CHAPTER I

INTRODUCTION
INTRODUCTION

Resource in a narrow sense refers to something which is useful and valuable and is meant to satisfy or helps to satisfy human needs. Every living being requires certain basic necessities that nature provides such as ideal environment, land, water, light, atmosphere, forest and biodiversity. The socio-economic development of mankind and its well-being depend largely on the environment and that development influences the environment. Thus, environment and development are interdependent. Now-a-days “development” has become a comprehensive word carrying wide as well as specific meanings so that both the common man and the specialist can use it in their own contexts. In fact, economic development is closely linked with the development of natural resources. These resources can be broadly classified into four categories, viz., i) private property resources, ii) state property resources, iii) open access resources, and iv) common property resources.

The term “Common Property Resources” (CPRs) is broadly defined as natural resources in which a group of people have common user rights (riot necessarily ownership rights). These include natural forests, community forests, community pastures, wastelands, common dumping places, threshing and winnowing grounds, watershed, drainage and village ponds, village lands, streams, rivers, groundwater and oceans. These may also include man-made resources like irrigation tanks, community wells and village roads.

CPRs have historically been part and parcel of India’s rural economy, culture and tradition. They play a very crucial role in the survival of the most vulnerable sections of the rural poor, who have very peripheral position in relation to mainstream economy, and meager access to remunerative income earning opportunities. CPRs provide them an array of consumer goods including, food, fibre, fodder, fuel, building materials, artisan’ raw materials,
small timber, medicinal herbs, resin, gum, honey and species for subsistence use and sale. They also provide many services of value to the people, namely space for off-season cropping, grazing, garbage disposal, animal keeping, public functions and crop threshing. CPRs further help to alleviate the problem of poverty by providing income earning opportunities, especially to poor households, to reduce unemployment through generating employment and to improve the ecological system through their sustainable use and management.

1.1 Common property resources and the rural poor in India

The rural poor continue to depend on CPRs because of the opportunity cost of the poor’s labour to harness the inferior options is still lower. Hence, there would be a progressive degradation in CPRs, especially of fuel wood and fodder (because there is no investment in CPRs). This would eventually result in a situation whereby it is not possible to extract anything, implying that the ultimate resource availability is zero. Also, decrease in fodder availability from the common lands would result in change in the livestock composition. As the benefits provided by the CPRs are not visible, their degradation also becomes invisible. The cost of abolishing CPRs, in terms of foregone opportunities for gains to the poor, would be too high to be compensated by other means. Those households owning land will be little affected as they can grow some trees in their lands to cater to the fodder and fuel requirements. The best way to balance both would be to design the mechanism so as to ensure that both the investing parties as well as the host-country and local people are made better-off.

1.2. Contributions of CPRs to Livelihood Security

The CPRs made a substantial contribution to the livelihoods of rural people, especially small and marginal farmers and landless labourers. This has particularly been the case in high risk and low productivity areas such as the arid and semi-arid regions (Andhra Pradesh report). In general terms, they have widened the range of income-generating activities available to people in rural areas as mentioned hereunder:
a) provided inputs to agriculture;

b) provided inputs to the home;

c) provided environmental services;

d) Served as a safety net for people in drought years, in terms of income generation and/or food supply.

a) **Income-generating activities:** Regular activities based on CPRs include the collection and sale of firewood, leaves made into plates and cups, fruits, grass for fodder, grass for thatching, honey and fish. Grass and tree fodder may also be fed to small ruminants, which can be a significant source of income, especially for the poor.

b) **Direct inputs to agriculture:** In India, 78.2 per cent of the total landholdings are held by marginal and small farmers. Wood from forests is used in making agricultural implements and bullock carts and in fencing off fields. For age from forests and non-forest land-based CPRs is needed to feed livestock, some of which are an integral part of the agricultural system. Drinking water for livestock is another pre-requisite for their maintenance that often comes from CPRs, such as rivers, village ponds and tanks.

c) **Direct inputs to the home:** In India the local communities have a tradition of depending on the forest resources for their living as CPRs contribute both directly as well as indirectly to rural livelihoods. Water and various fruits from CPRs are consumed by humans, while firewood is essential for cooking food. Wood and grass for thatching are used in house construction and maintenance and wood is also used in furniture-making.

d) **Environmental services:** Forests act as a sponge when it rains, regulating water flows, preventing flash floods and prolonging the period during which surface water is available. Where forests are on hillocks near to farmers’ fields they also prevent stones and poor quality soil being washed off the hillock and deposited in farmers’ fields while supplying nutrients to the fields in the form of leaf litter.
e) **A safety net for people in drought years:** Since forests are relatively resilient in the face of drought, many forest-based income-generating activities can continue when crop production has failed. In addition, some communities in forest areas fell trees in extreme drought years (but not in normal years) and sell the wood or firewood to generate income. Forests and other common lands may also be a source of emergency foods such as weeds, tubers and mammals.

Many rural households are extremely vulnerable to unanticipated hardships caused by unemployment, crop failure etc. In times of crisis the CPRs can provide valuable subsistence inputs and income-generating opportunities. If access to these lands is restricted, there may be direct conflict between local interests and any proposal to establish strict conservation areas.

1.3. **Multiple functions of Common property systems**

Common property systems will include all community-based resource-management systems. To avoid some of the anthropological complications, ‘community’ is defined as ‘resource community’- the group of people that uses certain resources. ‘Traditional’ is defined here to denote practices which have had historical continuity among a group of people. Resources involved in common property systems may be communal property or those which, although not legally owned by the community, are managed in accordance with community-based norms and rules. Common property systems have certain critical roles in local communities. These roles may be summarized under the following headings.

1.3.1 **Common Property Resources and Food Security**

a) **Food Security:** The role of CPRs in food production and filling the food gap in India has increased as a result of the management and the betterment of access to common property resources, particularly in irrigation channels. The bulk of the additional production of food grains, especially of marketable surplus, has come mainly from irrigated areas. There has, however, been some controversy with respect to the increase in agricultural production
due to irrigation because of the complementary role of seeds, fertilizers, credit pricing and other factors. It is to say that a ‘with’ and ‘without’ methodology often used for estimating the contribution of irrigation to food production shows that yields per hectare have increased substantially due to irrigation. In addition, there are gains due to increasing area under cultivation, raising cropping intensity and improvement in cropping pattern, which were made possible due to rapid development in irrigation channels. Irrigation channels are also the catalyst for the use of other inputs. Development and better management of irrigation channels are, therefore, needed for attaining the objective of food security.

In addition to that, the CPRs ensure the food security of the rural poor. As mentioned above the poor purchasing power and the food security gap are fully covered by these resources. By availing of meat, milk and milk products of the live animals for their own consumption and for earning household income from the livestock animals, their food security is linked to their own productivity in which CPR utilisation pattern plays a critical role.

b) Empowerment: the poor, who had significant and substantial stakes in the CPRs which were governed within the framework of the common property management, found that when they were given private land ownership, its productivity was declining. Jodha (1996) also found that in the post independence era, new markets opened for some of the CPR products resulting in over or unsustainable exploitation of the resources. His studies revealed that CPRs had contributed significantly towards employment and income of the poor where per household income ranged between Rs.530 and Rs.830 in different areas. During the Sixth Five Year Plan period (1980-85) households earning less than Rs.4,800 per year were considered the poorest of the poor among those living below the poverty level income, which was Rs.6,400 per annum. Thus, the proportion of income from CPRs to total income rendered between 11 and 17 per cent in the case of the poorest household (Rs.4,800) and between and 13 per cent in case of poor households (Rs.6,400).
Ribot (1995) Senegal and Andersen (1995) reported how wealthy and influential villagers in control of supposedly democratic forest councils are able to use state resource laws for their personal benefits. McKean (1992) also reached a similar conclusion that distribution of benefits in collective action is often resulted in inequalities in private wealth and asset holdings.

c) Poverty Alleviation: as already discussed, the dependence of poorer household on CPRs is still a highly contested issue. It has been often argued that poor people extract more natural resources due to greater reliance on the natural resource base and also due to their high social discount rate. On the other hand, scholars posit that compared to the non-poor, the poor may depend more on the commons in relative terms, but in absolute terms their dependence is lower (Dasgupta, 1993), particularly for resources with good market opportunities. Consistent with growing theoretical literature on common-property resource management, there is a large quantum of empirical research in India dealing with the dependence of the poor on the CPRs (Jodha, 1986, 1995; Beck and Ghosh, 2000). Beck and Nesmith (2001) noted that common property resources contribute about 12 per cent to the household income of poor rural households. In his study of common pool resources in West Bengal, India, Beck (1998) observes that access to CPR by the poor is gradually decreasing across all study villages and agro-ecological regions.

In their study of CPRs in different states of India, various authors found that CPRs contribute 1.1 percent to 22.1 per cent, 10 percent, 27.3 per cent and 12 per cent of the income of poorer households in Gujarat, Karnataka, Punjab and West Bengal respectively, while this figure for non-poor/cultivating households was 0.1 to 11.4 per cent, 6.2 per cent, 22 per cent and 0.13 to 5.62 percent in those states (Iyengar and Shukla, 1999; Singh et al., 1996; Beck and Ghosh, 2000). In a study of 29 villages in South-Eastern Zimbabwe, Cavendish (1998 & 1999) arrived at even larger estimates. He observes that the proportion of income based directly on the commons is about 35 per cent. Based on a
qualitative assessment of biomass products in Maranhão and Brazil, Hecht et al. (1988) concluded that the products offer support to the poorest of the poor, especially the women (Manikandan, Rao and Nehru, 2004).

1.3.2 Common Property Resources and Environment

a) Health: The World Health Organisation (WHO) estimates that 80 per cent of all incidence of sickness in developing countries can be traced to water and sanitation related causes. The prevention of infections of such an origin is one of the most important objectives of health and sanitation programmes in India. Human excreta should be disposed of in such a manner as to avoid direct or even indirect problems. According to Central Statistical Organization, in 1998, only 3.15 per cent of the rural population had access to sanitation services. In other words, 600 million people living in rural areas do not have access to toilets of any type. It is a fact that disease is a challenge to a developing country like India. The poor management of the common property resources such as public toilet, drainages and the drinking water are causes for disease in the rural areas. Better management of these resources will give a pollution free and diseases free environment to the nation.

b) Environmental services: Forests act as a sponge when it rains, regulating water flows, preventing flash floods and prolonging the period during which surface water is available. Where forests are on hillocks near to farmers’ fields they also prevent stones and poor quality soil being washed off the hillock and deposited in farmers’ fields while supplying nutrients to the fields in the form of leaf litter.

1.4. Services from common property resources

Common property resources also provide important services by playing a crucial role in regulating the hydrological cycle, contributing to soil fertility through nutrient cycling, helping conserve biodiversity, as well as serving as sinks for greenhouse gases. There is a spatial dimension to these service
functions: some benefits may be local, as in the supply of irrigation and nutrients to local agriculture (Kumar 2001) others may benefit resource users downstream, such as the impact of land use on water availability in a catchments (Nathan and Kelkar 2001) while some functions may be global, such as biodiversity benefits or carbon sinks.

Resource management issues become considerably more complex since ‘internalisation’ of such externalities will require the creation of a system of financial transfers between downstream beneficiaries and those whose local resource use practices ensure the continued flow of these services. Schemes such as the farm management programme in upstate New York, which was initiated due to concern over water quality in New York City (Gandy 1997), suggest that partnerships between regulators, upstream resource users and downstream beneficiaries may well provide a way of managing resources in order to capture some of these ecological service functions.

Given their linkages with production and consumption systems, the dynamics of common property resources cannot be studied in isolation from other processes that affect the economy. For instance, in India, as Figure 1.1 shows, other land uses affect the service functions of common property resources, most importantly in the regulation of the hydrological cycle. Fertiliser and pesticide use associated with agriculture have impacts on water quality, as does domestic and industrial water pollution from urban centres. Demand for water is determined to a very large extent by agricultural needs as well as the needs of urban consumers. Watershed management strategies, which incorporate specific types of common property resource use, may need to adapt to these pressures on the demand and supply of water. Management systems for these resources need to recognise these wider linkages and to create suitable frameworks within which the interests of diverse stakeholders can be accommodated.
Patterns of resource use may be impacted by factors that are operating at a much broader level, such as overall economic growth rates (leading to changes in demand for common pool resources) shifts in the structure of production (from the primary to the tertiary sector) as well as new research that results in the identification of new products and exploitation possibilities. Demographic factors may be particularly important: overall population growth is likely to affect demand for common pool resources, but the structure of this growth may also be relevant. Increases in rural-urban migration are likely to alter the nature of consumption demand for common property resource-products, but will also change the availability of rural labour, which may have an impact on household production strategies. The incidence of poverty is also likely to be an important factor, since most estimates suggest that the rural poor, especially the landless, disproportionately use common property resources (Rao, Manikandan and Walter, 2005).
1.5. Statement of the Problem

Field studies, covering a variety of countries and resources, have reported a vast array of local informal organizations, rules and enforcement mechanisms developed to manage common property resources. This literature has uncovered many interesting findings, although much of it suffers from selection biases because only resource systems and communities that still exist are available to be studied today and, furthermore, sometimes researchers may purposively sample relatively well-managed resources for case study sites (Baland and Platteau, 1998). Generally, not all local rural communities display successful (informal) management of common property resources, but neither is there general failure. In fact, there is substantial variation across time and space in the ability of villagers to manage their collective resources. Although much remains to be learned about the determinants of success at CPR management, several stylized facts seem to be emerging from the case studies.

First, there is some evidence that smaller groups are more likely to manage CPRs, in conformity with Olson’s (1965) predictions. For example, Ahuja (1998) using satellite imagery, found substantial inefficiency in land use in Cote D’Ivoire. Small villages, however, were less inefficient.

A second point emerging from field studies is that collective action for resource management is more likely the larger are the potential gains from cooperation, that is, when the community depends on the resource for a substantial share of income and potential losses from over-use and resource degradation are large (Wade, 1988). This result is intuitive from a supply and demand perspective: the larger the gains from cooperation, the more likely is it that the benefits exceed the costs of organising collective action.

Third, misguided outside intervention, especially by the state, may lead to break-down of traditional management systems. Thus, when colonial and independent governments have nationalised natural resources, it has often led
to collapse of existing CPR management systems because local authority structures governing resource use were undermined (Bromley, 1991; Ostrom et al., 1994; Ostrom, 1990). Governments have been unable to implement effective management of the nationalised resources, sometimes leading to severe resource degradation.

The failure of governments as CPR managers is partly caused by government agencies’ lack of detailed local information, reinforced by the fact that the nature of many resources makes central monitoring difficult and costly. Furthermore, when outsiders have imposed new resource management institutions, these institutions have often lacked local legitimacy and credibility. Consequently, collective action has not come forward, and pervasive encroachment on resources has often been the result. Policymakers have paid insufficient attention to local institutional, cultural, technical and natural environments and the complex subtleties shaping incentives for informal resource management. Therefore, interventions seeking to improve the resource situation through tenure reform have, on a number of occasions, had adverse effects (Molnar, 1990). Other research has shown, however, that villages that have received substantial external intervention from NGOs and other have much larger labour contributions to maintenance of common land and water resources (Chopra and Gulati, 1998).

Forth, there is a complex relationship between common property and equity. The impact of group inequality on the likelihood of collective action is ambiguous. On the one hand, inequality among users in income or production capacity may induce distrust. Thus, inequality and distrust can lead to conflict, suspicion and reluctance to abide by agreements. In general, some degree of trust among community members is necessary for inducing collective action and compliance with rules unless monitoring and enforcement is easy (Platteau, 1992). For example, some regions in India have a long history of conflict between high and low caste villagers. High caste villagers have appropriated common property resources for their personal benefit, leading to general
distrust in the management of CPRs and consequent attempts at encroachment by low caste people (Agarwal, 1994). Similarly, Ribot (1995) for Senegal and Andersen (1995) for India report how wealthy and influential villagers in control of supposedly democratic forest councils are able to use state resource laws to their personal benefit and to the detriment of the poorer and powerless resource users, often the women. Nugent (1993) notes that local organizations and institutions can suffer from the same problems of rent seeking and ensuing inefficiency that sometimes plague politics at the national level.

These examples show that economic and political inequality and rent seeking sometimes undermine the effectiveness and efficiency of local institutions, which do not always secure equitable and fair outcomes. On the other hand, inequality can sometimes increase the likelihood of collective action. A single Targe’ resource user may find it profitable to provide the public good privately, whether it is resource management or physical investment. This is the case when the large user can appropriate a sufficiently large share of the benefits from the public good to cover the costs of provision (Baland and Platteau, 1997).

Although local CPR management is no panacea for achieving equity and sustainability, common property resources often appear to be shared in an equitable manner. Jodha (1992) presents data for India indicating that the poor rely on common property resources for a larger share of their income than the wealthy, making such income inequality decreasing. The reason for this is that the poor have a lower opportunity cost of time and therefore readily work in low productive common property resources. In rural parts of Sub-Saharan Africa, common property farm land, pastures and other resources often provide social security and substitute for missing insurance markets.

It needs to be acknowledged that resources under common property can serve vital economic functions that individual property can not. Not only may common property display lower transaction costs compared to private property
under certain circumstances. CPRs role as insurance substitute often depend on secure and easy access to geographically dispersed resources. This is the case for management of resources where yields fluctuate widely across time and space. Herders in the arid and semi-arid tropics thus rely on common property to a very large extent because of the large spatial variability in rainfall, water and pasture, which makes it crucial to have access to very large areas Nugent and Sanchez (1993 and 1999). The argument extends beyond herding. Mccloskey (1975) argued that plot scattering of peasants in medieval England was provided an insurance substitute against rainfall risk, something that would not be achieved with consolidated land holdings. Blare 1 et al. (1992) have made the same point with respect to present-day farming in tropical areas, where scattering plots across microclimates (for example at different altitudes) hedges against rainfall risk. A similar argument could be made for fisheries and hunting. Individual property rights are not only cumbersome and hard to enforce in many cases, but would also ignore the need for fishermen and hunters to move spatially in search for movable stocks of fish or animals. In fact, Nugent and Sanchez (1993) argue that tribal institutions and chiefs play a larger role in herding as compared to agricultural societies because they fulfill crucial CPR management functions in herding communities requiring a large degree of flexibility for risk management.

The conclusion is that common property systems deserve respect for their management, equity and insurance functions. Policymakers should refrain from undermining common property systems, and should consider providing them with legal recognition and other forms of support. A major outstanding issue is whether common property institutions can be purposively created or induced by policymakers and donors to undertake resource conservation in circumstances where sustainable management techniques have failed to emerge spontaneously.
CPRs are critical to sustainable livelihood strategies of the poor in India ranging from direct visible contributions in terms of supplying physical items like food, fibre, fodder, fuel, timber etc. to less valuable gains implied by sustainability of farming systems, renewable resource supply, drought period maintenance etc. in arid and semi-arid regions in India. CPRs contribute between 12-25 per cent of the poor household’s income. It is a fact that the poorer the households, the more important is the contribution of CPRs. Moreover, CPRs contribute to rural equity because they are accessed more by the poor than by the rich.

Despite the contribution made by CPRs to the livelihood of rural poor, these resources have remained one of the most neglected areas in development planning in India. Common Property resources currently add some US$5 billion a year to the incomes of the poor rural households in India, or about 12 per cent to household’s income of poor rural households. This is about two and half times total World Bank lending to India in fiscal 1996, about twice foreign direct investment in India in 1996, and more than twice the amount of official development assistance in the same year.

In the Indian context, it is especially important as still 78 per cent of the rural people and 30 per cent of the urban population is dependent on fuelwood and chips as their main fuel. In certain pockets of the country, CPRs are providing the basis of income generation for households with multiple options, quite distinct from role as providers of subsistence incomes. This points towards the possibility of a new role for CPRs in the context of market oriented development, a role that has significant implications for the paradigm development with (and through) conservation. It can be argued that if people view the commons increasingly as a potential source for enhanced well-being, their role needs to be reconceptualised. Changes in the importance of different CPR functions, could lead to different kinds of shifts in the control, governance and conflicts over these resources. The heavy dependence of the rural poor links these resources to the dynamics of poverty and to development
interventions centred on the poor. Therefore, any change in the status and productivity of common property resources directly influences the economy of the rural poor.

In the “Tragedy of the Commons” written three decades ago, Hardin argued that the eventual fate of all resources held “in common” is over exploitation because access is unrestricted and there is no incentive among individuals towards resource protection (Hardin, 1968). However, critics now assert that Hardin’s thesis does not properly distinguish the type of property regime susceptible to such a process, arguing that it applies not to “common property”, but to “open-access” regimes. Common property is now generally defined as a system where “the resource is held by an identifiable community of users who can exclude others and regulate use” (Berkes et.al., 1989).

A number of welfare and development interventions have had severe negative side affects on CPRs. During the five years period of 1992-97 itself, around 833,000 ha (around 2 per cent) of the CPR land has been lost (NSSO, 1997). Such declines in CPRs have also been noted that the poor households are losing access to CPRs. The extent and decline between the mid-1950s and 1980s was between 26 per cent and 52 per cent are mainly due to the primary factors behind the degradation of CPRs as undeclared regressive state policies, encouraging privatisation and neglect of CPRs.

The globalization brought changes in administration pattern through centralized control over the general management. The Impact of globalization on the common showed various patterns of ownership, control, use and misuse. The commons are subjected to degradation as well as conservation in process of centralized management. After independence, the administration of natural resources came into the hands of respective specialized department for example forest department and Revenue department. All the land apart from private land was regarded state property and controlled by the state. Globalisation creates an impact on the local cultural domain and this interaction is an ongoing process. Different cultural unit feels the effect of globalization
differently. The larger cultural units imbibe it, while the small scale cultural unit confronts it, though gradually most of the times succumbs to pressures. In case of management of natural common, globalization affects local cultural units managing it into many ways. This is because of the process of management of commons in small scale societies vary in degree and kind. It has variety in management practice. For example, commons for livelihood issues are managed differently and commons for religious purposes (which has psychological attachment, and belief system) are managed differently. The religious commons play a vital role in local culture and are conserved and managed for psychological strength it give to the village social system. Most of the common resources in the small-scale societies have multifunctional. It has a manifest function as well as latent function in common management. Moreover, it is quite common that the CPRs are mostly used by the dominant sections of the society and the poor people are rarely allowed to enjoy the benefits form the CPRs. At this backdrop, the present study was carried out to understand the village level evidence in the study area regarding the dependence of poor households on common property resources the extent of which has been declining during the process of globalization; and to identify whether or not the CPRs have any relevance in providing livelihood security for the rural poor in the study area.

The Study has been carried out with the following objectives

**Objectives**

i) To identify the common property resources in the study area;

ii) To examine the poor people’s use of and access to common property resources in the study area;

iii) To identify the contributory factors for incapacitating the poor people in using the common property resources in the study area; and

iv) To suggest suitable measures of just utilization of the common property resources by the society.
1.5.1. Hypothesis

i) The resource use, benefit sharing and distribution of income derived from common property resources do not differ in accordance with socio-economic status of the resources users and their wealth endowment.

1.5.2 Nature and Scope of the Study

This study is mainly regional and explorative in nature. But, since the current pattern of different aspects of CPRs can only be understood by examining the use pattern, it is essential to analyse CPRs in social relevance. Hence, the nature of the present study is also temporal to certain extent. The study is not only explorative, but analytical also. The approach followed is interdisciplinary.

As the CPRs are of wide domain and of several varieties, defining the scope of the present study, at the very outset, is necessary. Only local common property resources and other contributory factors related to them have been investigated in the present study. Amongst the local CPRs, the nature and utilization patterns of natural and man made CPRs vary in several ways. Thus, this study analyses the existence of the local commons. The very nature of problem of stock and flow natural resources differs. The present study is carried out with an attempt to identify the contributory factors like caste, low income and ignorance that incapacitate the poor people in using the CPRs and also to find out the factors that contribute for the dominant sections of the society to have control over the CPRs. This study has highlighted the major factors impinging on the CPRs use pattern such as caste hierarchy, richness and political power. The study is an attempt to understand the dimensions of disequilibrium in the access to CPRs in the study area.
1.5.3 Study Area for Empirical Analysis

Dindigul District has been selected as the area for empirical analysis presented in this research. This district is located in southern part of Tamil Nadu between 10°05 and 10°09 North latitudes and 77°30 and 78°20” East longitudes.

1.5.4 Location of the study villages

The geographical location of all the six blocks (twelve selected villages) are located in the Dindigul District and they are clearly indicated in the map of Dindigul District (PI. see the Map. Fig. 1.2).

1.5.5 Justification and Relevance of the Study

The present study highlights the importance of CPRs in the Villages. The Government built as well as restructured the CPRs in the Villages through Various development programmes. In this context, the present study made an attempt to probe in to the following questions, a) Are there any deficiencies in the access to CPRs? b) Why the resources have been under utilized or over utilized? c) Who are exploiting the common resources and their quality.

METHODOLOGY

1.6.0 Research Design

The research design for this study consists of a study conducted on the basis of a stratified random sampling technique in Dindigul District of Tamilnadu. This research is exploratory in nature and uses qualitative and quantitative methods at individual and community level.

The present study is mainly based on the availability of information on common property resources in Dindigul District and their use pattern and the benefits accruing from CPRs. Keeping in view the objectives of the study, the different sections of the social groups were contacted and necessary information was elicited from the respondents through interview method in the study area.
Fig. 1.2. Location of the study area
1.6.1 Sample Design

The sample design for the study is to select two revenue divisions in Dindigul District though there are three Divisions in Dindigul District viz., Dindigul, Palani and Kodaikkanal. The Kodaikkanal Division was not taken for the present study due to the following reasons.

1. Kodaikkanal division is fully covered by the hilly-forested area.
2. The forest cover is fully controlled by the Forest Department

In Palani revenue division, there are 6 Blocks out of which 3 blocks were chosen on the basis of the availability of all identified natural and man-made CPRs (reasons for leaving other block). Similarly, out of 7 blocks in Dindigul Division 3 blocks were chosen on the basis of the same criteria. Therefore, finally 6 blocks viz, Dindigul, Natham, and Reddiyarchatram from Dindigul revenue division and Vadamadurai, Palani and Thoppammpatti from Palani Revenue division were identified.

Out of these 6 blocks, two villages from each block were randomly selected on the basis of the availability and Utilization of CPRs. Further, from each village 25 households were selected by stratified random sampling. So that the total number of respondents worked out to be 300.

1.6.2 Sample frame

The list of census villages of the Dindigul district was collected along with the Block-wise details. The panchayats were randomly selected for the samples and each panchayat covers only 25 respondents. Some of the panchayats, Akkaraipatti panchayat in Thoppammpatti block, Avichipatti panchayat in Natham Block are include more than one hamlet as a sample village.
a) Selection of First-stage Sample

There are 14 blocks in Dindigul District out of which 6 blocks were selected randomly.

b) Selection of Second-stage Sample

Block wise list of all the villages in Dindigul district and the details of the villages as per 2001 census were collected from the District Collectorate. In block-wise panchayat details were collected and ordered in a form and randomly selected two villages for the study.

Figure 1.3

1.6.3 Sample size

A total 300 households was covered in this study by taking 25 households from each selected village. The details are given in the table 1.1.
Table 1.1
Selection of the Sample

<table>
<thead>
<tr>
<th>Revenue Division</th>
<th>Selected Blocks</th>
<th>No. of sample villages</th>
<th>No. of Samples</th>
</tr>
</thead>
<tbody>
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<td>Dindigul</td>
<td>Dindigul</td>
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<td>50</td>
</tr>
<tr>
<td></td>
<td>Reddiyarchatram</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Natham</td>
<td>2</td>
<td>50</td>
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<td>150</td>
</tr>
<tr>
<td>Palani</td>
<td>Thoppampatti</td>
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<td>50</td>
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<td></td>
<td>Palani</td>
<td>2</td>
<td>50</td>
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<tr>
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<td>Vadamadurai</td>
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<td>Total (2)</td>
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<td>Total (1+2)</td>
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<td>300</td>
</tr>
</tbody>
</table>

1.6.4 Data Base

The data base for this study consists of both primary and secondary data.

a) Primary data

The primary data was collected from the sample households by administering a pre-tested structured interview schedule. Informal discussion with respondents and field observation were also followed as other methods to elicit further information from the respondents.

b) Secondary data

The secondary data consisted of the information available at the block level and district level regarding the availability of CPRs. These data were collected from the district statistical reports and block profiles. Necessary data and literature were also collected from various Government reports, research publications, books, journals and also from relevant websites. Demographic data like caste composition, and economic status and particulars about land use pattern were obtained from secondary date sources.

1.6.5 Data Analysis

The data collected from primary and secondary sources were analyzed using both qualitative and quantitative methods depending on the nature of the data and were interpreted by employing appropriate statistical tools. The descriptive statistics such as mean, standard deviation including the
frequencies and percentage were considered for the analysis of qualitative data. Computer softwares like SPSS and Microsoft Excel were used to process the data.

### 1.6.5.1 Statistical tool used

Qualitative analysis was done by employed the following descriptive and analytical statistical tools.

**a) Descriptive statistics**

Descriptive statistical tools like frequency, percentage, mean and standard deviation were used to analyse the primary data. Bar chart and graphic presentations were also applied for the respective analysis and presentation.

**b) Analytical statistics**

For analysis the data, simple classification and tabulation technique have been adopted. Wherever necessary, certain statistical techniques like averages, regression analysis and ‘t’ test have been used.

### 1.6.6 Reference period

The data were collected from a sample of households by interview method. The survey period for the study is January 2005 to may 2006. The enquiry on CPRs was conducted with different reference periods. First, all data pertaining to area under CPR land were collected for the period of 2005-06. For the data on use of and access to CPRs, the period of current year was generally taken as the reference period.

### 1.6.7 Significance of the study

The economic process is sustained by a flow of low entropy (high quality) energy, materials, and ecological services from the environment. Collectively, these resources and services are called as Common property resources and considered as natural capital. Not only the natural resources, but it includes also the man-made natural resources such as ponds, tanks, drainages etc., which are called as man-made common property resources.
In poor countries common property resources make a valuable contribution to the sustainable livelihoods of rural populations. An inadequate rural employment opportunity, especially in the slack season, implies that the local commons can make substantial contributions to household incomes. Another important function of local common property resources is that they act as insurance against uncertainty in the absence of complete contingent markets. Access to such resources serves to prevent risks associated with natural disasters and crop failure. Furthermore, for landless populations, access to local common property resources may be the only available non-human asset. At this backdrop, the present study will be highly useful for suitable policy formulations.

1.6.8 Limitations of the study

As the CPRs area wide domain and of several varieties, defining the scope of the present study, at the very outset, is necessary. Only local common property resources and other contributory factors related to CPRs have been investigated in the present study. Amongst the local CPRs, the nature and utilization patterns of natural and man made CPRs vary in several ways. So this study analyses the existence of the local commons. The very nature of the proble of stock and flow of natural recourse differs. The present study is carried out with an attempt to identify the contributory factors like caste, low income and ignorance that incapacitate the poor people in using the CPRs and also to find out the factors that contribute to the dominant sections of the society having control over the CPRs. This study has highlighted the major factors impinging on the CPRs use pattern such as caste hierarchy, richness and political power. They study is an attempt to understand the dimensions of disequilibrium in access to the CPRs in the study area.
1.6.9 Chapterisation of the Study

The thesis divided into seven chapters. The first chapter deals with the importance of the problem, the need to tackle it on a priority basis, the objectives of the study, and the methodology of the study and the broad framework of the sample. The second chapter offers the theoretical framework of the most important concepts within the institutional economics. The third chapter is devoted to the presentation of a detailed review of literature on the interrelationship between CPRs, physical supply of products, income generation, degradation of natural resources and management institution relating to the CPRs. Chapter four examines the spontaneous evaluation of land tenure and their perspective on common property resources in various countries including India with special emphasis on Tamil Nadu. Chapter five focuses the profile of the study area. The sixth chapter presents the results of the study relating to the availability and use pattern of CPRs in the study area and their access to the sample households on the basis of the socio economic background of the sample households. In the seventh chapter - last chapter summary, findings, conclusion and suggestions, and areas for further research are presented.

Reference


