

## Forest CPRs and Usufructuary Rights in a Changing Forest - Base: A Case Study of Community Adaptation in the Eastern Himalaya

### ADDENDUM

#### Clarifications

The chapter introduces the research area and throws light on the importance of local natural resources in the rural economy especially for poor households. Natural resources are often communally owned and managed by poor people to mitigate the risk involved in their individual ownership. In this context a distinction is made between statutory and incentive based CPR management systems. The justification of CPR systems is based on more general issue of property rights. Since the destruction of natural resources adversely affects the livelihood security of the poor, it is important to identify how the optimal rate of extraction is determined in economic literature. Unlike other areas of economics, optimal outcome for natural resources cannot always be market determined simply because market for many natural resources output simply do not exist. The economic approach to absence of market for natural resources, and how the problem has been resolved in economics is dealt under the section "growth of natural resource economic".

The chapter outlines the literature review with focus on natural resource economics and literature on common property resources. Such separation is essential because the former review survey natural resources as they are understood in market theoretic framework, while the latter deals with nonmarket mechanisms. [It may appear repetitive because the two literatures are closely related and also same authors have contributed to both fields]. However, common property resources cannot be treated in isolation from natural resources economics literature.

In the third section, the research problem is stated: how the expanding control of the state over natural resources like forests has wrecked the institution of CPRs through curtailment of community rights on forests. Since the area studied falls under the Eastern Himalaya (forests of Darjeeling and Jalpaiguri district), the chapter also elaborates on forests of the Himalayas in general and that of the forests in the two districts of Darjeeling and Jalpaiguri in particular. The justification for considering these two districts for case-study has been made in this section.

The fourth section states the research hypothesis to be examined in this thesis. We have broadly divided the hypothesis into four separate groups of hypotheses relating to the Development Impact on Forests, hypotheses relating to Forest Resource Markets, hypotheses on Policy-related Issues, and hypotheses relating to CPRs & Participatory RMS systems. Thus the primary objective of the study is to enquire whether the definition of forests as a CPR remains valid in a situation of constantly rising demand for forest-based resources.

The methodology adopted for the study is based on the study requirements of both secondary information and primary data. Thus field survey will be undertaken of forest communities in both the districts under study while policy analysis will be undertaken to decipher the root of the research problem.

Community rights on natural resources are deeply embedded in property rights, so the second chapter has exclusively dealt with the dynamics of property rights and CPRs.

The justification for having chapters 2 to 5 is that they separately deal with various issues related to forests CPRs and usufructuary rights of the communities. The four group of

hypothesis examined in the study were all not related to the field –study. The nature of hypothesis demanded that separate chapter on property rights, forestry and forest economics, forest legislation in the Indian sub-continent and Forests CPRs in the Himalaya be separately treated in each chapters.

Chapter 3 studies how the inherent contradiction in forests valuation ignoring non-timber forest product under capital investment theoretic framework leads to sub-optimal outcome in scientific forestry. The scientific forestry pursued by the state which is an extension of capital investment theory does not consider the rural community to be a natural stake-holder of forests resources. This explains why state has always been reluctant to accept the role of rural community in forests management. Decentralisation programme like JFM is unsuccessful as found later in the study, because of state apathy towards such arrangements.

Chapter 4 examines the state policy on forests in India, with focus lying from the colonial period to the present. Lying at the core of the capital investment theory are the alternative uses that land may be put to. Like capital, land will be put to such uses where its return is the highest. Thus, forests policy cannot be considered in isolation to land use policy of the state. While the capital tied up in forests is guarded through policy of alienation of forests communities, the maximum return or revenue on land is ensured through policy of systematic diversion of forests land to non-forests use. Special statutory provisions made for administering the revenue department in the two districts of Darjeeling and Jalpaiguri have resulted in diversion of forests lands in these districts.

Chapter 5 thus enquires into the extent of loss of forests cover in the Himalayas arising from population pressure in the region. With growing population needs, the state forests over time came to be forcibly converted to *de facto* CPRs. The energy needs of the people in the Himalayas have been examined vis-a-vis the policy on fuelwood forestry. The difference in area under forests by legal status in the three regions of Himalayas namely, Western Himalayas, Eastern Himalayas and North-East Himalayas exercise considerable influence on the nature of usufruct dependence of local communities. The dynamics of resource depletion in Eastern Himalayas is different from other regions of the Himalayas and therefore, the next two chapters' studies exclusively the various issues in forests degradation and loss of forests cover.

Hence, chapters 2-5 have dealt with various research issues very much relevant to our understanding of forests CPRs and usufructory rights.

Chapters 6 & 7 have been exclusively assigned to case-study. The two districts represent different agro-climatic conditions that give rise to distinct resource dependence by the community. Chapter 6 therefore exclusively deals with state forestry in the hills of Darjeeling district. Drawing for the first time perhaps from various Forests Working Plans, Annual Reports of the Forest Divisions of the two districts we have traced how selectively the community rights were curtailed, while industrial and commercial interests were protected.

The research hypothesis has been examined using both secondary and primary data collected through our field survey. The secondary sources has been used to enquire into the land use changes, livestock & population dynamics, and forestry practises of the region that had a direct bearing on the forests CPRs of the study area.

To understand the nature of resource dependence of the rural community in the hills and plains of Eastern Himalayan region we have undertaken household survey in forests villages. For easy comparison of the household dynamics of people's participation in the forests management in the hills and plains region of Eastern Himalaya, we have not undertaken

separate econometric exercise for each district. The exercise has been done in chapter 7 and the use of location discrete dummy has been made for this purpose in our analysis. The two districts are home to various ethnic groups with their distinct culture, language, kinship and traditions. However, keeping in mind the agro-climatic differences we have broadly clubbed them as forest community in the hills and forest community in the plains. These distinct traits of a community give rise to different level of collective action. Further, at the time of our household survey, the *panchayat* system was non-functional in the hills. Due to continuous political disturbances in the hills the Forest Department provided little or almost no employment opportunities to the villagers. We have therefore under section 7.7.3 examined the issued whether under this circumstance, will a programme like JFM be able to evolve collective action for management of forests. It is not surprising that people in the forest village surveyed have less stake in the success of JFM.

The last chapter is the concluding chapter. The first section of the chapter summarises chapters 1-7. Since the hypotheses were clubbed into four groups, the research findings have also been reported under four broad groups. In the lights of our research findings the direction of future forests policy in India has been prescribed and potential issues for further research identified.

## **SUMMARY and CONCLUSION of Chapters**

### **Chapter 2: The Role of Property Rights in the Traditional Subsistence System**

The absence of property rights in natural resources has been considered synonymous to open-access or no one's property. Such forms of properties are vulnerable to "tragedy of commons". To mitigate such tragedy the traditional economic theory consider private or more reluctantly state ownership of natural resources. Community property rights were not seriously considered an alternative as community's ability to manage natural resources was seriously questioned. The collective action approach results in non-cooperation a situation analogous to Prisoner's Dilemma in game theory. This naturally raises the question, whether CPRs will be successful in managing natural resources optimally. In the concluding section of the chapter we therefore identify factors that may help to achieve a successful collective action in natural resource management. CPRs will not alleviate poverty, but help to mitigate fluctuations in income of the poor and play an active role in conserving natural resources.

### **Chapter 3: Impact of State Forestry & Settlement on Forest CPRs**

The chapter identifies the major lacunae in the forestry approaches that have led to non-identical valuations of the forests. While people living on the forest-fringes with greater livelihood and usufruct dependence on the forest appraise both resource stocks and flows on usufruct principles, Forest Departments focus on valuing steady-state flows using market principles. Since Faustmann gave his prescription for the determination of the rotation age of forests, the primary objective in forestry has been not only maximisation of timber value but also maximising the rent from land. This led to the adoption of a wrong set of priorities under state forestry. Alienation of rural community from forests became a declared policy of the state forestry. Natural vegetation was replaced by mono-culture crops to maximise timber value and forests land were diverted to non-forests use. Sub-optimal valuation of forests by the state makes forestry operations unsustainable as rate of harvest exceeds the rate of replantation. As a natural consequence, the loss of bio-diversity and forest cover threatens the livelihood security of rural community. Though state forestry has survived for centuries forests did not, and therefore the need to conserve forest through community participation

was felt. A shift in policy from alienation to participation through collective action thus manifested in setting up JFM.

#### **Chapter 4: Forest Policy & Evolution of the Community-Forest Relation in India**

The major issue considered in this chapter is whether forest legislations have been effective in conservation of forests in the subcontinent. The progress of forestry through various legislations related to forests in the Indian sub-continent has been enquired in this chapter. Each major piece of forests legislation has been critically assessed vis-a-vis enclosure of forests to create “timber mine” instead of managing the forest for biodiversity. The enclosure built on “guns-and-guards” has been a failure because the onus of preserving forests in statutory protection systems lies with the administering authority, while in community-based protection systems, the onus is shifted to the transacting agents. Thus the last two sections of the chapter makes a case for participatory management through tenurial security of forest dwellers. Enclosure of forests in most parts of the country has adversely affected the century old system of collective action based on customary law institutions. In case when both customary law and statutory law systems are found to be wanting, partial induction of property rights into usufruct management systems, like JFM, can provide a more effective way of managing the forests.

#### **Chapter 5: Forests & Forest Settlements in the Himalayas**

An important issue that this chapter enquires is to what extent is the subsistence need of the poor responsible for degradation of the forests in the Himalayas? The poverty of forests fringe-communities in the Himalaya and the marginal character of ex-forest lands on which they are settled have dictated their adoption of a mixed farming model. The effect on forests in the Himalayas due to increasing population pressure has therefore been examined in this chapter. With a high rural population and limited alternative employment opportunities, dependence on agriculture is obviously quite high in the mountains. Mixed farming in the Himalaya which combines agriculture with horticulture and animal husbandry and leads to a swelling of livestock populations, increases the dependence of these communities on forest CPRs for fuelwood, fodder and other usufructs. Absence of any policy to meet such demands of rural communities has aggravated the depletion pressure on the forests of the Himalaya. Unsustainable forest-use practices in the Himalayas were masked in the past by apparently abundant outflows of forest product resulting from mass conversion of natural forests to monocultural 'created' forests. The result was loss of biodiversity which otherwise could have been avoided under the institution of CPR. Data on forests cover shows that the survival of customary law institutions in the North East Himalaya appears to be more conducive to the maintenance of forest cover and forest quality. While forests under the Unclassed category is dominant in the North East region, in Western Himalayas almost half of the forests are under the Protected Forests category. On the contrary, almost 93% of forests are under the Reserved Forest category in the Eastern Himalaya region. Thus, forest-settlement equation in the Eastern Himalaya has been studied in detail in the next two chapters in the light of these distinctions from other regions of the Himalayas.

#### **Chapter 6: Forest Communities & CPRs in the Hill Region**

For our case-study we have considered the two districts of Darjeeling and Jalpaiguri which fall within the Eastern Himalaya. State forestry was introduced in these districts along with the rest of the country. It was only after nationalisation of forests in these districts that a huge influx of population has taken place mainly due to the encouragement of the district administration. Both the districts show similar picture of diversion of forests lands to tea and agriculture, and the forests in both the districts are situated in the north. However, the similarities of the two districts end here; while forests of Darjeeling district are in the hills, forests in Jalpaiguri are in the plains. Moreover, the administrative laws and land laws were

unique to each of these districts and differed from the rest of the country during the colonial rule. Forestry in the hills and in the plains progressed separately during the last hundred and fifty five years. These unique characteristics of the two districts require that the districts be studied separately following a similar analytical structure for easy comparison. Also the span of time considered being large, our task would be more difficult if the two districts were clubbed together for study.

Using secondary data sources we examined the land use, livestock, population and resource depletion dynamics of the region over the last two centuries. Using forests records we have identified the extent of rights enjoyed by the forests communities since the introduction of state forestry. Stringent conditions were imposed for the establishment of forests villages in the hills. Whatever benefits the villagers enjoyed was earned through provisions of free labour under the *taungya* system. While each successive Working Plans curtailed rights of the villagers, elaborate planning was made to exploit forests for commercial gains. When forests were being systematically enclosed for the villagers, more and more forests compartments were thrown open to professional graziers and timber contractors.

There was no apparent change in forestry practices after independence except that diversion of land to tea had stopped since 1960s. The maximum attrition of forests cover in the post independence period has taken place during the 1980s. The loss has been due to increase in forests working rate and also due to increased pressure on forests owing to rapid growth of population in general and urbanisation in particular. To mitigate the loss of forests cover, JFM was also introduced in this district along with the rest of the country. But, a Supreme Court's order dated 12.12.1996 on conservation of biodiversity was interpreted by the Forest Department as creation of Biodiversity Working Circle. The questions remain whether creation of Biodiversity Working Circle as proposed in recent Working Plan are meant to maintain, if not, create more restrictions on people's access to forests. The full implication of these can be understood in years to come.

### **Chapter 7: Forest Communities & CPRs in the Plains Region**

The chapter deals with how the growth of population and change in land use has affected the forests of this region. Large scale deforestation in the region has been found to be closely associated with the transfer of forest lands into alternative uses like tea. In other words, devolution of the property rights to forests to State Forest Departments is thus responsible for the depleted state of forests in the Eastern Himalaya. This chapter also throws light on the nature of rights enjoyed by forests villagers in the forests of *Duars* region of Jalapiguri. Even after the enactment of the Forests Act 1865, large scale destruction of forests had taken place in the district under the permit system of extraction followed till 1879 when the first reservation was made under the provision of Forest Act 1878. In this district, the Bengal Duars Railways was given free grant of *sal* for railway sleepers. The immediate result was huge extraction of class I *sal* trees. To reduce cost the method of clear-felling was adopted and as a result species which were more beneficial to local communities but had less or no economic value were removed. In addition there was restriction in the collection of those minor forests product which fetched value in a market. Such restrictions had impoverished the forests villagers who did not even have any agricultural surplus to sell. The welfare of these people was never a priority in state forestry, instead the system was exploitative. Extension of statutory law to forests without increasing rural access to viable alternatives to forest usufructs cannot relieve the depletion pressures on CPR resources. This led to the realisation in the eighties that without the cooperation of the local communities' conservation programmes will not succeed, and JFM was introduced to ensure participation of the local communities. To make amends of century long neglect of these communities the long isolated forests villages were also brought under the *panchayat* system. Its needs to be seen.

whether introduction of JFM and incorporation forests villages into *panchayat* system has led to the improvement of the people in these villages.

For ease of comparison a joint microeconomic study of household dependence on forests CPRs in the forests villages of Darjeeling and Jalpaiguri has been undertaken to understand how far such participatory programmes would be successful in evolving co-operation in forests management. The study also throws light on the lacunae in present forest management programme and what ought to be done to evolve a truly participatory forest management system. People's perception about JFM has been found to be negative. The programme has failed to meet the immediate needs of the poor families, since in the absence of alternative employment opportunities, the villagers find it difficult to cope with the present while waiting for anticipatory returns from forests in the distant future. Inclusion of the forests villages into the *panchayat* system had helped to get employment in Jalpaiguri district but the political disturbance in the hills deprived people from such opportunities. The dependence on fuelwood will not diminish in absence of any viable alternatives. This naturally requires a rethinking on our fuelwood policy. Suggestions and what ought to be the direction of our future policies in this context have been made in the concluding chapter.

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