Dynamics and Revival of Fallow Land in India

Nilabja Ghosh
IEG, Delhi

As demands grow, land is probably becoming the most sought after resource in contemporary India. Agriculture faces a challenge of making good use of this diminishing asset-base it relies on. Deficient land may call for restoration of fertility and may not even be worth farming. Attraction for non-farm and urban jobs creates shortage of farm labour. Intuitively, geographic, water-related and economic aspects drive land utilization.

Both official secondary data and primary data collected by AERCs are used to study land utilization in India with a focus on unused fallow agricultural land. Changes in land use patterns across sectors and within agriculture are tracked using macro-data of India and Indian states and UTs. More detailed data analysis is done for four states to understand what drives land fallowing decisions. Econometric modeling of district level secondary data helps to identify the causative factors in the select states while field data obtained from sample surveys of farm households in the states reveal farmers' own explanation for their decisions to leave land fallow.

Holding higher relative shares of forest land, the Himalayan states along with a few others, enjoy ecological advantages including tourism. Sown area is more in large states but a few smaller states make more non-agricultural use of land. A correlation analysis finds strong the negative correlation of forest land with sown land. Over the three decades 1984 to 2014, except land under forest, non-agricultural uses and fallowing, most of the land use categories show diminishing tendency. Ecological land use declined consistently despite the recovery of forest land share. A modest reversal is visible in the last decade. Evidently, a reorganization of the pattern of land use is taking place with expanding human outreach on land and an inclination of land to move into non-agricultural uses. Regression analysis suggests association of land fallow with soil and climatic conditions while linkages with irrigation, food price and rainfall are weak and that with labour market is complex. Good of infrastructure and multiple cropping do not necessarily help. Primary data analysis shows that water and its management are important considerations for leaving land fallow.

Dynamics and Revival of Fallow Lands in Madhya Pradesh

H. O. Sharma
Deepak Rathi
Ravi Singh Chouhan
AERC, Jabalpur

Lands without utilization for productive agriculture activity could be categorized as fallow lands. It is imperative not only to understand the dynamics of fallow land in land use parameters of Madhya Pradesh but at the same time its revival is of great important. To analyze dynamics and revival of fallow lands in Madhya Pradesh district wise time series data from 1991 to 2016 have been collected for the study. The primary data from the farmer of Mandla and Bhopal have also been collected and analyze to find out the season for leaving land fallow by them. It is observed from the study that area under fallow land other than current fallow and current fallow was not found to be increased significantly even in a single district of the State, which was found to decreased significantly in Mandla, Seoni,

Chhatarpur and Chhindwara including major and other fallow land districts. The net area sown (NAS) and area under non agricultural uses was found to be increased significantly in Mandla, Balaghat, Seoni, Katni, and Chhatarpur, major and other fallow land districts. Apart from this the NAS was found to be increased significantly in Tikamgarh, Betul and Chhindwara districts, while significant increase in area under non agricultural uses was noticed in Shahdol, Dindori, Umaria, Rewa and Satna districts of M.P. Net irrigated area plays significant role to reduce fallow land as the fitted multiple regression model revealed that with 1.00 per cent increase in net area irrigated to net area sown resulting in to decrease in share of total fallow land to total net sown area by 0.27 percent. An average farmer earned more income where the share of fallow land was found to be lower in the total land viz., Bhopal (Rs.114095/year) as compared to where the share of fallow land was found to be higher in the total land viz. Mandla (Rs.66658/year). On the basis of ranking by the respondents and coefficient of variance the reason of land kept fallow was divided into most important, important and least important - The most important reasons for leaving land fallow were found to be lack of assured irrigation and uncertainty in rainfall. The important reasons were found to be left land for crop rotation, lack of expertise/experience in cultivation, low fertility of soil & lack of Interest in cultivate in unfavorable season, to conserve moisture & prepared land for next crops, not able to recover costs in farming/ low profit, lack of plough/tractor/ farm yard manure (FYM), high production cost/lack of resources, providing grazing lands for the cattle, weed infected, shocks in personal life (like accident or death of a member), lack of assured market for the produce, close mountain/forest high yield volatility in the previous years, land is not suitable for cultivation, high price volatility in the previous years, no access to credit, lack of watershed or similar efforts which could recharge ground water. Thus, utmost care should be taken so that land suitable for cultivation viz. fallow land other than current fallow and current fallow land should not be converted for the purpose of non-agricultural uses and efforts should be made to divert barren & uncultivable land which fall under the land capabilities classes V to VIII for industrial, real estate etc. purposes. These calls for government attention to frame effective and feasible land use policy in the interest to protect cultivable land from its diversion to non agricultural purposes. As increase in net irrigated area significantly reduces the area under fallow land hence, emphasis should be given to bring more and more area under irrigation. Apart from this efficient method and system of irrigation should be popularized amongst the farming community such as in situ moisture conservation, water management technologies, location specific suitable crop varieties requires less water etc. to increase the water use efficiency in a significant manner.

Dynamics of Fallow Land & Desired Argus-Eyed Measures for Revival: An Empirical Analysis of Jharkhand

Rajiv Kumar Sinha
Basant Kumar Jha
AERC, Bhagalpur

Dynamics of land use is a complex phenomenon, which is affected by several socio-economic, agro-climatic, indiscreet behavior of human being towards land for quicker materialistic gains and ecological factors.

Created as the 28th state of Indian Union by 'the Bihar Re-organization Act' on 15th November 2000, Jharkhand State had a population of 32.97 million (Census 2011) constituting 2.72% of the country's population, 28.82% forest cover leaving net area sown to only 18.87% of