Tahsilwise General Landuse Efficiency of Beed District, a Geographical Analysis

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Abstract:

Agriculture is a basic occupation and meets the basic needs of human beings like food, clothing and shelter. It is the source of a nation's economy. He provides raw materials to various industries. Agriculture plays an important role in the economic development of the region. Agricultural production, which depends on the fertility and use of the land Use of modern technology is very scarce in India and other developing countries, there is negligible use of modern farming tools and techniques. So, there it is more dependent on agriculture as a source of livelihood. Food is the most important need of human. Land is a very important resource.Landuse is surface utilization of all developed and vacant land on a specific point at a given time and space. General Landuse means land under various categories such as forest, agriculture, pastures, settlements, waste land etc. Landuse is directly affected by geographical, climatic, economic and human factors. The fundamental utility of land is satisfying the human need of food habitation and housing materials. It is essential to choose proper mode of landuse planning and allocation to various ingredients of optimum landuse to meet /solve the human needs Kellong (1980) has rightly pointed out that this calls for the clear understanding of land classification for successful planning and development. The term land use is virtually self-explanatory meaning the actual and specific use to which the land surface is put to in terms of herent primary land use namely land under forest, pasture, cultivation etc. This leads one, back to the village farm and the farmer to the fields, gardens, and fallow land forest and to the isolated farmstead (freeman 1968) as geography deals with the special relationship between these aspects and planning. Land is the basic resource of human society.

Keywords: - Agricultural production, land Use, agricultural productivity, landuse efficiency,

Introduction:

Agriculture is the major occupation of majority of the population in Beed district. Economic, industrial, educational, social development of this area is dependent on agricultural production. Despite of higher promotions per capita availability of food over time did not increase significantly. The growth rate of agricultural production is only around two per cent. The growth rate of production in agriculture must be more than the growth rate of population. Hence there is an urgent need to accelerate agricultural growth to address issues on food security, nutritional adequacy and income generation. This can be achieved by identifying the problems in crop production, infrastructure facilities, issues related to the natural resources, input management and accordingly there is need to improve agricultural services keeping in view the vision and objectives. The general land use pattern often does not give clear picture of the land under cultivation. This chapter concentrates mainly on the study trends in area of various food crops and cash crops in the Beed district. Agricultural patterns are the extent to which, the arable land under different agricultural crops may be put to use. These largely depends upon the Socio-Economic influence, which determine the possibility of the enterprise, the farmers choose the input intensity with which he farms with an assured supply of water and availability of modern inputs. Specially, high yield varieties of seeds and commercial fertilizers become possible for the farmers to replace less profitable land by growing two or even three crops in the level of prosperity in a single year. Differences in altitude towards rural land in the level of prosperity and in technology have produced changes in emphasis which are only gradually coming to be appreciated, although, in the long run their effects in both landscape and land use studies are likely to be for reaching. In simple words, cropping pattern means the proportion of area under various crops at a point of time. It is a dynamic concept because no carrying pattern can be said to be ideal for all times. It changes in space and time with a view to meet the requirements and is governed largely by the physical as well as cultural and technological factors. The change in cropping pattern in

a particular span of time clearly indicates the changes which are brought about by the Socio-Economic influences. In most of the situations, the physical environment reduces the choice of the enterprise either by prohibiting the growth of certain crops altogether or by reducing their level. The primary uses of land are for crops forest pasture, mining transportation gardening residential recreational industrial commercial and uncultivable waste barren and fallow land etc.Land is controlled by climatic factors, soil characteristic, slope of land, degree of erosion, drainage and other environmental factors.

Study Area:

Beed district is located in the central part of Maharashtra in Aurangabad division and forms a part of Marathwada region. The district lies between 18°28' and 19°28' North Latitudes and 74°54' and 76°57' East Longitudes. The district is bounded by Aurangabad and Jalna in the North, Parbhani and Latur in the East, Ahemednagar and Osmanabad in the South and Ahemednagar in the West. Godavari is the most significant river that flows on the borderline of Georai and Majalgaon Tehsils. The total area of Beed district is 10693. Sq.Kms and it is 3.47% of Maharashtra State.

The objectives of the paper:

1. To assess the impact of various socio- economic variables on general landuse efficiency
2. To study spatial distribution of general landuse efficiency.
3. To analysis the spatial and temporal changes of general landuse efficiency in the study region.

Data base and Methodology:

The present study is based on secondary data. Secondary data will be collected from social economic review, Beed district disaster management plan,district census handbook, gazettes, decennial census Reports of Government of India. Some data has been obtained from websites of Govt. of India and Govt. of Maharashtra, beed.nic.in, been undertaken to know the environmental status. The following formula used to calculate the general landuse efficiency.

$$\text{Index of Landuse Efficiency} = \frac{\text{Gross cropped area}}{\text{Net sown area}} \times 100.$$

Analysis and Discussion:

There is scope for extension of cultivated land by bringing fallow and potential land under cultivation .The proportion of potential agricultural land (uncultivated land) increased from 6.35% to 7.44% it means area under this category was increased by 1.09% in during 1990-95 to 2006-11 in the Beed district. Therefore, immediate need is to give more emphasis on intensity of cropping and increasing yield from existing calculated area. The main problem of under use of net sown area as low productivity and risk of crop failure are talking the rural population. Landuse efficiency may be defined as the extent to which the net sown area is cropped. The gross cropped area as percentage of the net sown area gives measure of land use efficiency, which means the intensity of cropping. The following formulaused to the index of land use efficiency.

$$\text{Index of Landuse Efficiency} = \frac{\text{Gross cropped area}}{\text{Net sown area}} \times 100.$$

Tehsilwise General Landuse Efficiency 2011

Sr.No.	Tehsils	Gross cropped area	Net sown area	Index of Landuse efficiency
1	Ashti	140499.98	130386	107.76
2	Ambejogai	95241.90	74116	128.50

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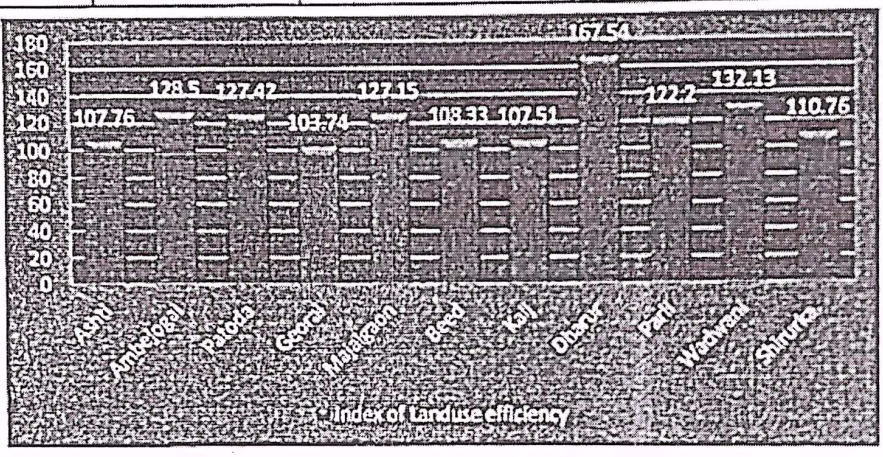
3	Patoda	61507.80	48273	127.42
4	Georai	139908.78	134862	103.74
5	Majalgaon	104981.66	82562	127.15
6	Beed	135391.00	124985	108.33
7	Kaij	95821.84	89129	107.51
8	Dharur	36652.00	21876	167.54
9	Parli	70485.00	57681	122.20
10	Wadwani	25865.00	19576	132.13
11	Shirurka.	57357.74	51787	110.76
	District	963630.26	835233	115.37



Above table indicates that the highest gross cropped area was recorded in Ashti tehsil in 2011 which was 140499.98. On the other hand the lowest gross cropped area was recorded in Wadwani tehsil 25865 heetares in 2011.The index of landuse efficiency of the district was 115.37% in2011. Land use efficiency Variations are mainly depending upon irrigational facilities as well as physical and non-physical determinants of Agriculture are also responsible for the variation in land use efficiency in study region. The land use efficiency in study region is divided into three categories viz. low intensity, medium intensity and high intensity.

1. Areas of low intensity (below 120 percent):

Below 120 landuse efficiency was observed Ashti, Georai, Beed, Kaij, Shirur kasar were below 120 landuse efficiency in 2011 .Most of the area is barren in these tehsils soils are poor: Wells are providing water for irrigation but most of the wells became dry in summer season hence these tehsils have low intensity of land use efficiency.

2. Areas of medium intensity (120 to 140 percent):

Landuse efficiency index between 120 to 140 was observed in Ambejogai, Patoda, Majalgaon, Parli, Wadwani in 2011. This tehsil is having less irrigated Area. Some parts of this tehsilare having high intensity of land use efficiency. Physical and non- physical determinants of agriculture are responsible for the medium land use efficiency.

3. Areas of high intensity (Above 140 percent):

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Above 140 landuse efficiency was experienced in Dharur tehsil was Above 140 landuse efficiency during 2011. Fertility of soil, use chemical fertilizers, use of high yielding, variety seeds and modern agricultural implements are responsible for the high intensity of land use efficiency.

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