

CHANGES OF LAND USE AND CROPPING PATTERN IN CHAMARAJANAGARA DISTRICT OF KARNATAKA

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ABSTRACT

Land and use is clearly constrained by environmental factors such as soil characteristics, climate, topography, vegetation. But it also reflects the importance of land as a key and finite resource for most human activities including agriculture, industry, Forestry, energy production, settlement, recreation, and water catchments and storage. The growth of population is greater than the rate of growth of food production. It is usually achieved through proper use of land resources with the application of bio fertilizers, hybrid seeds, double cropping, modern methods of irrigation and manpower. The land use patterns explain from agriculture cropping pattern and changes are analyzed. Two sets of data (2007-08 and 2014-15) were taken in this study. Secondary data's are collected and analyzed by cropping pattern and land use pattern.



KEYWORDS :

Cropping Pattern, Land use pattern, Land utilization.

INTRODUCTION

Land is the important natural resource, which support evolution and development of all types of life on land. Land use especially affected by natural and human factors. So, the uses of land have been increasing as the science and technology increase. The developing countries need and improve the exploitation of land resource to achieve the maximum output crops and the productive capacity of the land. Land use and cropping pattern is an important aspect of geographical studies particularly relevant to agricultural geography. Given the fixed amount of land available on the earth and the simultaneous increases in population and the pressure on land has been increasing tremendously.

Man plays a pivotal role in conditioning and transforming his physical environment through its utilization. The two sets of limits which determine the pattern of land use are the absolute or outer limits which are set by nature and relative limits set by cultural human attitudes and actions which determine the range of actual and probable use within limits while classifying land under different heads its subsequent use by man for a particular purpose is taken into consideration.

STUDY AREA

Chamarajanagara is the southern-most district in the state of Karnataka. It was carved out of the original larger Mysore District in the year 1998. Chamarajanagara district is consisting of 4 taluks Chamarajanagara, Gundlupet, Kollegala and Yelandur with 16 hoblis. Kollegala is the largest taluk with an area of 2786Sq.kms, while Yelanduru is the smallest with an area of about 266 Sq.kms.

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The study area forms a distinct land unit, besides being a cultural unity lying between 76°.24' and 77°.43' east longitudes and 11°.32' and 12°.16' north latitudes. It is bordered by Mysore and Mandya district of Karnataka state in the North, Nilgiris and Coimbatore districts of Tamilnadu state in the South-East, Waynad district of Kerala state in South-West. It has Geographical area of 5101 Sq. Kms. Chamarajanagara district lies in the southernmost part of Karnataka state.

The two dominant soil types of the district are red-loam- sandy loam and black cotton soil. There are no perennial rivers flowing in the district. However, there are important seasonal rivers such as the Gundluhole, Suvarnavathi, Chikkahole, Callar, Moyar and Udurohole. The Cauvery and the Suvarnavathi are the two important and major rivers which flow through the district through the northwestern parts eastward.

OBJECTIVES

The main aim of the study is:

- 1) To analyze the changes in Land use 2007-08 and 2014-15.
- 2) To find out the major dominating crop in the study area.

DATA BASE AND METHODOLOGY

The study is completely based on secondary data which is obtained district at a glance from 2007-08 and 2014-15 and other information has been collected. To analyze the changes in Land use and cropping pattern in the study area the simple statistical methods were used to find the result and changes on data abstracted from Chamarajanagara District at Glance.

RESULTS AND DISCUSSION

Land use is an important aspect of studies in agricultural geography and for making the study of land use; it is classified into different categories. The concept of land use has been used in so many ways that no generally accepted scheme of classification exists, despite many years of land use studies by geographers. In most of such schemes, activity on the land

has been the major criterion for classifying land use which is essential a qualitative rather than quantitative variable. Census of India has classified land utilization in nine different categories, but in the present study they have been grouped into eight major relatively significant categories.

According to 2007-08, the district as a whole had 32.65% of its area under net cultivated area, but scenario was changed in 2014-15, in the study area about 26.92% of the area. In this decade the agriculture area that is net cultivated area decreased to -5.72% because increase fallow land 4.74% to 10.47%. Land Non Agricultural Land excluding fallow land occupying only about 4.32% of both decade in total area of the district. This land has not variable from 2007-08 and 2014-15 (table-1 & Fig.1).

Table 1: Land use changes in Chamarajanagara district

Si.No	Land classification	2007-08 (%)	2014-15 (%)	Changes in %
1	Net Cultivated Area	32.65	26.92	-5.72
2	Non-Agricultural Land	4.32	4.32	0.00
3	Forest	48.36	48.36	0.00
4	Barren Land	3.76	3.76	0.00
5	Cultivable Waste	1.34	1.34	0.00
6	Permanent Pasture	3.99	3.99	0.00
7	Trees and Groves	0.84	0.83	-0.01
8	Fallow Land	4.74	10.47	+5.73

Source: Chamarajanagara District at a Glance - 2007-08 and 2014-15

Figure 1: Land use changes in Chamarajanagara district



The Chamarajanagara district, most of the area under forest i.e. it occupies about 48.36 percent. The total area under barren land in the study area is 5%, cultivable waste 4.3% and permanent pasture 8.4% of both decades in total area of the district, this land has not variable from 2007-08 and 2014-15. Trees and groves decreased to -0.01%. The term fallow land is applied to land, not under cultivation at the time of reporting, but which have been under cultivation in the past. Fallow land with an average of 4.74% during 2007-08 and it largely increased in during 2014-15 (10.47%). In this decade the area increased to 5.73%.

CROPPING PATTERN

The cropping pattern of the region is typical of an under developed agricultural economy in which most of the cultivated area is devoted for food crops particularly food oil crops are the most important in this area. Maize and Pulsus are the major dominating crops. Maize is one of the major leading crops in this region (table-2 & Fig.2). It occupies 20.05% in the current year (2014-15) compare to base year (2007-08) 1.13% increased. Pulsus is the major cultivated crops in this region compare to the base year 07-08, but current year is decreased in to -1.43% percent. Oil Seeds is the major Non food crop in this region, but that also gradually decreased - 2.34%. Cotton is the major Non food crop in this region. It is increased as 7.52%.

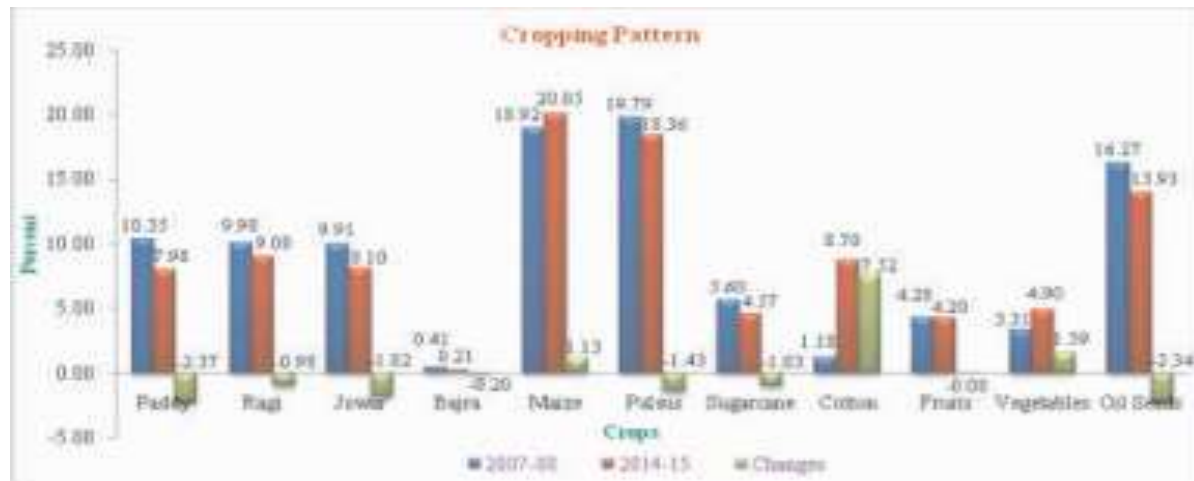
Paddy is the important food crops. The total area under ragi is about 10.35% & 7.98% area to the total cropped area. In this decade the area is decreased to -2.37% because cotton cultivated area has been increased. Ragi is the major cultivated crops in this region compare to the base year 07-08, but current year is decreased in to 0.98% percent. Bajra is the very less important in this region, because gradually decreased -0.20%. The cultivation of Vegetables crops is about 3.31% & 4.90%. In this decade the area is increased to 1.59%. Jowar, Sugarcane and Fruits are the most important crops, but that also gradually decreased 1.82%, 1.03% and 0.08%.

The total analysis given the result Maize and cotton is very good improvement due to good climatic condition, water facilities, soil suitability and good price. But other food and non Food crops are gradually digressed due to the Labor problem and low price. Net cultivated area is also decreased 5.72% comparatively from current year to base year 2007-08.

Table 2: Cropping Pattern Changes in Chamarajanagara district

Si.No	Crops	2007-08 (%)	2014-15 (%)	Changes in %
1	Paddy	10.35	7.98	-2.37
2	Ragi	9.98	9.00	-0.98
3	Jowar	9.91	8.10	-1.82
4	Bajra	0.41	0.21	-0.20
5	Maize	18.92	20.05	+1.13
6	Pulsus	19.79	18.36	-1.43
7	Sugarcane	5.60	4.57	-1.03
8	Cotton	1.18	8.70	+7.52
9	Fruits	4.28	4.20	-0.08
10	Vegetables	3.31	4.90	+1.59
11	Oil Seeds	16.27	13.93	-2.34

Source: Chamarajanagara District at a Glance - 2007-08 and 2014-15

Figure 2: Cropping Pattern Changes in Chamarajanagara district

CONCLUSION

The pattern of a region is the reflection of the varied physical and socio economic factors. As such Maize is the dominant crop occupying over more than 20% in Net Cultivated area followed by Pulses (18.36%), Oil Seeds (13.93%) and Ragi (9%). The present analysis reveals that the region as a whole has experienced over 1.13% among them increase in the Maize, where as all other crops shows a decreasing trend. Cotton is the major increased crops as 7.52%. The major changes in the Land use is fallow land increased 5.73% compare to current year from the base year. Followed by Net Cultivated area decreased -5.72% from base year. Trees and groves decreased to -0.01% from base year.

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