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**Changing Nature of Land Use in The Towns
of Gadchiroli District (M.S)**

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Abstract :-

Gadchiroli district has complex diversity. It is situated in the central part of the India, and extreme eastern part of Maharashtra state. spreading on 14412 sq. kilometre. There are only two towns in the entire district. District has maximum forest land cover area, hilly and highly drainage network area. It has specialities like tribal dominance, backward, Naxal affected, industry less and "rich land of poor people" in the state. In this paper an attempt has been made to highlight changing land use pattern of the two town i.e, Gadchiroli and Wadsa for the year 1991, 2001 and 2011. Changing population size of the towns affecting the total geographical area pattern. The dynamics of the land use and land cover change due to many anthropogenic activities. Land use reflects a complex correlation between Environmental and Cultural factors. Changing land use pattern is the temporal impact of the changing needs of the human being in the urban centre.

Keywords:- Town, Land use pattern, Population size, Anthropogenic activity, Push-Pull factors.

Introduction:

Urban centres are the creations of accessible Geo-physical environment and increasing population. Variety of land use and nature is depend upon the need of time and space. Urban population engaged in multiple work and the total geographical area divides into various sectors of economy like primary, secondary and territory activity. Youth urban centre require land for built up, open space, transportation, industrial and commercial purpose etc, due to pull push factors. Hence land use transformation took place. Land use is the surface utilization of the developed of vacant land on a specific point at given time and space. Land use change is one of the most important fields of human induced environmental transformation, with an extensive history dating back to antiquity (Wolman and Fournier; 1987). Land use changes especially in developing countries, has involved a decrease in the area of rural land use and an increase in the area of urban land use through urbanization. Urban centres growth reflects in horizontal and vertical development. Such type of development change the land use pattern of town. An important development in the town (urban settlement) during the past several decades has been the rapid expansion of population into the unincorporated area surrounding the town. There are conflicting demands between agriculture and non - agriculture uses. In this way land use changes taken place from one sector to another, this is the geographical phenomena the prospect and future of towns. Changing land uses are the indicators of urban development. Land use analysis is an important aspect of geographical studies, which provide proper guidelines for the planning and development of towns. Therefore the study of land use and its changes has been carried out by various groups at different level.

Study area :-

The present study is related to the Gadchiroli and Wadsa (Desaiganj) towns of the Gadchiroli district (M.S). Both towns are situated on the left bank of Vainganga river. Gadchiroli town is

district head quarter and Wadsa is Tehsil HQ in it. Gadchiroli town extends from 20° 10' 11" to 20° 12' 31" North Latitude and from 79° 57' 32" to 80° 01' 57" East Longitude its function as a administrative. Wadsa town lies between 20° 35' 29" to 20° 38' 05" North Latitude and 79° 56' 26" to 80° 00' 10" East Longitude, its function as a commercial town, connected with the road and railway. Which covers area of about 2888.74 square hectors (G) and 2636.80 square hectors (W) according to 2011 census.

Objectives:-

- 1) To study the decadal proportional area of land use categories (1991, 2001 , & 2011)
- 2) To analyse the land use change.
- 3) To find out stage of town and land use patterns in respect of TGA.

Data base and methodology:-

The study based on secondary data taken from revenue record, land record office, Town level data of Gadchiroli and Wadsa collected from Gadchiroli, Wisapur, Ramp ur, Tukum, Lanzeda, Sonapur and Wadsa, Nainpur, Wirshi tukum talathi office record during the period year of 1991, 2001 and 2011, an attempt has been made tabulation and interpretation of data with the help of simple pie diagram method.

Table -1
Area under different land use categories of Gadchiroli Town (area in Hectors)

Sr.n o	Land Utilization	1991		2001		2011	
		Area	area %	Area	area %	Area	area %
1	Agriculture	1567.27	63.30	1556.21	62.85	1609.70	55.73
2	Forest	376.14	15.20	374.14	15.11	365.83	12.67
3	Settlement	57.43	2.32	57.43	2.32	90.34	3.12
4	Water bodies	312.37	12.60	303.42	12.25	322.03	11.14
5	Non Agriculture	84.86	3.43	95.91	3.87	323.90	11.22
6	Other use	78.01	3.15	88.97	3.60	176.94	6.12
	TOTAL	2476.08	100.00	2476.08	100.00	2888.74	100.00

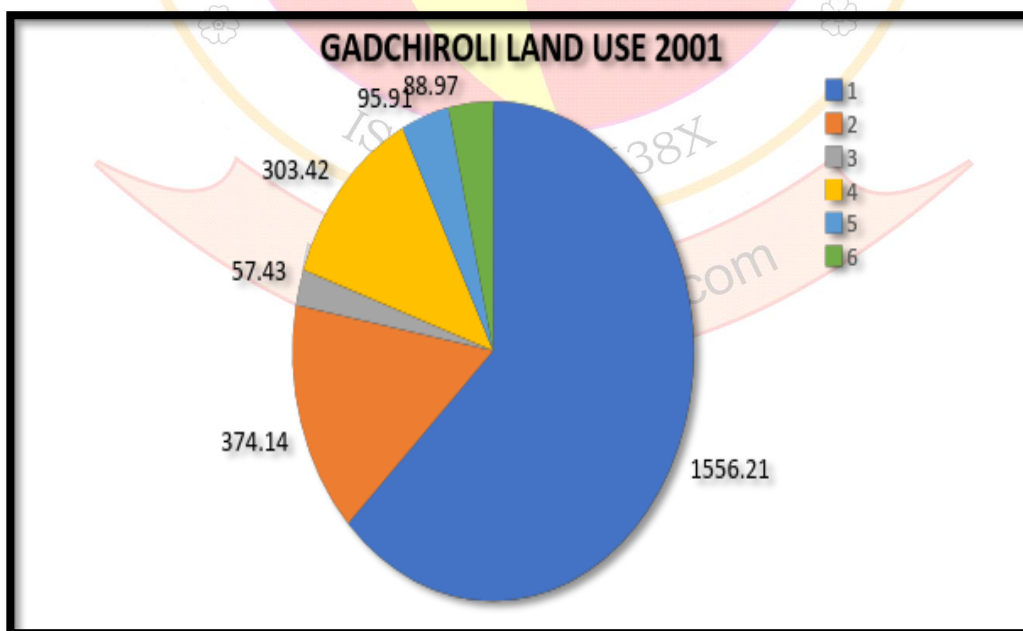
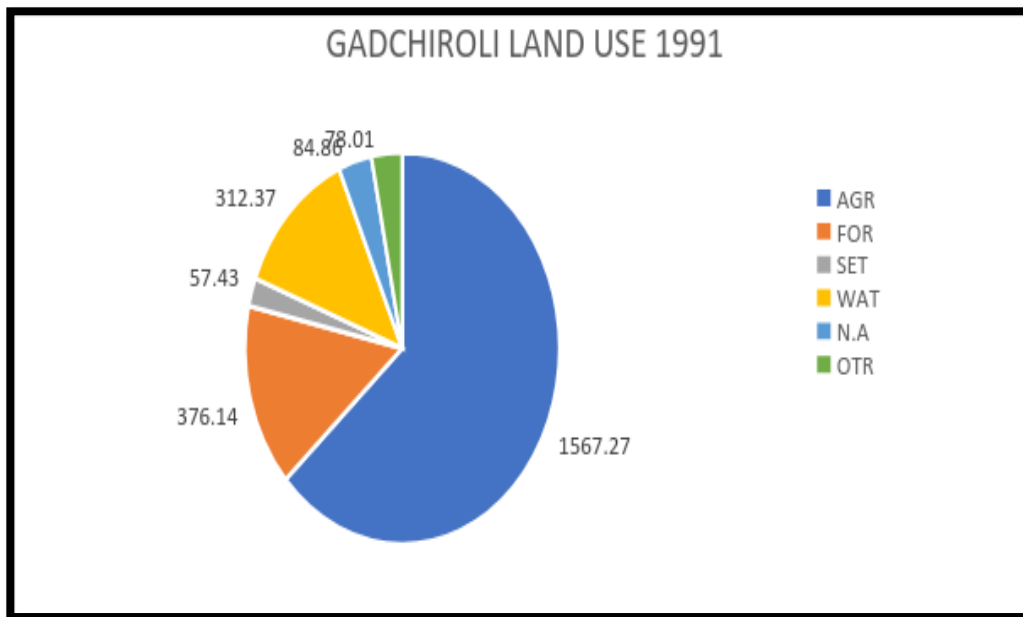
Source; Land record office

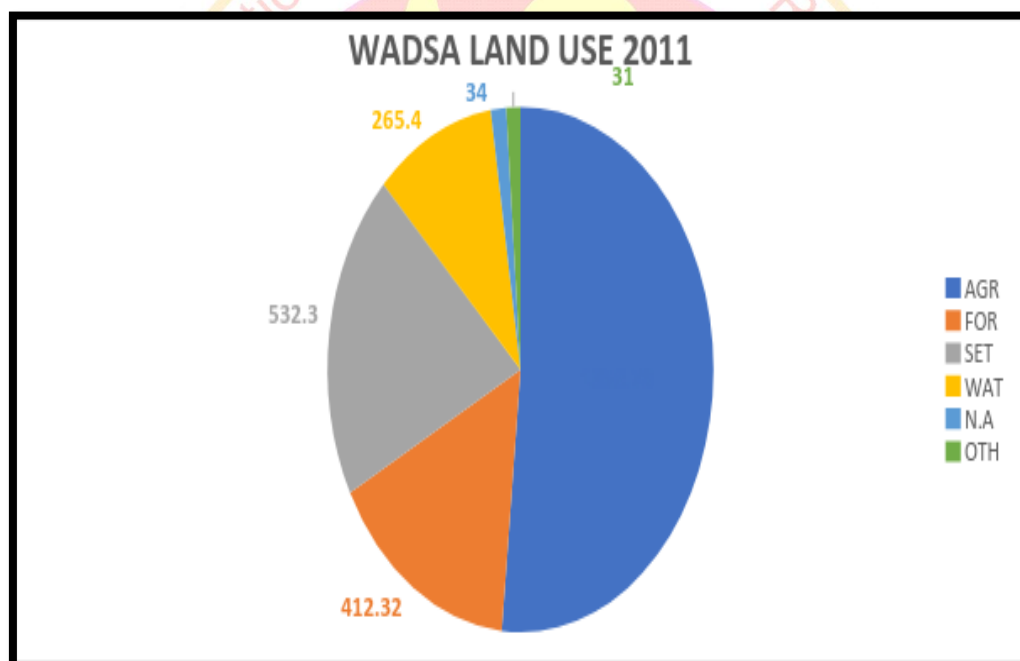
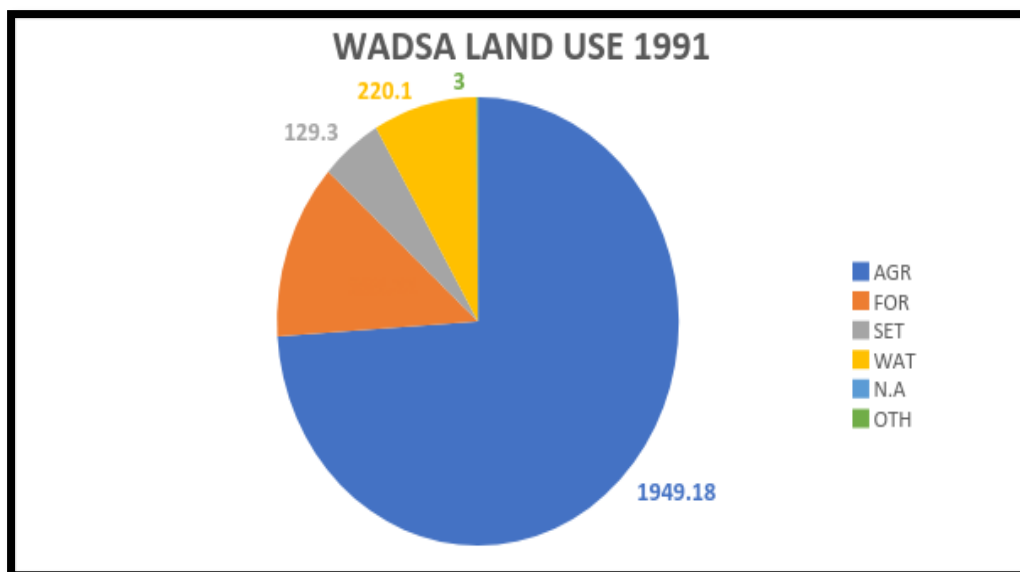
Table -2 Area under different land use categories of Wadsa (Desaiganj) Town
(area in Hectors)

Sr. no	Land Utilization	1991		2001		2011	
		Area	Area %	Area	Area %	Area	Area%
1	Agriculture	1949.18	73.92	1628.98	61.78	1356.78	51.46
2	Forest	335.22	12.72	324.72	12.32	412.32	15.64

3	Settlement	129.30	4.90	261.10	9.90	532.30	20.19
4	Water bodies	220.10	8.35	265.40	10.06	265.40	10.05
5	Non Agriculture	-----	-----	125.60	4.76	34.00	1.29
6	Other use	3.00	0.11	31.00	1.18	31.00	1.17
	Total	2636.80	100.00	2636.80	100.00	2636.80	100.00

Source; Land record office





Land use pattern Of Gadchiroli town;

After studying the spatial pattern of land use and land cover in the said town it is clear that, there is maximum utilization of agriculture land, after that most covered area by different land use as under respectively forest, non agriculture, other purpose occupied land and area under residential use. It is observed that the land pattern is changing gradually and land formation is taking place. In comparison of 1991 agriculture land is decreased by 0.45 % and 7.12 % in the year 2001 and 2011 respectively. Similarly Forest land has been decreasing in first and second decade of the study period is 0.90 % and 2.44 % in this way land use transforming into non agriculture and residential/settlement area. This indicates the speed of urban development of Gadchiroli town. The Such type of development is taking place gradually due to growth of urban population. In the first and second decades of the study period the area under water bodies decrease by 0.35 and 1.11 % respectively, because people of town in particular

area had occupied the land of area under water bodies. Therefore water crisis will be create. Non agriculture land area is increasing in the first decades, it change by 11.05 % and in and in second vary slowly, and other land use/ land cover area change by 0.45 and 2.52 %. In this way the land use pattern is transforming from one sector to another. It need of hour and requirement of population, but certainly create some problems like declinations land of agriculture and forest, environmental changes, temperature growth (cities known as heat islands), ecological imbalance etc.

Wadsa in Gadchiroli district is known as historical town. It is also multifunctional town. Certain changes found after the examine data and data based cartographic presentation of pia diagrams which are prepare for the years 1991, 2001 and 2011. Its land use pattern is moderate similar to Gadchiroli town. As a major categories area under agriculture is highest serially forest, water bodies, settlement and other land covers. Agriculture land is decreasing extensively, in 2001 in the comparison of 1991. This value is very high and about 12.14 %, in the second decade it is 10.32%. Forest land is also changing positively. Area under settlement increasing due to rural to urban migration with effect of pull and push factors. The patter of urban land use changing in the same period 5% to 10. 29 %. Area under water bodies lose in first decade but in second increase by 1.72%, it also not static. Non agriculture land was not available for town development in 1991. It increase in between 2001 to 2011 by 4.76 %, and in the second phase it is about 3.47 %. As well as area under other land use is very negligible it was 0.11 %, it change gradually and it is in average 1.06 %, in this way changing land use pattern in the study area and abroad significant, at the same time it is matter of anxiety, but it is in favour of town development.

Conclusion;

The study of changing land use pattern of both Gadchiroli and Wadsa town, brings us to the conclusion that various land use patterns are transforming continuously. Therefore area under agriculture and forest decreasing rapidly. Surroundings of both towns are changing and adjoining neighbouring regions. It will transform as a part of these towns. That's why the natural resources in the study area in dangers. Therefore i would like to suggest administrators, planner and policy maker to focus on sustainable development for better life.

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