



Land use planning issues in management of common property resources in a backward tribal area

Arun Chaturvedi^a, T.N. Hajare^a, N.G. Patil^{a,*}, Alka Chaturvedi^b, Arvind Mungole^b, Rahul Kamble^b

^a National Bureau of Soil Survey and Land Use Planning, Amravati Road, PO Shanakarnagar, Nagpur 440010, India

^b Dept of Botany, RTM Nagpur University, Nagpur 440010, India

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ABSTRACT

Shrinking natural resources and high population growth over last 60 years have been a matter of concern for the Indian planners. The situation is getting especially critical for communities solely dependent on common property resources (CPRs) associated with marginal lands, leading to major problems of impoverishment. The present study was carried out in a cluster of three villages in Deori taluka (administrative unit) of Gondia district of Maharashtra state, India, listed as a backward district by Planning Commission of India. Livelihood in these villages is characterized by their dependence on declining non-timber forest produce (NTFP), shrinking CPRs, low agricultural productivity, lack of soil and water conservation measures, low productivity of livestock, high rate of migration, and lack of infrastructure and credit institutions. Based on information obtained through a baseline survey, participatory land use plan (PLUP) aimed at improved management of available resources for sustainable tribal livelihood and conserve forests was formulated and implemented. Interventions like optimal rainwater management thorough community action, pisciculture, and diversified cropping were introduced. Quantitative and qualitative evaluation of NTFP was done. As a result of scientific interventions, significant improvement in land productivity and consequently economic development was noted. Two years of implementation of the plan has indicated that sustainable land use plan could not be implemented effectively without mobilization of a proactive community. The ideal way to ensure a proactive participation is to create an impact by starting with interventions where economic benefits are quickly realized and their potentials could be easily perceptible.

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Introduction

The term *common property resource* (CPR) is used in many fields like anthropology, behavioural psychology, geography, economics, political science, rural sociology and natural resources management. In traditional economic terms, as a class these resources are characterized by rivalry (one's use detracts from another's) and non-exclusivity (difficult to exclude additional users) (Randall, 1987). Common property resources constitute all such resources which are meant for common use of the communities. In the pre-British India, a very large part of the country's natural resources was freely available to the rural population. These resources were largely under the control of the rural communities. Gradually, with the extension of state control over these resources, resulting in decay of the community management system, CPRs available to the villagers declined substantially over the years. The latest [National Sample Survey Organization study \(1999\)](#) on the role of land, water

and forest commons in the life and economy of rural Indians has revealed that CPRs provide as much as 58% of fuelwood requirements and up to 25% of fodder requirements. It also provides evidence of large-scale depletion of CPRs, with CPR lands in rural India declining by almost 2% every 5 years (Goswami, 2011). Deterioration of common property resources increases the incidence of poverty level because poor people depend on forest resources. Earnings of rural people are mostly the combination of income from private property and common property resources. Reduction in common property resources reduces earnings of rural people leading them to migrate to nearby urban areas in search of livelihood. Thus, there is a link between common property resource degradation, poverty and migration (Mahanta and Das, 2012; Suresh et al., 2010). In India, the greatest decline in terms of absolute area (forest and grazing land) has been in the Central Plateau and Hills, the Eastern Plateau and Hills, the Southern Plateau and Hills and the Middle Gangetic Plains (Menon and Vadivelu, 2006). The study area (Gondia) thus represents the declining region.

In the context of Indian villages, the resources falling under CPR category include community pastures, community forests and wastelands, common dumping and threshing grounds, watershed

* Corresponding author. Tel.: +91 712 2240881; fax: +91 712 2500534.

E-mail address: nitpat03@yahoo.co.uk (N.G. Patil).

drainages, village ponds, rivers/rivulets as well as their banks and beds (Gowda and Savadatti, 2004). Unlike open access resources where people's use is on a "free rider" basis with no recognized property rights, in CPRs accessibility is exclusive with only the identified community having access to it and not others. In this sense, the resources share two broad characteristics. First, they are so large that any attempt to exclude potential beneficiaries from using them would be costly. Second, the supply of such resources is limited and consumption by one user reduces their availability to others. It is these two characteristics that necessitate collective efforts on the part of the beneficiaries for managing the resource. A large majority of over 75 billion rural population of India are dependent on CPRs for their livelihood (Pradhan and Patra, 2011) and yet the issue of land use planning in CPRs has remained neglected mainly due to the protected nature of these resources, where no change of land use is possible (as in case of forest), or the possibility of no modifications in its characteristic (as in case of village ponds, common grazing land). In practice every society has its own local level systems of resource management, which are based on the knowledge and experience of the resource users themselves (Adhikari, 2004). Land use planning issues are, however, very relevant for improved utilization of the CPR's for livelihood security. As a matter of fact, some of these CPR's play a very important role in land use decisions for their beneficiaries. Systematic evaluation of CPR's and their scientific utilization can help in significantly improving the livelihood of the inhabitants, especially in backward areas.

The planning commission of India has identified 150 most disadvantaged (backward) districts of the country on the basis of prevalence of poverty indicated by scheduled caste and scheduled tribes (SC/ST) population, agricultural productivity per worker and agricultural wage rate. An overlay of the map of these districts over the soil and land degradation map of India brings out that most of selected districts are geographically concentrated in the regions with either inhospitable terrain and/or degraded land. Many of these are regions where forest has been denuded for cultivation purpose and is inhabited mostly by tribal. The land quality being poor, there is more emphasis on the CPRs for livelihood security and tribal are often accused of illegal trading of forest produce to make a living. Gondia is one of these districts. In this paper an attempt has been made to evaluate the land use based issues in management of CPR's for their effective sustainable management to ensure livelihood security for the people living in these backward areas. The district is affected by *naxalism* movement (radical group professing communism and demanding control of forests). Among the economic issues that have been taken up by the naxal movement include land rights (for agriculture and housing), minimum wages and common property resources. Land ceiling act in India defines the quantum of land that can be held by an individual farmer. However, the federal states of India have implemented it with variable extent. The landlords invariably belonging to upper castes (upper influential section in social hierarchy) in many states continue to exercise control over excess lands well above the ceiling limits. Often they usurp village common land meant for grazing or other common purpose. Landlords have tenancy relations with marginal or landless farmers who work in the fields with share cropping arrangements. Many of them are absentee landlords. Many villagers work on their farms for wages. The arrangement over the years has created a system of exploitation and deep rooted class wars. Stated objective of the naxal movement is to restore the balance by taking over the excess lands from the landlords, distribute it to the landless/weaker people, and fight for better sharecropping or tenancy rights, housing rights especially for the tenant farmers who live at the pleasure of landlord in homesteads. Fishing rights in village ponds are also contested. The naxalites argue that local landlord always gets the fishing rights in a state held auction because other villagers are forced to allow it going unchallenged or prevented

from bidding higher. The state holds exclusive rights over forest and forest produce. Many forest dwellers practice agriculture inside forest resulting in conflict between basic livelihood rights and forest protection laws. The mining of metals and minerals and related activities inside forest are opposed by the naxalites. The disruptions stall development work frequently and thus uncertainty prevails affecting the poverty alleviation schemes and thus the vicious cycle continues. In this study, common water and forest resources have been taken into consideration mainly because of their importance in the overall livelihood of the inhabitants.

Location and other details of study area

The present study was carried out in a cluster of three villages in Deori taluka (administrative unit) of Gondia district in Maharashtra state. The villages, Salegaon, Zunzaritola and Khamtalao are part of the six villages selected for the sub-project "Efficient Land Use Based Integrated Farming System for Rural Livelihood Security in Aurangabad, Dhule and Gondia Districts of Maharashtra" in Gondia district approved by Indian Council of Agricultural Research under component 3: Sustainable Rural Livelihood Security (SRLS) of the National Agricultural Innovation Project (NAIP).

Gondia district is situated on North-Eastern side of Maharashtra state. The total population of this district is 1,200,151. The male and female population is 598,447 and 601,704 respectively. The SC and ST population in the district is 355,484 and 309,822. The literacy rate of district is 67.67% (Fig. 1).

Large part of the district is covered by forest. Paddy is the main *kharif* (monsoon) crop. The other agriculture crops are sorghum (in patches), linseed, wheat, and pigeon-pea (grown on bunds). The main profession of people is collection of non timber forest produce (NTFP), farming, and farm labour. There is no large scale industry in the district except rice mills. The district is divided in two sub-divisions namely Gondia and Deori. Each sub-division has 4 talukas, 556 Grampanchayats, and 954 revenue villages. Gondia experiences hot summers and cold winters and an average relative humidity of 62%. It receives rainfall from south-western winds mainly in the months of June, July, August and September. July and August are the months during which the maximum rainfall occurs (mean annual rainfall 1200 mm). The villages fall under Agro-Ecological Region 10.4 described as "Satpura range and Wain-ganga Valley, hot moist sub-humid climate and shallow to deep soils with loamy to clayey mixed, Red and Black soils having low to medium available water capacity and length of growing period 180–210 days" (Velayutham et al., 1999).

The selected villages (Salegaon, Zunzaritola and Khamtalao) are contiguous and located in the North Western part of the Deori taluka. The native population depends mainly on collection of non-timber forest produce (NTFP) for living. The productivity of paddy in these villages is affected by intermittent dry spells during monsoon, low fertility of soils, and lack of soil and water conservation measures, etc. Declining forest cover, shrinking grazing lands and conflicting interests in utilizing water in community tanks (CPRs) are other features. Productivity of livestock is poor. The villagers routinely migrate for seasonal employment.

Soils and land use

The cluster landform consists of lower piedmont plain and narrow valleys surrounded by low hills. Soils are in general developed from mixed alluvium and/or granite/gneiss, micaceous phyllites. Four soils were identified in the village namely, *Typic Haplusterst*, *Typic Apisquerts*, *Typic Haplusterst* and *Vertic Haplusterst* based on variation in topography. The soils in hilly region under forest are shallow to deep, excessively drained to well drained, acidic and have relatively higher organic carbon. These soils are classified

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