



## Land Utilization in Bellary District 1999-2000 And 2009-10

### KEYWORDS

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**ABSTRACT** Land utilization is an important predicament for planning process because of the finite nature of land resources. Bellary district in Karnataka covered an area of about 499264 hectares comprising nearly 61.39 percent under net sown area in 1999-2000, which has come down to nearly 436067 hectares or 53.62 percent in 2009-10. Area under forest there is no changes, area under non-agricultural land increased by 0.02 percent, other uncultivated area increased by 0.01 percent, while fallow land also increased by 7.75 percent during the study period. Among the talukas of the district, overall volume of change is greater in Siruguppa, Hagari Bommanahalli and in Bellary talukas above 10 percent because due to dynamic conditions existing there. Nearly 5 to 10 percent index of volume change medium dynamic was observed in two talukas namely Sandur and Hospet. Less than 5 percent index of volume of change was observed again in two talukas namely Kudligi and Hadagali.

### Introduction

Land use pattern means distribution of land or uses of land for different purposes such as forest, fallow, uncultivated, etc. Such distribution depends upon various factors. Agriculture is one of the main occupation in most of the district in Karnataka state. Geographers and Agricultural Scientists and so many others are engaged in the study of agricultural landuse. Here an attempt has been made to study the land use pattern in Bellary district from 1999-2000 to 2009-10.

### Methodology and Data Source

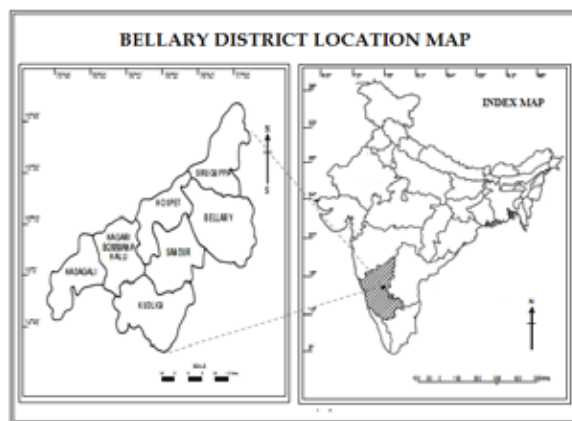
Secondary data has been used from District Statistical Office, Bellary from 1999-2000 to 2009-10. Simple method of volume of change in land utilization has been used. Index of volume change in land utilization has been indicated by  $X/Y$ , where 'X' is summation of difference of percentage of land use categories of increase and 'Y' is that of decrease for the period from 1999-2000 to 2009-10. X & Y should be same but with opposite directions. The average of percentages of land utilization has been calculated taking 1999-2000 as the base years and 2009-10 as the last years. For analyzing the changes in land utilization, the method used by Dr. Jasbir Singh (1974) has been applied. We have also calculated the matrix of coefficient of correlation in different categories of land use for different talukas in the district from 1999-2000 to 2009-10.

### Objectives

The objective of this paper is to know the differences in land utilization in Bellary district from 1999-2000 to 2009-10.

### Study Area

Bellary district is one of the 27th district in Karnataka state. The district bounded on the north-west by Gadag, on the north by Koppal district, on the north-east by Raichur district and on the west by Haveri, on the south by Davangere, on the south-east by Chitradurga district of Karnataka state, on the east are Ananthapur and Kurnool district of Andhra Pradesh state. The district covering an area of 8420 sq.kms it lies between  $14^{\circ} 30'$  and  $15^{\circ} 50'$  north latitudes and  $75^{\circ} 40'$  and  $77^{\circ} 11'$  east longitudes. The distance from north to south and east to west it is spread over a distance of 186.7 kms and 161 kms respectively. The geographical location on an average of 461 meters height from the sea level. It consist of 7 talukas there are 189 village panchayat and 517 villages. The Tungabhadra river forms an administrative boundary dividing the district on the west.



### Land Utilization in Bellary District

Agriculture is the important occupation of the study area. So, more than 70 percent of the people are working in agricultural activities in Bellary district. Here five major categories of land utilization have been considered for the study.

They are: 1) Area Under Forest, 2) Area Not Available for Cultivation, 3) Other Uncultivated Land, 4) Fallow Land and 5) Net Sown Area. The land utilization in Bellary district from 1999-2000 to 2009-10 is depicted in the following table 1.1. The volume of change has been computed and shown in the table 1.2 for each talukas of Bellary district.

During the study period of ten years, the net sown area has decreased by about -7.77 percent. Area not available for cultivation has slightly increased by 0.02 percent, other uncultivated land has also increased by 0.01 percent, there is no change in forest land use. However, fallow land has increased by 7.75 percent during the study period.

#### 1) Area Under Forest

In 1999-2000, Bellary district had 97017 hectares of total geographical area under forest. There is no any changes i.e. increase or decrease in forest land amongst all talukas of the district during the study period.

#### 2) Area Not Available for Cultivation

This category includes two decision (a) Land put to non-agricultural uses and (b) Barren & uncultivated land. These areas would be no more available for cultivation. In 1999-2000 the total area under this category was 121979 hectares (15%) of the total geographical area. The area not available for cultiva-

tion has increased in Siruguppa (0.14%) and in Bellary (0.01%) talukas. In other talukas of the district there is no positive or negative results, same land use under this category.

### 3) Other Uncultivated Land

Other uncultivated land is divided into three major groups, which includes (a) land cultivable waste, (b) permanent pastures and grazing land, (c) land under miscellaneous trees, crops, etc. which is not included in net sown area. In 1999-2000 the other uncultivated land was 33875 hectares (4.16%) of the total geographical area. It increased by 4.17 percent (33917 hectares) in 2009-10. Out of the seven talukas of the Bellary district, except Hadagali taluk, all talukas fall under positive trend was observed 0.02 percent in Hagari Bommanahalli and 0.01 percent in Kudligi, Hospet, Sandur, Siruguppa and Bellary taluk respectively in this period.

### 4) Fallow Land

This type of land use category of fallow land includes current fallow and other fallow land. In 1999-2000, the fallow land was 61061 hectares (7.51%) of the total geographical

area. And it increased by 124080 hectares (15.26%) in the year 2009-10. A positive change was observed in Siruguppa by 24.48 percent, Hagari Bommanahalli by 10.79 percent, Bellary by 10.11 percent, Sandur by 6.82 percent, Hospet by 5.45 percent and Hadagali by 1.51 percent. Hence, a negative change was observed in only one taluk i.e. Kudligi by 1.94 percent in the study region.

### 5) Net Sown Area

This category includes all those areas, which are used for cultivation. In 1999-2000 in Bellary district 499264 hectares (61.39%) area was under net sown area. Net sown area was decreased by 436067 hectares (53.62%) within ten years or within one decade i.e. 1999-2000 to 2009-10. A positive change is observed in Kudligi taluk by 1.19 percent. A negative change is observed in other six talukas of the Bellary district namely Siruguppa by 24.62 percent, Hagari Bommanahalli by 10.78 percent, Bellary by 10.13 percent, Sandur by 6.84 percent, Hospet by 5.46 percent and Hadagali taluk by 1.51 percent in the study period of Bellary district.

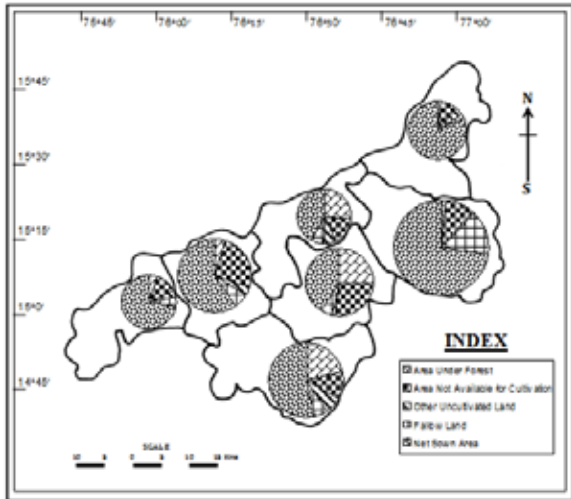
**Table-1.1 : Talukawise Land Utilization in Bellary District from 1999-2000 to 2009-10** Area in Hectares

Land Use Categories	Years	Bellary	Hadagali	Hagari Bommana halli	Hospet	Kudligi	Sandur	Siruguppa	District
Area Under Forest	1999-2000	2877 1.70	4738 4.99	4482 4.59	24970 26.74	33661 21.08	24118 25.56	2171 2.08	97017 12.39
	2009-10	2877 1.70	4738 4.99	4482 4.59	24970 26.74	33661 21.08	24118 25.56	2171 2.08	97017 12.39
	Volume of change %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Not Available for Cultivation	1999-2000	16145 9.55	12163 12.82	25139 25.76	14935 15.99	19288 12.08	24870 26.35	9439 9.05	121979 15.00
	2009-10	16157 9.56	12163 12.82	25139 25.76	14935 15.99	19288 12.08	24870 26.35	9582 9.19	122134 15.02
	Volume of change %	+0.01	0.00	0.00	0.00	0.00	0.00	+0.14	+0.02
Other Uncultivated Land	1999-2000	1629 0.96	3963 4.18	3271 3.35	7110 7.61	11678 7.31	1704 1.80	4520 4.33	33875 4.16
	2009-10	1638 0.97	3964 4.18	3290 3.37	7113 7.62	11686 7.32	1705 1.81	4521 4.34	33917 4.17
	Volume of change %	+0.01	0.00	+0.02	+0.01	+0.01	+0.01	+0.01	+0.01
Fallow Land	1999-2000	25601 15.15	5518 5.82	6426 6.58	7107 7.61	8750 5.48	5150 5.46	2509 2.41	61061 7.51
	2009-10	42699 25.26	6949 7.33	16958 17.37	12196 13.06	5649 3.54	11589 12.28	28040 26.89	124080 15.26
	Volume of change %	+10.11	+1.51	+10.79	+5.45	-1.94	+6.82	+24.48	+7.75
Net Sown Area	1999-2000	122775 72.64	68471 72.19	58281 59.71	39252 42.04	86239 54.00	38517 40.82	85639 82.12	499174 61.39
	2009-10	105656 62.51	67039 70.68	47759 48.93	34160 36.58	89422 55.99	32067 33.98	59964 57.50	436067 53.62
	Volume of change %	-10.13	-1.51	-10.78	-5.46	+1.99	-6.84	-24.62	-7.77
Total Geographical Area	1999-2000	169027	94853	97599	93374	159706	94359	104278	813196
	2009-10	169027	94853	97599	93374	159706	94359	104278	813196

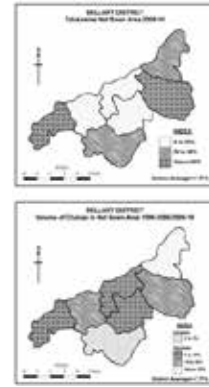
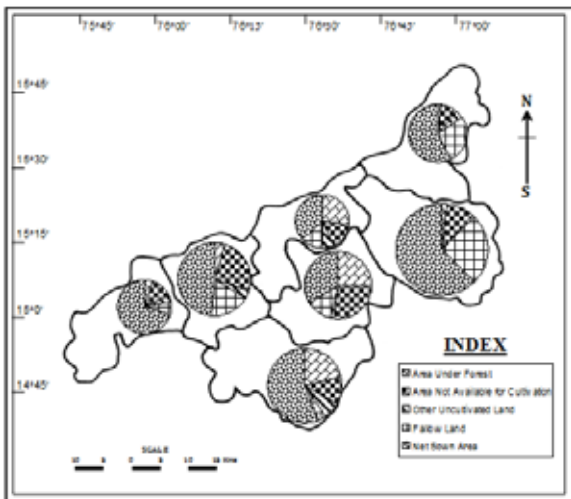
Source: 1) Computed by Author

2) District Statistical Abstracts of Bellary District 1999-2000 to 2009-10.

Talukawise Land Utilization in Bellary District 1999-2000



Talukawise Land Utilization in Bellary District 2009-10



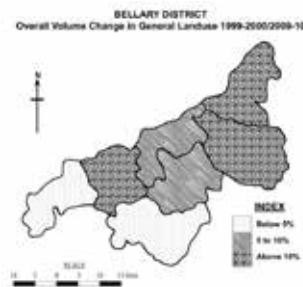
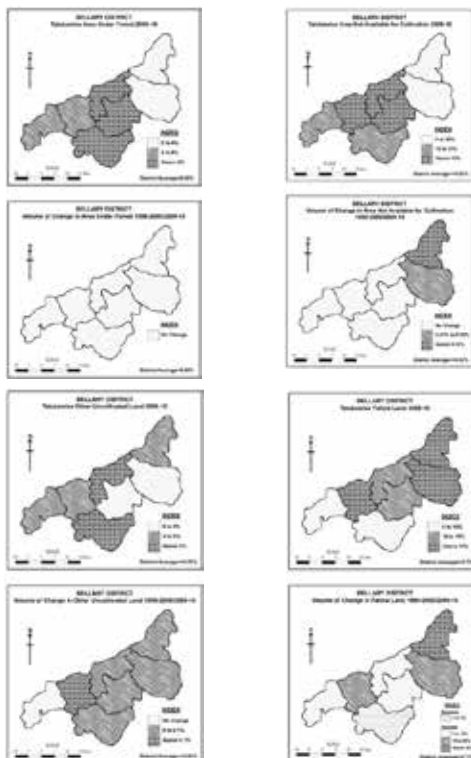
Index of Volume of Change from 1999-2000 to 2009-10

Index of volume of change, taking into consideration of all the above categories, it will be useful to measure the overall volume of change of land from 1999-2000 to 2009-10. Index volume of change in general landuse is indicated by X/Y, where X is the summation of difference of percentage of general landuse categories of increase and Y is that of decrease for the period in question. X and Y should be same but with opposite signs. This overall volume includes the land actually involved in the transfer from one category to another. Naturally whereas volume is greater one can say that more dynamic conditions exist there. The following table 1.2 shows an index of volume of change in different talukas of Bellary district.

Table-1.2 : Talukawise Volume Change of Bellary District 1999-2000 to 2009-10

Sl. No.	Name of Taluka	Index of Volume of Change in Percentage
1	Bellary	10.13
2	Hadagali	1.51
3	Hagari Bommanahalli	10.81
4	Hospet	5.46
5	Kudligi	2.00
6	Sandur	6.84
7	Siruguppa	25.94
8	Total District	7.77

Source: Computed by Author



The index of the volume of change was 7.77 percent for the entire study region. It was below 5 percent in two talukas, Hadagali (1.51%) and Kudligi (2%). Nearly 5 to 10 percent index of volume of change in land use from 1999-2000 to 2009-10 was found again in two talukas namely, Hospet (5.46%) and Sandur (6.84%). Above 10 percent index of volume of change was observed in Siruguppa (25.94%), Hagari Bommanahalli (10.80%) and lastly Bellary (10.13%) talukas of the district.

Conclusion

In Bellary district, area under forest there is no changes in all talukas of the district. Area not available for cultivation has increased only in two talukas namely Bellary and Siruguppa, while there is no changes in other talukas. Other uncultivated land has increased in almost all talukas except Hadagali taluk. Fallow land has increased in Siruguppa, Hagari Bommanahalli, Bellary, Sandur, Hospet and Hadagali talukas and has

decreased in only one taluk i.e. Kudligi. Net sown area has increased in Kudligi taluk, while it has decreased in Siruguppa, Hagari Bommanahalli, Bellary, Sandur, Hospet and Hadagali talukas of the Bellary district within the study period.

#### Suggestions

There is some scope for expansion of agriculture and manufacturing industries. Population pressure has tremendously

increased on the land but net sown area have to be tremendously increased, there is little scope for expansion of agriculture except for multiple cropping for the environmental balance it is very necessary to increase area under forest. Fallow land has to be decreased in Bellary district.

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