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STUDY THE SHIFT IN LAND USE PATTERN WITH REGARD TO CHHATTISGARH AS A WHOLE STATE BY USING CLUSTER AND PRINCIPAL COMPONENT ANALYSIS

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ABSTRACT

The present study has been conducted in Chhattisgarh for various land use pattern based on area using secondary data collection from The Directorate of Land Records classify Total reported geographical area of different categories *viz.*, land under agriculture, forests, non agricultural uses, barren land, and uncultivated lands and lands put to non-agricultural uses were culturable waste, miscellaneous tree and groves, fallow land and other fallow land etc. The reported geographical area of the state decreased by 7.03 lakh ha during the period under study (i.e. 1970-71 to 2005-06). It was observed that net area sown of land in Chhattisgarh state was increased mainly because area under the land increased considerably, as well as the entire three zones. Culturable wasteland, fallow land and other uncultivated land decreased slightly but forest decreased rapidly. There has been increasing shift in net sown area contributing to 6.59 per cent during the period under study at the state level. The area under forest decreased by 8.61 per cent, at the state level. The culturable wasteland shows increasing trend accounting for 0.65 per cent. There has been an increasing trend in area not available for cultivation contributing 1.9 per cent during period of study. The fallow land shows a decreasing trend contributing for 0.07 per cent during the period under study. There has been a decreasing tendency in other uncultivated land excluding fallow land accounting for 0.54 per cent. The highest sown area was found in the Chhattisgarh plains, while the minimum was found in Bastar Plateau. The zone, which has highest proportionate area under forest, is Bastar Plateau, while the lowest was seen in Chhattisgarh plains. The Bastar plateau has the highest proportionate area under culturable wasteland, while the lowest was seen in Northern hills. The land not available for cultivation was highest in Northern hills, while the minimum was found in Bastar plateau.

Shifts of various land use pattern in Chhattisgarh state as a whole registered a considerable increasing land not available for cultivation followed by net area sown. The results corresponding to the shifts in various land use in Chhattisgarh plains in study years revealed in that culturable waste land and land not available for cultivation recorded considerable positive shifts in the land utilization level of land in the region. Relatively high shift potential for culturable waste land followed by net area sown was observed. This increase was due to the maximum coverage of the Chhattisgarh plains. The shifts of various land use characteristics in northern hills showed that uncultivated land and net area sown increased in positive direction while other categories of lands are shifted in higher negative direction. In the recent years culturable wasteland recorded higher negative shifts than other land. The shifts in the area of various land use of Bastar plateau is positive in these region forest land, net area sown and culturable wasteland showed negative shifts.

KEYWORDS: Shifts, Land Use Pattern, Cluster Analysis, Principal Component Analysis, Agroclimatic Zones