CHAPTER III

REVIEW OF LITERATURE
3.0 Introduction

CPRs have been an Integral part of the economy and ecology of local communities in India from time immemorial, but they could not attract the attention they deserved. However, in the fast few decades a lot of literature of CPRs in India. Due to interdisciplinary notion of the CPRs the concerning literature is spread over disciplines. There is an urgent need to structure and assess the available literature and to shed some light on where we stand today, taking a broad view of what has been achieved by scholars belonging to different disciplines. For it, the available literature on the significance of CPRs is concentrated mainly on the direct contributions of these resources to the household economies of local communities and their significance in the sustainability of rural ecosystem has not attracted much attention. For a more critical analysis, the literature on significance of CPRs is regrouped into four sub-themes: (a) Livelihoods and supply of physical products, (b) income and employment generation, (c) the extent and depletion and (d) management and access to CPRs.

3.1 Livelihoods and supply of Physical product

Blaike et al (1986) have presented a case, failure of bureaucratic regulation as a means to control degradation of CPR-land in Tamil Nadu, where all formerly CPR-land has taken under state control. The rules to regulate the use of CPR-land are partial and often unclear leaving a great deal to the discretion of field officers in matter of enforcement, and hence are prone to manipulation by those with local power and generally work in there favour. Consequently, lot of illegal uses and encroachments are frequently facilitated by bribery to state officials take place. As the interaction among users is drastically limited, highly individualistic patterns and competition characterize
CPR-use. The bureaucratic regulations on CPRs has resulted in a widespread or severe shortage of domestic fuel, a severe pressure on grazing land, and the marginalization of poor which in turn has led to increased use of CPRs and their encroachment. The CPRs offer various livelihood opportunities that have been either not pursued or inefficiently pursued from the viewpoint of Poor’s welfare.

Jodha (1986) revealed that the CPRs is significant for survival of poor people, about 84 to 100 per cent of them collect fuel, food, and fibre items from these resources. Where as lower proportion that is 10 to 28 per cent of large farmers are also depend on CPRs for the biomass resources. The proportions of households who procure higher (42 to 89) per cent among large than small farmers (19 to 41 per cent). Moreover, it has also revealed that the various items (6 to 12 in case of poor and 3 to 5 in case of large farmers) including fuel, fodder, various wild fruits, roots, leaves and bark of plants, gum, honey, fish, small gum, silt, clay etc. are collected from the CPRs. The extent of dependence for domestic fuel, 66 to 84 household fuel in the poor and 8-32 per cent in the rich (large farmers) households are provided by the CPRs. CPRs have also been found to provide grazing materials and space to 69 to 89 per cent of the total animal unit grazing days in case of poor households and 11 to 42 per cent in case of rich households.

Jodha (1987) has studied the significance of CPRs in the arid and semi-arid regions of India, has found that the CPRs accounted for 8-9 per cent of food intake in the poor and about 4 per cent of the better off households. Though it has not directly dealt with CPR—contributions, has presented interesting data on proportion of animal grazing days on CPRs in one village each in Nagaur, Jodhpur and Jaisalmer districts of western Rajasthan. The livestock of these villages grazed more than 84 per cent of the total animal grazing days on CPRs during 1963-64 and 1977-78.
Mishra and Sarin (1987) observed that the community based management systems was tried by construction small earthen dams in the Sukhomajri village and providing water from them for irrigation, which increased the crop productivity tremendously and thus created community’s stake in restricting grazing in the catchments of the dams.

Brara (1989) has found that the individual citizen can now by pass the gram panchayat in appeal for a common use. It others the livelihood option to the poor households through livestock rearing. For the small-holder-cum -livestock-reared in Rajastan, the characteristic for pattern of agrarian adoption is based on deploying private lands largely for cultivation while livestock is grazed on common pastures. Moreover, the lands that were deemed uncultivable had greater ecological potential for pasturage that benefited many instead of the current allotment for private cultivation or afforestation that benefited few. It is equally true for cultivators-cum- livestock rearers in both arid and other districts.

Iyengar (1989) conducted a study in five different geo-physical regions of Gujarat have revealed that only a limited flow of products from CPRs. The cattle grazing and fuelwood collection have been identified as the main contributions of common lands. It has revealed 45-76 per cent of the households utilize CPRs for open grazing, and 35-66 per cent for fuelwood collection.

Nadkami et al. (1989) revealed that the CPRs are providing large quantities of fuel-wood, grass, straw, milch manure, fencing material and timber in the forest based villages of the Western Ghats in Karnataka. The forest dwellers’ dependence on CPRs is so high that 95 per cent of the total fuelwood consumption during 1985-86 was met from this area, net cultivation as the imputed cost of leaf manure, fencing material, fuel wood for area cannot processing and farmyard manure collected form the CPRs. About one third of
the total cost is governed by the CPRs. They depend the CPRs mainly for free grazing and fodder is so enormous that supply about 75 per cent of the total grassing and constituted about 67 per cent of the total imputed fodder cost.

Singh and Ballabh (1988) evaluated that the village woodlot scheme in Aslali village near Ahmedabad, Gujarat found that this scheme financially viable (1:73 benefit cost ratio and 28.71 per cent internal rate of return at 15 per cent discount rate), but socially undesirable as the forest officials consider it the extension of forest area and mange it in highly bureaucratic and techno-economic fashion. From the survey of 70 villagers and some *panchayat* officials, the study has found almost no involvement of villagers as well as *panchayat* in the establishment and management of woodlot. Most of the people, especially poor cattle raisers, who have lost the grazing benefits have been found its staunch critics.

Chopra et al (1990) found that the CPR income accounted for more than 25 per cent to the total income of the poor households and 22 per cent of the total income of non-poor households. One of the major CPR based activities that of fuel wood collection, was mainly performed by adult male members of the family.

Jodha (1990) has found that the complementary role played by CPRs in crop production in five districts of the dry tropical zone in India. About 31 to 42, 11 to 16 and 8 to 11 per cent of the total own farm inputs of poor farmers from the CPRs in pre sowing to pre-harvest, harvest and post-harvest stages, respectively. Still a greater dependence of small and marginal framer’s crop farming on CPRs has been revealed by the extent of support it receives for sustenance of drought animals and it has estimated that the maintenance of such animals on the private land means shift of 48 to 55 per cent of cropland to fodder crops.
Arnold and Stewart (1991) revealed that the depletion and degradation of CPRs threatened the long-term sustainability of the natural resource endowment of the country, and have increased the hardship of the poor people whose basic survival invariably depends on these resources. Some of the location specific facets of these implications have been noted in the case studies reviewed in the following section, but much still remained unfolded.

Jodha (1992) found that adapting traditional indigenous institutions today’s developments demands not a simple question of adopting existing local institutions to a different context and it explaining that the role of common property resources in rural society has suffered severally from theoretical bias. He stressed that to succeeded, a strategy of protection and developing common property resource must extend well beyond user groups and grass roots organizations.

Pasha (1992) has found that the CPRs are contributing about 63 and 72 per cent of fuel wood and fodder consumption, respectively, in three villages of Chitradurga and Tumkur districts in Karnataka. The poor people (landless and marginal farmers) derive higher proportion of their biomass requirements than the rich households in these villages.

Partap and Qureshi (1993) revealed that CPRs are the single source of fuel wood to the 98 per cent of households in Garhwal and Kumaon districts of Uttar Pradesh. They fulfilled above 75 per cent of the households in Himachal Pradesh, has affirmed that the hill men enormously depend on common property resources for the fodder, fuelwood, timber and herbs etc., an average household in this region seeks about 85, 86 and 90 per cent of the timber, fodder and fuelwood requirements, respectively from common lands.
Sharma (1993) conducted a survey in the Aravalli Region of Haryana and he identified, the CPR-land is the main supplier of the fuelwood and fodder needs of the village communities. The CPR contributed about 67 per cent of fuel wood consumption in higher income groups that increases to 100 per cent as income of the household.

Beck (1994) the gleaning of rice grain from seasonal fallows has been found as a major contribution of CPRs to the sustenance of poor in West Bengal. Minor Forest Products (MFPs) are gathered widely by a large number of households. It has found that almost all poorest households met their fuelwood requirement of whole dry season and some part of monsoon season from CPRs. The animal grazing on CPRs for four to six months in parganas district and all the year over in the villages in Midnapore district of West Bengal.

Shahoo and Misra (1994) who conducted a study in three fishermen’s villages in Gunjam district of Orissa found that a large majority of the fishermen’s households (56 to 75 per cent) depend solely on fishing from the CPRs. Though the CPRs do not provide much grazing benefits in these villages, the firewood requirements of the large proportion of landless households (55 to 72 per cent) are met from these resources. Moreover, it has the CPRs also provide some minor products like shells of molluses and flowers of Pandanus in these villages.

Kurian and Vijayan (1995) have revealed that the fish for consumption of the household of all of those associated with the fishing unit, it can be said that the karanila system has ensured that the nutritional status of a larger number of persons has been taken. Moreover, it is also found that the pathway to socially undersigned levels of capital deployment and energy and most certainly lead to economic and biological over fishing by investing on the common property resources in Kerala.
Singh et al. (1996) revealed that the CPRs are the main providers of biomass requirements of a significant proportion of households. This study as brought out that about 11 per cent of the cultivating households are using common arable land for crop production, about 62 and 88 per cent of landless and cultivating households, respectively, obtain the fodder grasses from the CPRs, about 89 per cent of landless and 88 per cent of cultivating households get firewood from the CPRs, and about 60 per cent of the landless as well as cultivating households are grazing their livestock on the CPRs. Moreover, it provides 46 and 84 per cent of the total fodder and fuelwood requirements respectively in siwalik region of Punjab state.

Bokil (1996) has made an attempt to analyze the privatization of common property resources, and it degraded, and he found that these are happened mainly due to the instantly and weakness of the government in the late 1980s. The mismanagement of the panchayats leads the illegal felling of trees in the common lands. He mainly found that, the rich and powerful sections of the society can enjoined with these CPRs and the Dalits, and the weaker sections of the society are not allowed to use the CPR lands and they are suffered for this livelihood security though they are having the cultivable lands and so on. The Dalits particularly restricted to use the common property resources. Due to the encouragement upon of CPRs the upper caste and powerful society can able to privatize the CPRs. He found that about 85 - 90 per cent of the Dalits are landless and they are not able to access the CPRs in Maradhwd District in Maharasta.

Shah (1997) studied that the food security and access to natural resources. She thoroughly analyzes the food grains and the agricultural production and productivity during pre and post reforms period in India. By studying the relationship between the CPRs and the agriculture, she found that about 55 per cent of the farmers have operational holdings with an average size of less than three quarters of an acre and with nearly 40 per cent of the rural
households in the category of land-less and semi-land-less, self-sufficiency at the household level is an almost impossible goal given the prefect level to CPR may be a necessary but not sufficient condition for ensuring food security among the rural poor.

Beck and Gosh (2000) made a study on common property resources (CPRs) in seven villages that was carried out between 1993 and 1996 from across the agro ecological zones of West Bengal and found that the CPRs made up about 12 per cent of the poor household income, fuel and fodder. Moreover, the most important CPRs access by the poor, women and girls are mainly responsible for collection of CPRs, which may be why their importance to the poor largely ignored.

Jishan (2000) revealed that it faced considerable problems in meeting subsistence food requirements and food status has improved, rather these declined, over time, access restriction existed largely to a shortages of labour in the village and not as a conservationist strategy and he has found that, the regulatory restrictions, to the extents that they were used were not a result of existence of villages level intuitions concerned with the sustainability of common resources, but a result of the power of the kingly family over forests in the Tehri - Garhwal region.

Bose (2000) made an attempt to study the environment and its role in the economy of the villagers of Himalayan society; he found that, the feet hills gives the grass for their livestock population. The people are getting the household increase from their livestock some other then the income sources in these areas. He pointed out that the need for and the Role of Ecology in the Economy of this region briefly.

Beck and Ghosh (2000) found that poor people are being systematically excluded from customary access to CPRs, able to meet their livelihoods, at an alarming rate, the main causes of this exclusion are agricultural intensification,
commoditization of CPRs, environmental degradation and population growth. New forms of ‘community’ management of environmental resources, which have been promoted by Governments and did donors over the last 10 years, may add to the exclusion of the poor.

Nathan and Kalkar (2001) made an in depth analysis about the logging economy that is accrued the village economy among the indigenous community, they described the forest goods one as “the environmental goods’, the environmental services and its externalities are clearly discussed and they narrated how the external cost bearded by the local people than the higher society. They suggested that the establishment forests communities’ property rights over forests, and the establishment of marbles for regional and global environmental services.

Damodaran (2001) found that the common property lands and tree groves provide 30-40 per cent of income diversification opportunities for small and marginal farmers of the villages practicing sericulture. Systematic development of common lands as income diversification assets for agriculture based micro-enterprises such as sericulture could provide substantial income diversification options for small and marginal farmers and even landless labourers.

Xiaogang (2001) has made an attempt to analyse the resource use in the water in Lakshi Watershed, Lijiang. He described the forest as Nanyao (a naxi village) the Yi Villages got benefits more than the naxi villages. He has briefly narrated the role of forests in local Ecosystem services and livelihoods, providing water resources to the village for both drinking and irrigation purposes and he found that the strong the powerful within the community of the township (Naxi Vs Yi, men Vs Women) try to sue logging or the growth of new economic activities to their advantage. But, there is clear struggle between these dithenatially affected.
An analysis made by Takeshi Sakurai (2002) based on investment models shows that the optimal timing of investment in irrigation systems depends on the speedy deterioration of irrigation performance and the cost of stopping the deterioration. The effect of the irrigation systems on profitability of rice production is empirically examined using the farm household data collected by the author and his collaborators in Tamil Nadu in March, 1998. Found that the profit of rice production using well Walin only is very low. The profit per acre deflated by rice price is Rs. 450/- on average for farmers using well Walin only, 77 rupees on average for farmers using tank Walin only, and 730 rupees on average for farmers using both of irrigation system.

According to Swamy and Reddy (2002) the three important factors which contributed to the decline of common land resources as examined are: i) the policy of distribution of wastelands and village forestlands to individual households with ownership rights, ii) the declaration policy that forests in the neighborhood of the villages are reserved forests that sealed the villagers’ access to these resources which in turn provoked encroachments, particularly by the tribal households; and iii) the encroachments by the influential landlords on the forests and wastelands.

Velusamy (2002) observed that the rights on common lands are totally controlled by the higher caste people in India by tradition. Similarly the rights on access to other CPRs in Rural areas are also being held by the same group even today. The higher caste people suppressed and cheated the weaker section of the society since the British rule, along with bureaucracy and the depulmation, the higher caste people made them as a landless poor. Not only that, in the modern society, other than the schedule caste, all other Backward, Most backward, and Forward caste to people are live in a around the city especially close to the common property like temple, lands, etc.,. The schedule caste people are located for away from these resources. However, the access to CPRs is very least among the weaker sections i.e., Dalits, they are protect to use the CPRs in rural areas, even in the city base CPRs.
Book, Curunj and Dukpa (2002) study with very in depth background of the CPRs in Buttan and compared with Indian Himalaya hills, they discussed about the contribution and the role of the forest produce from the CPRs in the study area. They mainly found that the role of CPRs changed over time.

Berhana, John and Girmay (2003) found that the relationship between population density and collective action, especially with respect to collective labour input and access to Market appears to undermine the intensity of collective management of woodlots and its effectiveness in ensuring tree survival probably because this increases the opportunity cost of people’s time and/or the ‘existing options’ of community members. Promotion of woodlots by external organizations appears to displace local collective action in protection of the woodlots and contribute lower tree survival rates; that the collective action can be an effective means of redressing resource degradation and increasing community wealth.

Vyrastekova and Soest (2003) made an attempt to study the community participation in the catalyzed common pool management in the Netherlands. They found that unrestricted access to common pool resources (CPR) loads to individually national extraction levels that are sub optimally high from a social perspective. The study striking as a suggest that local community participation is not a uniform remedy to reduce excessive extraction among common property resource uses especially if there is no internal structure of rights and duties present for going relationship between community members. The local community participation can be an effective tool in enhancing efficiency of CPR use, when community based conservation would more profitably be founded on principles of checks and balances among various parties - local groups, government actors, even NGO, and aid agencies - rather than in faith in them.
Manikandan, et al. (2004) explored that the sustainable development driven by the CPRs in India, they found that the available CPR resource should be managed, systematically. The quality of human life, is determined by the human health and well being, Environment and the economics. The CPRs are the main source especially in the Drought prone area to provide the livelihood options to the rural poor. Apart from the livelihood options, the CPRs are providing the food security and livelihood security to the rural poor.

Gowda, and Savadatti (2004) observed that there was marginal decline in CPR area between 1978-79 and 1998-99. Forest area accounted for more than 95 per cent of the total CPR area.

Gowda, and Savadatti (2004) revealed fuel wood collection from CPR meets more than 2/3rds of the total energy requirements of household. More than 50 per cent of the total fodder requirements of the households as met through the CPRs. Half of the surveyed households reported that the forest CPR was open for fuel wood collection.

Sakthivadivel, Gomathinayagam and Shah (2004) revealed that the small farmers who won less than 33 cents of land and less than 1 acre are getting water for irrigation from tank resources for their entire land. Small farmers of land in the common area are permitted to cultivate half of their land under the tank irrigation system and big farmers are irrigated one third of their land under the tank irrigation system. It ensured that each one get adequate water to raise a paddy crop at least on a proportion of their land so that nobody in the village goes without some harvest to sustain their livelihoods.

Mahmood, (2005) found that the pathway to the sustainable development by using the common property Resources as a drive for improving the livelihoods among the rural poor in India. Conserving the natural resource base on which many of the rural poor depend upon for their livelihood like crop lands, grazing land, pasture land and etc., over the years.
Rao, et al (2005) revealed that about 1.2 to 1.5 million tanks still in use and sustaining every day around 0.66 million villages in India. The common lands generate employment from tank resources are rarely used for maintenance work, and a major portion of the income generated through these CPRs like tanks and temples are expanded on the common amenities that strengthened the CPRs in the villages to provide the livelihood security among the stakeholders. Moreover, 80 per cent of the fish production is getting from the inland (i.e., Common Property Resources) a resource that gives the employment opportunity to the fishermen community.

3.2 Income and employment generation through CPRs

Bhaduri and Surina (1981) found that about 48 per cent of the households mainly belonging to scheduled tribes and backward communities in Ranchi district of Bihar earn their household income and livelihood mainly by-
Collecting the fuelwood from the forests and carrying into their heads to the nearest market.

Jodha (1986) has estimated that CPR-product collection provided employment between 128 to 204 days and 34 to 85 days in dry regions of India, per annum among the poor and large farming households, respectively. The CPR based activities (Grazing, Off-Season Cropping, etc) provided employment for 43-89 days per household or 18-31 days per adult workers, in poor households during 1982-83. The study has also pointed out that the greater employment in CPR-activities during the off season, notably after the harvesting, during poor crop years, and during the days of involuntary unemployment, underlines the CPRs as a significant source of employment to the poor communities, when the alternative employment is not available. The income from CPRs accounted for 15 to 23 per cent of the gross income of poor households and 1 to 4 per cent that of large farmers. Inclusion of CPRs-income in household income substantially reduces the inequality in income distribution.
Mishra and Sarin (1987) have presented some unresolved problems of Nada project, namely the absence of legal rights to the produce of plantation, inter-caste conflict, insufficiently opportunities to earn cash income, and absence of outside neutral interventional to resolve conflicts. These may be detrimental to the interests of the project.

Iyengar (1989) the proportion of the households reporting that depend on CPRs for income generation that varies from 2.5 to 15 per cent that most of the income generating activities such as collection of fuelwood, Minor Forest Produces (MFP) raw materials, dug, sand and stone, cultivation of vegetables on riverbed and animal grazing are undertaken by landless and marginal forming households are the major income generating activities in Gujarat.

Nadkamin et al (1989) have reported that the imputed value of physical product obtained from CPRs amounts to 15-50 per cent of the gross household income in the forest-based villages in Uttar Kannada district of Karnataka.

Chambers et al (1989) observed that CPRs contribute about 35 and 38 per cent of the earning of tribal in the forest regions of Gujarat and Madhya Pradesh, respectively.

Singh and Ballabh (1989) recommended that the state should only provide technical and financial support to motivate the people for afforestation rather than taking all jobs itself. It is widely documented that the elected village panchayats owing to their various economic and social constraints are not appropriate organization for development and afforestation of common land.

Malhotra and Pofenberger (1989) the famous experiment of ‘Joint forest Management’ in Arabari range of West Bengal is a recent example of change in Forest Departments policy of CPR-management, from highly bureaucratic to people’ involvement and cooperation. The joint management of planted area
has been found to yield good results as the forests have regenerated and average income flow from forest-based activities to local people has been about Rs. 722 per annum per participatory family.

Pasha (1992) has brought out that the CPR income including the values of fodder, fuel wood and the imputed values of grazing accounts for about 10 to 62 per cent of the gross income of poor and non-poor households.

Singh (1993) found that in Himachal Pradesh, that the income from the CPRs accounted for 37 per cent of the total households’ income in Siwalik Region of Punjab.

Singh et al (1996) have found that the CPRs contributing 27.3 per cent of the total gross income of the landless and 22 per cent of the cultivating households.

Beck (1994) also estimated that CPR-product collection (rice gleaning, and fuel wood and wildfood gathering) is worth between approximately 19 to 29 per cent of the poorest households’ income across the three villages in North 24 Parganas and Midnaporre districts of West Bengal.

Sahoo and Mishra (1994) found that in the coastal villages of Orissa, the CPR-based activities accounted for about 10 to 20 per cent of total daily time of the poor households during 1989-90. The income from collection of minor products is estimated to be Rs. 1,700 per poor household per month.

Kurien, John and Vijayan (1995) have revealed that the Income spread mechanism among the fisher man community in Kerala. In kerala, especially, the region of Allepay and Emakumlam are the most popular for the Karanila system of the fishing units. It is basically fully depends the CPRs as a major source for fishing in Kerala. Most of the households are mainly depends the CPRs for their household income.
Rao (2000) has made an attempt to explain the overall impact of watershed under the drought prone areas program (DPAP) has positive and significant role in the rural livelihoods. There has been a market improvement in the access to drinking water in the project areas. Due to the watershed management, the top yields have been raised and it has substantially increased in area under cultivation in the rabi season, addition to this it has increased the employment opportunity and reduced the migration of labour. Ultimately this watershed development programme generates the employment opportunity and the income generation to the rural mass by the development of watershed programmes in the rural area.

Emmanuel, (2000) has found that the common property resources are providing the livelihood security to the village community. The village people are getting 2/3 of their household income from the CPRs through cattle grazing, collecting firewood, fodder and forest food and the timber products for construction of houses and so on. The irrigation system is also providing the inputs to the agricultural sector and the agricultural landless labour can get the man days working hours. They are getting the seasonal employment during the off-season period they are getting the non-farm employment opportunity also in the villages.

Swamy and Reddy (2002) explained that the occupational structure of the tribal communities in the study area is about 60 per cent as agricultural labourers and only 3 per cent in other activities. This classification however, concedes the traditional food and minor forest product gathering activities and also tendu leaf-plucking. Bamboo-cutting, basket-making, fishing and hunting activities of the villagers.

Book, Curunj and Dukpa (2002) found that the CPR gives employment opportunities and income generation to the poor people. Moreover, they explained that the socio-economic factors which influences the sustainable used or degradation of the CPRs in Bhutan.
Mitra (2002) found that agricultural labours and non-agricultural workers have an excessive working hour but had to extra economic benefit. Majority of cultivators (77.96 per cent) had 135 to 150 working days in a year, and 22.04 per cent and 100 to 110 days. Day labour and cultivator cum day labour had working days between 150 and 175. The non-agricultural persons were engaged almost all round the year. Most of the ST population had working days, but in case of SCs it was in between 121 and 150 days and in case of GCs it was 50 to 150 days.

Berhana John and Girmay (2003) reveals that the Benefits were greater and reported problems of managing the woodlots were less on woodlots managed at the village level than these managed at the Righted tabia level. Communities that managed woodlots at the village level applied greater labour inputs, planted trees much more densely, more often hide a guard, and less often had violations of restrictions. Although average tree survival (per tree planted) was lower on village managed woodlots, the member of trees surviving per has been greater in village wood lots. Most of these differences were not found to be statistically significant after controlling for other factors, suggesting that other factors besides the level of management are more important in determining the extent and effectiveness of collective management of community wood lots. However, villager-level management of community woodlots has superior economic significance.

Chopra and Dasgupta (2003) found that the collection for sale only is a large percentage with 31.72 per cent at the all India level falling in this category. The percentage increase in the developed states of Karnataka and Maharastra to 32 per cent and 45 per cent respectively. It is highest in Madhya Pradesh at about 68 per cent.

Rani, Sekar and Amudha (2004) found that the farming community reared their livestock mainly by depending on their own land (76 per cent). In addition farmers also exploited community forests to graze their animals. The utilization of community forest got decreased. This might be due to the Government’s restrictions on grazing in the forests.
Manikandan et al. (2004) revealed that the common property resources are effecting the economic opportunity to the rural poor, both small and marginal farmers. Off-seasonal employment and drought years by providing the form of fuelwood, thatching grasses wood for household purpose as a inputs to the home, wood from the forests to making agricultural implements, feed to the livestock and biomass requirement of the marginal and sub-marginal farmers, as a inputs to the agriculture by the collection and sale of fuelwood, honey and other Minor Forest Produces (MFPs) for sales is giving income to the rural poor and the CPRs providing the safety net the rural poor during the drought years by the way of providing CPR based employment generation programmes for their livelihoods by the way of generating income by these kind of employments.

3.3 Extent and causes for degradation and CPRs.

Jodha (1985) has revealed that the common grazing lands including forests, pastures, uncultivable and cultivable wastelands, and fallows other than current fallows, covered a substantial proportion to total Area (56-83, 31-61 and 34-26 per cent during 1953-54, 1963-64 and 1977-78 respectively) in the western Rajasthan. The area under common grazing lands has declined fast and the rate of decrease was higher during 1953-64 than 1963-78. Similarly, high rates of decline have been found in number of watering points (tanks and ponds) and their catchments areas. The number watering points and their catchments areas had declined from 36 to 17 and 769 to 456 ha respectively, during 1953-54 to 1972-73. The area under post-harvesting conservation of cropland into grazing land has also decreased. Jodha has also found some evidences of substantial diminution in the productivity of CPRs during 1945-47 to 1963-65.

Shah (1987) stated that the widespread legal and illegal privatisation of CPRs has been found as the main reason for their depletion, and over grazing removal of top soils and extensive cutting of trees are the main cases for the degradation in the three villages of Gujarat.
Jodha (1987) has also discerned severe physical degradation in CPRs in dry regions of India during 1950s to early 1980s. Number of factors affecting the CPRs lands and its degradation, the CPR based village activities are duly affected the CPR. a) The decline in the number of CPR-products obtained by villagers (from 27-47 in 1950s to 8-22 in 1980s), (b) nearly total extinction of rich vegetation species from a number of CPR - plots, (c) grave depletion in the number of watering points (from 9-98 in 1950s to 3-13 in 1980s), and (d) per capita variations in the density of trees and shrubs on the protected (398-882 / ha) and unprotected (83-215 ha) CPR-plots.

Shah (1987) has also found that the common lands are grossly encroached upon and severely degraded in the three villages of Gujarat. But Iyengar could grasp comparatively less shrinkage in the area of CPRs in Gujarat. He has found that according to land records CPR and has decreased from 54 to 41 per cent of the total area from 1947 - 65 to 1974 - 85. But he has observed extensive usurpation of CPR - land which land records could not reflect. He has added that the usurpation has occurred in all villages wherever common land existed and was suitable for cultivation and it has been done by all, the rich and the poor, and the dominant and the backward castes people. In regard to spatial variations in availability of CPRs, Iyengar has contended that the size of common lands is greatly determined by the variations in productivity and potentials of land. The proportions of CPR - land to the total area are recorded to below (0.4 to 27.9 per cent) in the villages with higher productivity and good potentials, reasonably high (9.6 to 72.9 per cent) in the villages having low productivity but good potentials, and very high (30.0 to 96.4 per cent ) in the villages with low periodicity and poor potentials. The study has also presented some evidences of physical deterioration of CPRs which are based on the impressions and opinions collected through informal and in-depth interviews of village elders. It is discerned that during last three decades, the tree population on CPRs has substantially declined, many tree species with rich timbers have largely disappeared, and many grass varieties have totally vanished.
Mishra and Sarin (1987) have described that till early 1980s, the rapid depletion of CPRs was creating serious economic and ecological problems in Siwalik Hills of Haryana and all convention bureaucratic and technocratic tools failed miserably in controlling it.

Gupta (1988) has presented the strategy used to motivate the local communities to participate in tree plantation on severely eroded CPRs in ‘Jawja’ block of Ajmer district in Rajasthan. The school system and established non-formal education centres have been involved to impart the learning regarding value of tree plantation, its growth process and organic relations of people with trees, which reproduced good results and encouraged people to plant and protect the trees on CPRs.

Brara (1989) the non-arid districts of Rajasthan confirm that a significant proportion (25 per cent) in 1956-57 tend it was 15 per cent in 1981-82 of the total geographical area is de facto grazing land. Whereas the arid districts showed a lower proportion of permanent grazing land in 1956 to the total geographical area as compared with the other districts.

Iyengar (1989) has found that according to the land records, CPR land as decreased from 54 to 41 per cent of the total area from 1947-65 to 1974-85. It has contended that the size of common land is greatly determined by the variations of CPR-land to the total area are recovered (0.4 to 27.9 per cent) in the villages having low productivity and good potentials and very high (30.3 to 72.9 per cent) in the villages with low productivity but good potentials. It is described that during last three decades the tree population on CPRs has substantially declined, many tree species with rich timbers have largely disappeared, and many grass varieties have totally varnished.

Nadkarni et al (1989) have found that in the villages located in the forest region of Western Ghats in Karnataka, which the CPR–area accounts for 56 per cent of the total land.
SPWD (1990) on the basis of land-use statistics has estimated that CPR-land encompasses around 27.65 per cent of the total geographical area in Andhra Pradesh varying between 14.5 per cent in Srikakuium and 52.8 per cent in Khammam district. The study has also assessed about 9 per cent decline in the CPR-land in the state from 1976-77 to 1986-87. CPR-land constitutes around 23 per cent of total geographical area in 14 villages scattered over 10 districts in Karnataka (Nadkami and Pasha 1991; Pasha 1992). Due to wide usurpation of common lands for cultivation mainly by rural elites in developed villages and by relatively poor in backward villages, CPR-land has declined from 36 to 23 per cent in these villages during few decades.

Jodha (1990) has found that the public policies as the main cause and the demographic and ecological, market and other factors as the supporting causes fostering expropriation of CPR-land in the dry regions of India.

Jodha (1990) by reconstructing the productivity status of CPRs in the past, on the basis of nomenclature, village elders experience and fragmentary village records and by comparing it with the present productivity status, has established grave degradation of CPRs in the sample villages. He has observed serious diminution in the density of trees and other vegetation cover, the ability of CPR plots to sustain specific category of animals, the water availability in the ponds, and the intensity of actual usage of CPRs units, during four decades proceeding to 1982-83.

Arnold and Stewart (1991) in the mountainous and sub-mountainous regions, where the livelihood traditionally depends on the collection of forest products, the large scale deforestation has made this not been able to provide intended benefits to 238 poor households (landless and marginal farmers) in the five contiguous villages in upper Ganga plain (Sultanpur district) of Uttar Pradesh. Due to high cost of reclamation and lack of irrigation facilities, land of about one-third of allotted is lying waste.
Nadkami et al (1991) and Pasha (1992) have also accounted that about a per cent decline in the CPR-land in the state from 1976-77 to 1986-87. CPR-land constitutes around 23 per cent of total geographical area in 14 villages sculpture over 10 districts in Karnataka.

Singh and Bhattacharjee (1991) have affirmed that the illegal encroachment and forcible occupation of common lands before late 1970s, and their distribution of landless and marginal farming households under ‘land patta ‘ scheme of the state government since 1977, are formidable causes of their decline in West Bengal. Sahoo and Misra (1994) have discerned that the privatization of CPR - land, either through its legal transfer to the poor in various ‘Social welfare programmes or through its illegal occupation leading to subsequent legalization, is the main cause for its decline in three coastal villages of Orissa.

Pasha (1992) has also found the illegal encroachment by rural households and the legal distribution under welfare programmes as the main reasons for reduction in CPRs in the dry regions of Karnataka. He has emphasized that the encroachment upon CPR-land especially by rich households and its subsequent regularization is a more prominent factor. The study has brought out that rural rich and poor has usurped 52 and 22 per cent of the total lost CPR-land, respectively while rest of the lost CPR-land (26 per cent) has been distributed among poor individual households.

Singh (1993) has brought out that the CPRs comprise a large size of land in the hilly areas of Himachal Pradesh. The per capita availability of common lands and ratio of agricultural and its support-land (common) which are 0.16 and 1:0.47 respectively.

Srivastava and Kaul (1994) in an examination of land records of 293 villages in Aravalli hills of Haryana, have found that the proportions of the commons lands to the total area range from a low of 2 per cent to a high of 81 per cent (the average being 26 per cent).
Sahoo and Misra (1994) have revealed that CPR-land constituted around 20 per cent of the total geographical area of three coastal villages in Orissa during 1989-90. Without citing any bases and evidences, they have also added that ‘both the area and productivity of CPRs in terms of quality and quantity of products have declined.

Bokil (1996) has found that dalits as the sole encroaches of common lands. The dalits are usurping the common grazing land in this region since independence and the state government has regularized such encroachments twice (in 1978 and in 1991) *dalits* as the sole encroachers of Common lands in Marathwada region of Maharashtra.

Shah (1997) found that degradation of CPRs both quality and quantity is leads the food security problems in the rural areas and she has suggest that to ensure increased production of bio - mass, through proper investment and protection rather these selling lost into the more complicated issue of improving the access and collective action. If would involve not only mobilization of local resources and perfects participation but also releasing of unlawful encouragement of CPR.

Emmanuel (2000) has found that, because of the ‘economic power’ caste group affiliation, ‘right to partition’, and encroach of commons, out of 55 sample households 30 households have encroached the land resources. Where as the forest resources, these people can collect the forest products without the prior permission from the forest department and the revenue departments illegal cutting of woodlots, illicit felling of trees in the forest areas.

Jodha, (2000) focused that the 80 per cent of the privatized CPR land in different states went to the people who already had relatively more land. The poor people’s average land holding is size is between 1 to 1.3 hectares whereas the earlier people added 5 to 9.5 hectare in different states. He suggested that the up-scaling participation approach for managing the CPRs in the rural areas
successfully and the greater attention has to be given to clarity of their underlying premise focus on decentralization on and devaluation of the operational levels; are orientation of government machinery, and emphasis on local institutional development and capacity building to meet the new challenges.

Damodaran (2001) found that the area under common lands has been declining over time, partly due to the forces of privatization and partly due to assignment of these lands for non-designated, non-community purpose by the governments. With reference to Karnataka that the ratio of CPRs to net sown area fell from 39 per cent in 1970-71 to 29 per cent by 1995-96 aided by the decline in CPR areas as well as marginal increase in net sown area.

Dadibhavi (2001) revealed that out of total land area of 330 mm hectares in India. Out of 330 mm total land area, only about 140 to 147 million hectares consisting of forests, woodlands, grasslands, deserts, marshes, rivers, lakshes, shorelines and other forms of common properties support many other activities like forestry, fishery, livestock rearing and provide daily requirements like food, fuel, fodder and medicines.

Sekar (2001) has found that the industry effluents let out to river and tank, CPRs increased the percentage of abandoned wells from 8 per cent during the eighties to 62 per cent by the year 1999 - 2000.

Takeshi Sakurai (2002) the difference is due to higher labour input required for the management of well irrigation. The estimation of the profit of formers using both tanks dwell water is statistically significantly higher then that of formers who use either well water only or tank water only. This implies that at the equilibrium, tank and well irrigation can coexist. Using the estimation results of the profit function, it is calculated that about 90 per cent of farmers will use wells at the equilibrium. Considering that well users are only 37 per cent at present, it is predicted that the member of wells will increase in future.
Swamy and Narsimha (2002) revealed that CPRs comprising village forests, uncultivable wastelands. Village grazing lands and tank beds constituted 84 per cent of the total geographical area in 1900-1901. The percentage decline in CPRs was 37 per cent for the first 50 years, i.e., 1900-1901 to 1950-1951, and 45 per cent for the later 40 years, i.e. 1950-51 to 1990-1991. Before 1950, it was largely the decline of wasteland (34.55 per cent) and accounted for the overall decline of CPRs. In the post independence period, i.e. 1950-51 to 1990-1991, apart from the steep decline in wastelands and forests (40.8 per cent) and village grazing lands (52 per cent). Tank beds (50.38 per cent) were also brought under private ownership, thus reducing the CPR land from 53.91 per cent to 29.68 per cent (figures in parenthesis indicate extent of decline).

Berhana John and Girmay (2003) has analysed that the factors which determined the variations in collective action, and the effectiveness included population density, access to market, agricultural potential, the presence of external organizations, whether the woodlot is managed at the village or tabia level, and the area of woodlot.

Chopra and Dasgupta (2003) NTFP sellers have more access to land and to membership of Institutions as compared to collectors for self consumption especially in Bihar. In Karnataka and Maharatra, they are less asset - poor and have more access to irrigation that those who collect for consumption only. They may have lesser net sown area and are also likely to be located closer to forests. Since the marginal effects of the asset poverty irrigation and sown area variables are high, it can be concluded that there more affluent farmer are also the sellers of NTFPs. The results for Madhya Pradesh are mixed. However, in three of the four state studies, sale of NTFPs emerge as an activity associated with the more affluent and privileged set of households.
Gowda, and Savadatti (2004) have made a study on barren and uncultivable land, cultivable waste, other fallow land and forest from the CPR land for a village and that in the past (1978-79) about 3,515 acres and 35 gunthas of CPRs land (Which amounts to nearly 63.15 per cent of the total geographical area of four villages) was available in the sample villages. But the area had come down to 3,491 areas and 20 gunthas (62.72 per cent) of the total.

Rani, Sekar and Amudha (2004) understood that there had been significant changes observed in the availability of total number of wells in the sample households. The total number of wells observed was 65, which showed the temporal enhancement in the number of irrigation wells. Though the number of wells had increased significantly the irrigable capacity of the tank reduced to 0.430 hectare.

Mahmood, (2005) revealed that the degradation of CPRs are increasingly became the focus of attention because of their negative impact on rural population, water scarcity, grazing pasture scarcity, fuel wood scarcity—all of these common property resources are problems due to unsustainable development hamper rural peoples ability to earn living and reducing rural poverty.

Rao et al, (2005) found that the area under fodder crops, permanent pastures and other grazing lands has decreased from 8267 thousand hectares to 7981 thousands hectare from 1993-94 to 1996-97. Regarding to pasture and other grazing land has decreased from 11064 thousand hectare in 1995-96 to 11040 thousand hectare in 1996-97. The forests are reduced to 633, 397 sq.km (19.27per cent to the total area) in 1997 from 639, 286 sq.km (19.45per cent) of the total area in 1989-91, mainly because of the Globalisation which operated the market forces to degrade the environment both economic and the Natural Resources in India.
3.4 Management and access to CPRs

Jodha (1985) has grouped the cause of depletion and degradation of CPRs in Western Rajasthan into three categories: (i) institutional changes in the form of land reforms, (ii) population growth, and (iii) commercialization and mechanization of CPR-based activities. He has elaborated that land reforms in early 1950s encouraged the privatization of CPRs to cropland by drastically reducing the land rent. The transfer of ownership or custodianship of the CPRs to village panchayats has also been observed disastrous as the panchayats have dismantled the traditional arrangements or regulated CPR - use without establishing any effective alternative arrangements. Jodha has contended that in post - independence period population growth has exerted a high pressure on CPRs, but it could not do so in pre - independence period mainly because (a) feudal landlords did not allow addition to croplands from CPRs, and (b) most of the CPR-lands were sub marginal in ecological terms and high rental charges (from a quarter to half of farm produce) levied by jagirdars made them sub marginal in economic terms. The break down of the traditional caste occupations systems has also been observed a major cause for expropriation of CPR-land for cultivation. The changes in the village economies from subsistence to market oriented, introduction of irrigation, fertilizers, improved seeds and more especially tractors have also been seen as the factors encouraging privatization and over-exploitation of CPRs.

Wade (1986) has presented a case of successful collective management system followed in common grazing land in Kumool district of Andhra Pradesh. The study has argued that the nature of the resource and technology in the region makes privatization as a means to reduce the ‘externalities’ difficult. Thus, in order to reduce the externalities, the villagers have formed villager councils, which rent out the surplus grazing lands in post-harvest periods to the migrating herders and appoint the field guards. The rents animals are caught grazing standing crop provide enough money to the
councils to pay the field guard. The farmers get the benefit of stubble cleaning from their fields, manure sold by the herders, and save their soil from the damage of excessive grazing. In order to control externalities and free riding, village councils put very tight specification of responsibilities on the herders and farmer.

Mishra and Sarin (1987) in this way the community management has emerged in Sukhomajri village. But at the initial states, it faced the problems of free riding, which was controlled by changing the water distribution system from conveyance system to equal distribution among all the families, and by forming a village society consisting of one member from each family and some co-opted members from concerned government departments. The co-opted members from government department perceived to be impartial and neutral played very crucial role in resolving many problems. The community management resulted in increase in the agricultural productivity, prevention of soil erosion and expansion in vegetation cover.

Moench (1988) in a remote village in Tehri region of Uttar Pradesh has found many informal systems of CPR - management. The author has revealed that the forests are state property, but re de facto CPRs and are managed by villagers. Moench has proposed the local land use zoning and rules for more effective management of CPRs.

Wade (1988) has also found that the villager institutions are more likely to be formed and sustained where the risks of conflict and loss relatively higher, hence successful collective management exists in black soils and in the tail end of irrigation distributaries where ecological conditions create high risks of conflict and crop loss. He has also observed that also an effect of the rules of restrained access on resource use, of ‘both the production and equity are higher with these rules and institution that they would have been in those same villages in absence of the uses and institutions. The management of only intensely filed needs that could not be met by individual response, control of
‘local elites’ on the councils, and simple and transparent technique of calculation and control are features which have been listed by Wade the reasons behind the success of collective management in these villages. He elsewhere (1987 and 1988 has logically contradicted all standard theories of collective action (Prisoner’s Dilemma, Tragedy of Commons, logic of Collective Action) on the basis of empirical findings of this management system, and has found it a superior alternative to private and state regulation in such circumstance.

Gupta (1988) the process of people’s participation has been reported to cross next state when some village communities decided to collect seeds and to cultivate nurseries to minimize their dependency on forest department. Regarding conflict in benefit sharing the author has argued that as most species raised are traditionally consumer for subsistence, benefit sharing would not create any problem’s the article has also listed the requirements of this strategy and factors facilitating it.

Gadgil and Iyer (1989) have demonstrated the wisdom of traditional management system illustrating a case study of a cluster of villages in Uttar Kannada district of Karnataka, where people are largely engaged in traditional occupations. The authors have used the endogenous caste groups as an ecological analogue of ‘species’ specializing in different resources. They revealed that such diversification of ecological niches of the different co-existing endogamous caste groups ensure monopoly in the use of specific CPR, and are instrumental in the long term sustainability of these resources. The authors have suggested the means and policies by which some of the positive attributes of the traditional resource management system can be preserved and rejuvenated.

Malhotra and Poffenberger (1989) have brought out that the average cost of regeneration has been modest Rs/.250 per ha. This is only 5 per cent of the cost of establishing a plantation crop. The proper selection of beneficiaries,
adequate empowerment of FPCs, micro-planning for the overall development of the area, suitable amount and timing of benefit flows, processing and marketing of non-wood products, training, and motivation of FD staff and FPC members, women’s participation and political neutrality in FPCs, are certain factors which have been identified as crucial for Arabari type joint management of Commons.

Singh and Ballabh (1989) the study has brought out that the panchayat did not take over woodlot after stipulated time. Hence the need of searching some other alternative forms of organization for this purpose has been emphasized.

Chopra et al (1990) have examined theoretical and empirical aspects of people’s participation in the management of CPRs in a cluster of five villages including Sukhomjri. They found that establishing effective ‘non-governmental, non-market institutions’ is the real solution of the so-called ‘tragedy of commons’ in the lower Siwalik hills of Haryana. The pertinent additional in CPR-management literature, this book has made are: (a) the analysis of linkage between CPRs and PPRs, (b) evaluation of effects of community management system using social-cost-benefit-analysis, and (c) theoretical understanding of conceptual arrangements between villagers and government. The study has revealed that the emergence of community management has resulted in fairly high rate of returns. The contractual arrangements have found between government and societies have been found theoretically vital to the success of participatory management. These arrangements provide some welfare improving distributional gains to both government as well as the village communities. The evidences of the contributions of contractual arrangements, namely preservation of the forests and land, increase in the productivity of PPRs and impart the gainful employment within village, reinforce these conjectures. On the issue of replicability of ‘Sukhomajri model’ the authors have argued that the degree of success depends upon the distribution of private asset, social structure.
especially caste composition), existence of catalysts (committed leadership and support from government and other agencies) and employment and income situation. The study has strongly recommended the thorough reexamination of laws and legislations governing the management of CPRs, and transfer of user’s rights to village communities wherever possible.

Jodha (1990) from a detailed enquiry of 175 CPR-units has revealed that emerging pattern of CPR management by the local people. The factors inducing this new pattern of people’s interventions are: (i) most of the CPR-unit specific management events are a by-product of the other developments, such as factional quarrels in the villager, or specific conditions of government grants of the villager or adherence to attain rituals and religious sanction; (ii) higher productivity and yields of CPRs induce their better management; (iii) the CPR-unit’s location, size and proximity to village, as well as rituals and religious sanctions play positive roles in management of CPRs; and (iv) genuine concern against degradation and misuse of CPRs is an important factor inducing peoples’ action for CPRs.

Beck (1994) has found that the increasing agricultural development, commoditization of formerly open access natural resources, and increase in number of dependents on CPRs, are the forces stimulating curtailment in the access of the poor to the CPRs. He has observed severe restrictions on the access of the poor on CPRs for gleaning the rice grain and for the collection of MFPs either by the rich or by the government in three villages of deltaic region of West Bengal.

Singh (1994) has analyzed the management procedure of widely know Gambhira co-operative farming society in Kheda district of Gujarat. On the very outset, he has described the genesis of society as a brainchild of an enlightened and dedicated social worker Chhaganbhai patel on whose request and state government agreed to grants flood prone bhattha land (riverine / riverbed land) to the society of distressed cultivators. The management
committee with the help of employees regulates the functioning of society; while policy matters are decide in the general body meeting. Many innovative methods of collective farming, work allocation and supervision, distributions of farm produce and profits between the society and groups and among the meersar of each group have been developed by the co-operative society. The author has observed no sign of conflict in the interactions among members and with non-members. The work system, the method of distribution of produce and profit of society, high stakes of all members in the society, and socio-economic homogeneity have facilitated frequent and usual beneficial interaction between members of the society, and inculcated a sense of cooperative work ethics and reciprocity among them. The consistent increases in crop yields, total farm production, net farm income per member and net profit over time, have affirmed that the co-operative management is efficient and sustainable the society is also equitable as it provide benefits to the destitute and poor and hence reduced inter-household disparity in the constituent villages, and among the members the benefits are distributed in proportion to their labour contribution. The members of the society have also been found, by and large, satisfied with the performance of society.

Srivastava and Kaul (1994) have reported and effort for changing the open access system into community regulated system in the Aravalli Region of Haryana. It has been brought out that from the every beginning of the project, the participation of local communities is considered vital for achieving the target, and hence to control and management the CPRs, the project has constituted Village Forest Committees (VFC) as executive committees of Village panchayat. The micro-plans for afforestation, grassland development and soil conservation have also been reported to be prepared with active participation of the community. The authors have further added that in order to provide employment and cash incentives especially to women, mahila (women) nurseries have been set up, local women have been appointed as extension workers and women have been encouraged to collect the seeds of
grass and legumes being purchased by project. To encourage the local committees, cash incentives have also been given to VFCs with higher degree of success in plantation and with complete protection of vegetation. Although, the reports have claimed some positive trends in the restoration process of common lands, but it is too early to assess its long-term sustainability or reliability.

Emmanuel (2000) has found that the management of three types of common property resources such as communal forests; grazing lands and gravity flow irrigation are to be managed by the both local people and the government department that is Joint management system in common property resources least portion of the village people only need the pure village management systems and no body wants the pure government management system in managing the common property resources in India. Because of the unsatisfactory and incapacity of the government institution like panchayat Raj institutions, and the forest department the local people are disappointed for that, because of this unbelievable government management. He also found that, ‘economic power’, caste’ caste group affiliation’, ‘right to partition, and the Enclosure of the commons’, has benefited the wealthiest farmer and it forbidden the rural poor to access these resources.

Das (2000) has explained the people’s participation, reservation policy is activates in the parliament to the weaker sections getting benefits, especially from the CPRs. They are getting equal rights, leaderships, in the watershed management programme and the community conflicts on common property resources. The CPRs are controlled through this people’s participation, gender equity, and drought pronning and the primary education, equalized among all people.

Pandy (2000) discussed about the Tanks and Trees, the relationship between biology, economy and society, the historical significance of the tanks and its significance of the village in the Indian context. He reviewed the cases
of tanks and associated vegetation in India. It was noted the existing management can be traced as early as from around 1500 BC. The cases reveal that besides engineering works forestry operations were important aspect of tank management. The empirical case of tanks and associated vegetation discussed that integration of indigenous knowledge and formal science for management of riparian commons, such as tanks, is a district possibility. Though the tradition of tanks is in decline we cannot over look the opportunity to learn from their continued somival. Village has a well - developed technology, institution and strategies, which can be off help to overcome the situation. Equality of knowledge between the indigenous knowledge and normal science should be viewed as a case in a point for empowerment, security and opportunity and sustainability.

Ostrom (2000) the study is made to discuss about the relative advantages of proximate property and common property for the efficiency, equity and sustainability of natural resource use patterns have been debated in legal and economic literature for several centuries and he has been clouded by a troika of contusions that relate to the difference between common property regimes, and a resources systems and the flow of resource units. He discussed about the attributes that he considered to be most conductive to the development of communal property rights and performance of communal property rights systems varies substantially, however, as do the performance of all property rights systems. He concluded that a very large number of housing developments both apartments houses and individual family dwelling involve individual property to the grounds, recreational assessment for the repair and maintenance of these common facilities are not unlike the assessment made by a community of irrigators on themselves to the maintenance of their own system would be the communal property regimes in the twenty first centaury.

Jodha (2000) has mainly focused the disregard of CPR-perspectives by the successive public approaches for management’s or development of wasteland in India. He has detaily explains the management status of the waste
lands (WL) during the pre and post independence period in India and critically analysed the waste land development programmes which was lunched by the government from the land reforms in 1950s and 1990s.

Meenakshisundaram (2000) has made an attempt to assess the comparative efficiency of VFCs and PRIs in Natural resource Management (NRM) and also to explore whether and how the management of common property resources can be organized in a sustainable manner that helps the poor and also conserve the resources. He found that, the VFCs have clearly defined boundaries. And their areas of operation have been clearly spelt out the MOUs they have signed with the KFD. The collective choice arrangements do exists as the individuals affected by the operational rules are also member of the VFCs and have a say in modifying rules. Secondly, while graduated sanctions can be applied to the violators by the VFCs hey cannot be enforced in most cases and finally, there is no conflict resolution mechanism readily available to the VFCs and VGCs are needed the community. Based organizations, to meet out the requirements. The PRIs, are not able to mange the local village resources. Because of the human resources management and shortages in the financial assistances and the over responsibilities to the panchayats to fulfill the all village requirements and wants and reads, it cannot able to mane the village resources Basic infrastructure facilities.

Ramanathan, (2000) has discussed about the land act of Madhya Pradesh, she classified and list out the common land sin Madhya Pradesh. She demanded the right of the forest based peoples (or) forest dependents. The Governments restriction on the people to use the common lands, like forest are the basic result of the forest dependents. The Madhya Pradesh court has been advised to the state, to give freedom to the people to use the resource by the Supreme Court. In her study she explained that, the forest and the common lands are the common property to the people. Poverty can be reduced among the forest a dependent due to the basic right of the forest use has been strictly pointed out in this paper.
Dadibhavi (2001) stated that the need for managing common properties, in order to make CPRs as productive assets; there is a need to have a new technology in terms of species, inputs and technological methods of resource management. In fact, integration of land and water management becomes imperative i.e., Development of watershed programme along with CPRs development. In this connection, the village community can seek the necessary technical know how from the other agencies and government departments. In this regard, he has analysed various common property resource management system in India such as Traditional community management of CPRs and it analysed that the magnitude, significance and the Decline of common property resource in India. Requiring to the management of CPRs the Traditional Community might privatization social forestry, user managed CPRs or participating management of CPRs. Presented the policy uses to better management and uses of CPRs and the future of CPRs in India.

DN. (2001) has studied that the failure of traditional management systems for non-timber forest product (NTFPs) to cope with problems of regeneration and of maintaining the sustainability of the output demand some new rules and systems. Essentially old forms of social capital in these indigenous communities. Which were based on reciprocity and non accumulation, are no longer functional and are breaking down? And they may be no easy transition from winship-based collectivities to newer citizen-based groups. Problems in marketing of CPRs products (NTFPs) and the privatization of CPR lands which is in the practice of the editing practice in the management of CPRs land in the Rural areas in his study area is also described.

Xiaogang (2001) revealed that a better system them management by external order would be give the local people a stake in the sustainable use of the forests and the watershed services through the sale of eco system services specifically water. With such rights they could balance the income from sale of
water for irrigation and to the town, against their direct and indirect caste and their benefits, in cash and kind, in goods and eco systems. Services, from other forms of forest land use.

Damodaran (2001) revealed that the existing institutional structure in local areas including the Panchayat Raj institutions have not been attained to the goal of income diversification. The focus of these institutions has tendered to be more on natural resources development than on its redistributive and income diversification significance. The new scheme of the Central Government, SHGs in rural areas and its success in Andhra Pradesh could argue well for an active programme of waste land development in rural area based on the goal of income diversification.

Sanjay (2001) made an attempt to study about the rural people’s knowledge (RPK) on the national resource management in rural areas. In this study he found that most of the geographical area (i.e. 5 per cent of the geographical) areas are as forest. He founds that, the village people are not aware of the village resources, and they are having very poor knowledge about the resources. Even today the people are also believe the village priest (Pahan) to forest cost the rainfall forth the year and he safely concluded his study while it is all very well to give due recognition to cultural practices and beliefs that have been systematically ignored or rejected as primitive and unscientific in the past, it is also important to situate this knowledge within the larger context of the changing forest reality. That is before ‘defending indigenous ecological’ knowledge we must also spark of restoring the rights of the community over the forests. This is by number means an easy move because, in a differentiated indigenous community, squared by this late and the markets, some economically vulnerable households may continue to practice a profession that is antithelices to the goal of forest conservation but gainful to them in the short term. It will, therefore, crucial to recover or establish a new the value of local ecological services as an explicit out put of forest management and not as something which accrue naturally or can be taken for granted.
Panday and Rao (2002) have made an attempt to analyse the impact of Globalisation on commons, that the impact of Globalisation and its relationship with commons and the relative effectiveness; descriptive about the sacred Groves and its features. The Traditional Management System of the sacred groves and its extent has been get complicated and difficult to manage the changes on commons due to Globalisation. The Christianism affected the Hindu culture in India which imputed the religious conflict. Though the Globalisation has makes on free minded people by the religious conversion, the traditional management system and the traditional cultural factors are also affected by this Globalisation. Managing the commons by the sacred Grove, the Christian Missions are managed well than the Hindu Institutions in India.

Bardhan (2000) analyses data from 48 irrigation systems in the Indian state of Tamil Nadu. He finds that systems are better maintained when guards are hired to monitor and punish deviators, and when costs are shared in proportion to the size of landholdings rather than equally divided among all users. The probability of conflict about water use is significantly higher in villages where there is no dominant caste, but caste heterogeneity has no significant effect on the frequency with which water allocation rules are broken.

Swamy and Reddy (2002) has found that, the instance of user groups co-operation with full information about the event, the retinal strategy is one of ‘cenditinal co - operation’ in sharp contrast to the domination strategy of the game ie. ‘defecto\' signifying the inter dependence of decisions in a village economy. How the resource user - groups, a whole village or a specific user group reciprocate to the circumstances not only depends upon the local specific conditions, but also important aspects like the extent of commercialization, socio-economic variations with in the village community and the nature of the state intervention.
Vira (2002) made an attempt to analyse the subsistence use of the common pool resources be affected by changing social, economic and ecological dynamics. He has found that resource sector in the context of wide economic pool resource sector in the context of wide economic policy reform processes in the Indian economy. He found a change in resource use pattern in India. More over he estimated that the fuel, wood and fodder consumption from the CPRs and the availability of the CPRs per head has been discussed and he briefly discussed that the policy implication and Globalisation of the CPRs, and its externalities during the globalization era has been discussed. He found that majority of status and people are depends on the CPRs. He also found that the land use and CPRs in India.

Athikari (2002) studied that CPRs with the poverty alleviation and equity and the study pointed out that the economic conditions are the main cause for exploiting the local commons. The forest products utilization pattern is quite different among the various income groups based on their socio economic status. Most of the forest dependents tend to prepare their management plan based on more consumption oriented regime with very restricted access to the community forest as per model provided by the forest Department. The economic (land, livestock) and social heterogeneity (ethnicity, caste, education etc.,) has more influential impact on household level income from CPR than other factors. He also found that regarding and distributive issues of collective action have important policy implications for community based resources management initiatives, especially these aimed to reduction poverty through better management of local commons.

Millicent (2002) found that scientific knowledge as a guide to common property management only one component. The social, moral and economic aspects carry equal weights (multi-disciplinary approach). It means that before going to the libraries for the documented knowledge and laboratories for verification, the local peoples’ knowledge is paramount. The paper section summarizes the common property resource management paramount
framework. This should include cultural, scientific and global aspects (interdependency). The economic, cultural social scientific factors influence each other and given that there are no territorial boundaries in most common property resources, global co-operation should be enhanced. However the international (global) co-operation requires local, national and regional participation, This which enhance a common global goal (cultural) which would ensure sustainability of the common resource.

Book, Curunj and Dukpa (2002) they found that role of CPRs in accessible area, where mainstream cash crops became a profitable business; the role of CPR products remained stable or declined. The demand for some CPRs increased in order to support the fast growing population and to enable the growth of the cash crop production. They also found that role of forest produce collection from the CPRs and its internationalization and market opportunities.

Sakuriai (2002) studied that on tank Irrigation as a local common Property Resource: the case of Tamil Nadu” has mainly discussed the theoretical inquiries and empirical analysis on the issue of the evolution of institutions for resource management, focusing on irrigation water, a traditional local common property resource. Specifically, two management schemes of irrigation water, a community management regime (tank irrigation) and an individualized management regime (wells), are compared in terms of the efficiency of rice production.

Jana and Frost (2003) found that unrestricted access to common-pool resource (CPR) leads to individually rational extraction levels that are subordinately high from a social perspective. These results are striking as they suggest that local community participation is not a uniform remedy to reduce excessive extraction among common property resources users, especially if there is no internal structure of rights and duties present forging relationship between community members.
McPeak (2003) analyzed and addressed localised degradation in the commons. In his study examines the implications of user and resource heterogeneity for exploitation patterns and policy measures in a commons. The study presents a dynamic model of capital accumulation in a heterogeneous. Development of a relatively complicated model is required because of the simple common property model is logically flawed in this context. Second reason for explicitly recognizing spatial heterogeneity in the analysis is to improve policy recommendations. The broader implication of this study is that policy implications derive from common property models that assume user and resource homogeneity may be in appropriate if applied to setting that violate these assumptions. It is also found that explicitly recognition of user and resource heterogeneity can led to the discovery of policy measures heterogeneity exits in a commons, appropriate analysis and policy definition require explicit attention be paid to the influence of these factors on the common property system under analysis.

A study made by Chopra and Dasgupta (2003) indicates the nature of dependent of households in these states on CPRs as measured by number of households collecting each of the three commodities, fuel wood, fodders and NTFPs. Large number, collect fuel wood from the commons in all states, the percentage working from 40 per cent to 60 per cent, while the average for India is 36 per cent. The percentage of households collecting fodder is lower, ranging from 9 per cent for India to 17 per cent for Karnataka. It is lowest in Madhya Pradesh at 9 per cent NTFP collection also involves low percentage of Households with the range varying between 7 per cent to 24 per cent Madhya Pradesh having the highest percentage t at 24 per cent.

Sakthivadivel and Shah (2004) reveal that tank institutions that lack cohesiveness or are non-inclusive or faction ridden result in low performance. The people belonging to SC are not involved in the decision-making process in tank related issues due to caste discrimination in Sivagangai district of Tamil Nadu. Elders from each caste group form the power centre in the village
council and they make all the decisions. The traditional association of Pappaiyanpatti village in Theni district of Tamil Nadu was virtually the big landowners association belonging to dominant castes of Naidus, Kallars and Vellalas, excluding others. These landowners still wield considerable influence in the affairs of the newly formed association. The dominant members take decisions and others are obliged to accept. In Dongargaon in Chandrapur district of Maharashtra state, three institutions are involved in the management of the tank: the Water Distribution Panch Committee (WDPC), fishermen’s society and farmer community.

Haripriya (2005) has found that the success of the CDM programme depends on the magnitude and responsiveness of rural communities to fuel wood use and also availability of other substitution possibilities through CPRs in the rural areas. In the Indian context, it is especially important as still 78 per cent of the rural people and 30 per cent of the carbon population is dependent on fuel wood and chips as their main fuel.

2.5 Research Gap

The literature of the earlier studies reviewed that the contribution of the CPRs to the rural poor in different aspects, especially concentrated on the field of supplying the physical products for livelihood security, employment opportunities are given by the CPRs and so on. At this fracture the present study makes an attempt to analyse how the rural poor are using the common property resources in the study area. It is also to be found that the access to man-made CPRs, and how they are using the common property resources in the study area.
References


