

Dynamics of land use pattern in Maharashtra, India

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ABSTRACT

The present study was undertaken with the broad objectives Viz. to study the temporal changes in land use and to estimate trends in different land use categories. For this, secondary data on land use statistics for 30 year's period from 1970 – 71 to 1999 – 2000 were collected from different publication of Government of Maharashtra. For observing decadal changes, the data were grouped under three decade. The findings of the study showed that the land use pattern of Maharashtra was dominated by different crops (57.34%) followed by area under forest and fallow land (7.67%). Regarding temporal changes in different land use categories, it was observed that, the proportionate area in each decade under different categories was remain more or less same with meager changes in each decade. As far as rate of growth was concerned, it was observe that, over a period of time positive and significant growth observed in case of land under non agriculture uses (1.46%), land under miscellaneous tree crop (1.65%) and both the fallow (3.24%) while negative and significant growth was observe in forest land (-0.16%) barren and uncultivable land (-0.49%) and permanent pasture land (-1.47%). The dynamics of shift in land use indicated that about 5 lacks ha. area was shifted from ecological sector of which 76 per cent area was shifted towards non – agriculture sector and only 24 per cent area to agriculture sector. On the whole, the study concluded that, in Maharashtra the area under ecological sector is decreasing very fast which responsible for disturbing the ecological balance as well as land productivity.

Key words : Dynamics, Land use pattern, Temporal change, Fallow land, Ecological sector.

INTRODUCTION

Generally land denotes the surface of the earth, the soil or the ground. The concept of land use has been define in various ways by many geographers. Souer define, "land use as the use to which the entire land surface is put". Stamp (1962) stated that "land as a whole must be so used as to satisfy as many as possible of the needs of legitimate desires of the people of the nation as a whole. Land use in any region is influenced by physical and socio-economic environment. Under utilization, over-utilization and mis-utilization are the three common problems in the utilization of common property. The land available for agriculture and other purposes is limited. The over increasing pressure of population, decreases land man ratio which forced to shift in area under different land use categories. Considering these all the aspects, the land use dynamics in Maharashtra was studied with the objectives 1) To study the temporal changes in land use. 2) to estimate trends in different land use categories and 3) to study the dynamics of shift in land use.

Source of data

Analysis of data

For studying temporal changes in land use pattern, growth rates of land use category as well as shifts in land use pattern the data were grouped into following four periods.

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|-------------------|---|----------------------|
| 1. Period I | : | 1970-71 to 1979-80 |
| 2. Period II | : | 1980-81 to 1989-90 |
| 3. Period III | : | 1990-91 to 1999-2000 |
| 4. Overall period | : | 1970-71 to 1999-2000 |

To know the growth in area under different categories of land in Maharashtra State, compound growth rates were estimated with the help of exponential function of the following type

$$Y_t = ab^t \dots\dots\dots (1)$$

Where,

- Y_t = Area under a particular category of land in a particular region in the year 't'
 a = Intercept
 t = time period
 b = estimated coefficient

The compound growth rate in each land use category was estimated by using following equation.

$$r = (\text{Antilog } b - 1) \times 100$$

Where,

- r = Compound growth rates (CGR) is percentage term
 b = Estimated coefficient in the exponential function

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