cultivation during 1990-91 to 1995-96, whereas during 1995-96 to 2010-11. Out of the total geographical area increased 0.93%, out of the total geographical area below 6% area was found under Area not available for cultivation in Amravati & Gadchiroli districts, whereas 6% to 12% area was observed under this category in Wardha, Chandrapur, Nagpur, Yavatmal and Akola districts during investigation period. Above 12% geographical area was found under this group in Bhandara during 1990-91. The proportion of area not available for cultivation varies from district to district in the study region.

C) Other uncultivable land (Excluding follow land)

Other uncultivable land decreased from 0.68% to 0.39% in the entire study region during investigation period. Out of the total geographical area below 8% geographical area was found under this group in Buldhana, Akola, Amravati, Yavatmal and Gadchiroli districts, whereas 8% to 16% area was found in Chandrapur, Wardha and Nagpur districts during 1990-91 to 2005-05. Above 16% area was found under this category in Bhandara district (17.31% to 18.36%) during the same year.

D) Fallow land

Fallow land increased from 0.77% to 0.53% in the entire study region during investigation period. Out of the total geographical area below 3% was under fallow land in Amravati, Bhandara, Chandrapur & Gadchiroli districts, whereas 3% to 6% area was under fallow land in Buldhana, Akola, Yavatmal and Nagpur districts during 1990-91 to 2005-06. Above 6% area was under fallow land in Wardha (8.41% to 13.45%) districts during investigation period.

E) Net Sown area

During 1990-91 to 1995-96, Net sown area was increased 0.19%, while during 1995-96 to 2010-11, Net sown area decreased from 0.15% to 0.41%. Out of the total geographical area below 45% geographical area was found under this category in Gadchiroli, Bahandara & Chandrapur districts whereas 45% to 55% Net sown area was recorded in Nagpur during investigation period, about 55% to 65% Net sown area was found under in Amravati, Yavatmal and Wardha districts. While above 65% Net sown area was recorded in Buldhana and Akola districts in the same year.

Conclusion

Out of the total geographical area below 15%, area was found under forest in Akola, Wardha and Buldhana districts, whereas 15% to 30% area was recorded under Forest in Yavatmal, Nagpur, Amravati and Bhandara districts and above 30% geographical area was observed under forest in Chandrapur (35.55% & 36.03%), & Gadchiroli (73.69 to 74.37%), districts during investigation period. Chandrapur and Gadchiroli districts more area under forest hence, the economic condition of the people is not strong. These districts have also favorable climatic condition for forests. Besides, rugged topography presents expansion of cultivation.

The proportion of the area not available for cultivation varies from district to district. Out of the total geographical area 6% to 12% area was found under area not available for cultivation in Wardha, Chandrapur, Nagpur, Yavatmal and Akola districts during investigation period.

Fallow land increased from 0.77% to 0.53% in the entire region during investigation period. Negative change was recorded in Yavatmal, Wardha, Nagpur and Bhandara districts. This change occurred in fallow land because some follow land was transferred to cultivated area during the period of investigation.

During 1990-91 to 1995-96, Net sown area was increased 0.19%, while 2000-01 to 2010-11, net sown area decreased from 0.15% to 0.41%, due to changing pattern of land use.

There is very little scope for agricultural activities in Gadchiroli and Chandrapur districts due to vast forest area, economic condition of the people of these two districts is very poor. Some people are busy in collecting medicinal plants, roots, and herbs.

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