CHAPTER II

REVIEW OF LITERATURE
Even though the common property resources is new concept, in recent times there is plenty of literature available all over the world. Garret Hardin gave a formal explanation about common property resources in his article “tragedy of the commons” in 1968. According to him the tragedy of commons occur where the private benefit of grazing an additional head of cattle on common range exceeds the private cost, because the costs of maintaining range quality can be shifted to the group as a whole. Since the Hardins’ theses many researchers took active interest in the subject and contributed to the stock of CPR knowledge base. Some of the findings of earlier studies and the methodology adopted therein have been reviewed.

Runge Carlise Ford (1981) in his theoretical explanation of common property resources introduced the assurance problem. The institutional alternatives to common property externalities are wider than argued by private exclusive property rights advocates. According to him the tragedy of commons is not a prisoner's dilemma, characterized by the strict dominance of individual strategies. The non-separable common property externality is an assurance problem. The assurance problem provides perspectives in analytical and policy terms. It defines the problem of the commons as one of the decision making under uncertainty. Institutional rules innovated by the group to reduce uncertainty arid coordinate expectations can solve the problem of
overexploitation. Rules come in any forms and private property is only one.

Jodha (1985) studied the temporal trends in common property resources and their impact in selected villages of district falling under three sub-zones of arid regions of Rajasthan. Some of the findings are from 1950s to early 1980s; the area under CPRs declined and quality of CPRs was deteriorated. He found three major reasons for this, namely, a) land reforms, b) population growth and c) commercialization of desert economy in general and CPR based activities in particular aided by technology. Under changed situation the cultivation of sub marginal land became viable that was earlier used as CPRs. Former CPR management institutions were broken away. Replacement of subsistence barter village economy in to profit oriented market and monetary economy due to the improvement of infrastructure led to privatization of CPRs which ultimately resulted into overexploitation of natural resources. A major share of privatized CPR land went to well off sections of the society depriving the accessibility to a large number of people into otherwise CPRs. He concluded with few suggestions such as strict ban on further curtailment of CPRs by any activity, regulated use of CPRs, introduction of an element of user cost, designation of CPRs as a source of revenue for local bodies that may reverse the trends and may help in managing the CPRs in the long run.

Jodha (1986) made a comprehensive study about CPRs and rural poor in arid and semi-arid regions of India in selected villages from 21 districts of 7 major states. He analysed the contributions of CPRs to rural people in forms of income,
employment, bio-mass, etc., in different regions. He explained with data the dependence of poor as well as non-poor on CPRs and due to the presence of the CPRs how the income inequalities between these two got reduced. By analyzing the temporal variation of CPR area in the study villages between 1950 and 1980 he concluded that area under CPRs declined considerably due to government policy. Privatisation of CPRs by giving land to poor in reality negatively resulted rather than helping the poor because of non-viability of cultivation and lack of complementary support. He finally concluded that the collective loss of the poor from decline of CPRs has not been compensated by acquisition and retention by the poor of privatised CPR land.

Runge (1986) discussed the theoretical issues related to CPRs such as free rider problem, multi-person prisoners dilemma, assurance problem, CPR management, etc., in very extensive manner. He argued that the privatiasation of CPRs failed to stop overuse, and have contributed to inequality in resource distribution. Runge questioned the tragedy of commons approach and described a number of reasons why common property may continue to be both efficient and equitable complementing and combining with private rights in a way consistent with the resource endowments of village economies. He opined that the inferior out comes such as overgrazing do not necessarily arise from the strict dominance of free rider strategy, but from the inability of interdependent individuals to co-ordinate and enforce actions in situations of strategic interdependence. Runge concluded that if expectations, assurances and actions co-ordinated to predict behavior, there is less necessity for herd
owners to pursue free rider strategy, indeed co-operative behavior might be encouraged as utility maximizing strategy.

Wade (1987) analysed 41 villages in Kurnool district of Andra Pradesh in which people co-operatively managed the village CPRs. He found that, in some of the study villages villagers collectively managed the village commons effectively with strict implementation of certain pre-defined rules and regulations. He suggested that village organizations that are successfully managing the CPRs should be encouraged with needy legal and technical assistance by the government.

Chopra Kanchan and et.al. (1989) assessed the peoples' participation and CPRs in selected villages. They found that in one village where earlier no-cooperative of resource users resulted in environmental crisis and tragedy of commons and thereafter people realized that the village resources belonged to them and therefore cooperated and managed the village CPRs successfully with limited financial resources from the outside. They concluded that under the participatory management of CPRs the beneficiary groups are more responsive to the cost of preservation.

Pasha (1991) analysed the sustainability and viability of small and marginal farmers with dependence on animal husbandry that was taken up with the help of CPRs in three villages of drought-prone region of Karnataka. He found that 36 per cent of gross income of the marginal and small farmers was derived through animal husbandry. Because of population growth, market forces and political lobbying for land reforms, the CPR lands become open access which resulted into decline and degradation of CPRs which ultimately led to change in pattern of
ruminants holding from large to small. He opined that all sections of rural society should be involved in management of CPRs with needy assistance from few outside agencies.

Nadakami and et. al. (1992) assessed the viability of social forestry projects on village commons in few randomly selected villages of Karnataka state. They profound that social forestry is proved to be viable based on the three criteria Net Present Value (NPV) Benefit Cost Ratio (BCR) and Internal Rate of Return (IRR) with consideration of direct benefits only inclusion of indirect benefits and positive externalities would have been shown economic viability to be even higher.

Pasha (1992) studied 14 villages in different parts of Karnataka assess the extent of access the rural people have to CPRs and the impact of development programmes through CPRs on the poor. He found that the area under CPRs in the study area declined considerably. Of the total CPRs lost more than half have been encroached by the rural rich, more than one fourth of the CPRs distributed by the government to rural poor for different purposes and 22.40 per cent of lost CPRs are encroached by the rural poor waiting for regularization. Though very few received the benefits of privatisation, more people deprived of access to the CPRs and faced the problem of biomass. For the want of complementary inputs the poor who received the land hardly cultivated it and some of them even sold or leased out the land. Due to the deferential needs of rural poor and of the forest department in tree patta system neither the poor nor the CPRs protected properly. In spite of the shrinkage and degradation of CPRs their contribution to the rural economy continued to be
significant particularly in drought prone areas. He observed that even though the rural poor in relative terms got more benefits from CPRs in absolute terms it was rural rich who received more benefits. In the study area developmental agencies failed to involve the people in the protection and regeneration of CPRs. He concluded that once the rural people are included in the CPR protection and regeneration activity with receiving benefits the process may be self sustaining.

Karanth (1992) made historical analysis of privatisation of CPRs in his case study of Rajapura village of Bangalore rural district. After analyzing several historical facts he came to the conclusion that depletion of CPRs had a much earlier history than being post-land reform phenomena. Even though the specific schemes of privatisation of land resources which were meant for poor, the net benefits went to rich and dominant classes. He concluded that due to encroachment the village pastures were disappeared and rural people used the forest land for grazing that led to degradation of forest resources also.

Rita Brara (1992) observe that in the wake of environmental crisis the government's scheme of greening the common grazing and waste lands neglected the usefulness of village commons to the villagers. The government with guidance of natural scientists preferred fast growing economically valuable species in these commons which are less useful to rural community. These outside agencies failed to understand the subsistence survival mechanism of rural people with the help of commons. She finally concluded that the grazing lands or other village commons were
not wastelands as these agencies perceived; on the contrary they offered several crucial services to rural community.

Marothia (1993) in his case study of Kura village analysed common property arrangement with active participation of villagers and social forestry sponsored by the forest department in isolation with village community. He found that village CPRs held and managed by the villagers with active participation reflected long run sustainability while social forestry programme on the village commons implemented by forest department without understanding the sociological and institutional arrangements, insufficient consultation and without the involvement of village community utterly failed. He concluded that village commons could be effectively managed under common property regime.

Beck (1994) made study of three villages of two different agro-ecological zones of West Bengal. He found three main CPR activities namely gleaning, fuel wood collection and collection of wild foods leaves and other CPR products these CPR based activities added up to 19 to 29 percent to total household income of the poor. He finally concluded that even though the West Bengal had very meager CPRs the existing CPRs are very vital for the subsistence of poor.

Jodha (1995) contended that the common property resources are part of societal responses to high risk, low productivity environment in the dry regions of India. He opined that the decline of CPRs under changing social and institutional circumstances despite their unchanged biophysical contexts, leading to degradation of community asset and withering away of environment friendly survival mechanism of the people.
Milind Bokil (1996) analysed the privatisation aspect of village commons in Marathwada region of Maharashtra. The researcher found that under changing social structure the policy makers regularized the land encroached by backward community. Even though the policy makers clarified at the time of the regularisation the no further encroachments will be regularized the elected representatives generally adopted populist stance and the encroachments were regularized from time to time. Bokil concluded that even though privatisation of village commons helped the beneficiaries to acquire food security the beneficiaries not able to cross the poverty line because of unviable size of the holding and absence of complementary input support.

Jodha (1998) in his work on CPRs tried to identify some key factors and situations responsible for natural resource base protection in the past and their neglect and decline leading to resource degradation in the changed circumstances. For the reason of the recurrent failure and ineffectiveness of interventions initiated towards stopping of human induced degradation of the natural resources base, one may be tempted to look for some lead from the traditional arrangements. The author pleads not for revival of traditional arrangements as they were, but, focused on a search for functional substitutes for the traditional arrangements that can fit in with present day circumstances.

Bob Som (1998) in his article explained the classification of property resources, common property resources, pressure of CPRs, tragedy of commons. He also throw light on privatization of CPRs, effects of privatization and the alternatives to the tragedy of the commons, such as property rights school, the assurance
problem approach. He finally concluded that to avert or reduce the tragedy of commons the combination of various strategies are needed rather than any one single approach.

Dhar (1999) assessed the common property land resources in 18 villages of different regions of Uttar Pradesh. He found that CPR area shrunked over period of time. Two third of the study villages do not had CPLR management to the satisfactory level. In spite of rapid decline in area as well as productivity of common lands in Uttar Pradesh, these still constitute important community assets that provide biomass, employment, income and ecological services. He propounded for concerted CPLR management policy. Some possible ways are decentralized collective management, public management and privatization of CPLR depending upon circumstances. Forest being a common property in a broader definition of CPR, joint forest management is necessary. He concluded that management of CPRs and priority of people should be properly balanced and tragedy of commons must be averted.

Beck et.al. (2000) conducted a seven village study about the CPRs in different agro-climatic regions of West Bengal. The study found that fuel made up between 60 to 80 per cent of the CPR products collected with fodder amounting 5 to 20 per cent. In many villages few other CPR products like vegetables, fruits, fish, etc., were collected depending upon CPR type and accessibility. Income from CPR activities account for 12 per cent of gross income of poor house holds. The proportion of women’s share in total CPR product collection was varied between 70 to 78 per cent in the study villages. They concluded that poor were
systematically excluded from CPR accessibility mainly due to agricultural intensification, commodification of CPRs, environmental degradation and population growth.

Chopra Kanchan and et.al. (2002) analysed the recent evidence on the role of common pool resources (CPRs) as development drivers and safety net providers. In the context of alternative development paradigms multiple uses of common pool resources have come under consumptive pressers from various stake holders. The important issue that emerges is the extent and manner in which common pool resources would continue to be relevant to sustainable livelihoods in the context where markets and globalization dominated development. Using a simultaneous equations framework with poverty and value of collection from CPRs as the endogenous variables, the inter-linkages between development and CPRs are explored. The effect of exogenous variables such as the role of privately owned assets, access to infrastructure and existence of management regimes for CPRs is also examined. They found that while safety net role of CPRs is dominant, regional differences in their role as development drivers emerge.

Joshi (2006) with consideration of significance of CPRs in hill farming made an effort to review the ongoing resource management of three major CPRs (land, water and forest) in Indian central Himalayas. Based on field experiences and review of the resources synergy the paper strongly advocated that the management and conservation of CPRs must be framed, implemented and evaluated in the light of area specific needs, socio-economic characteristics, bio-physical attributes and the
influence of external factors. The paper concluded that the management of CPRs could be ensured by maintaining harmony between the man and nature.

Chopra Kanchan and et.al. (2008) in their essay on “Nature of Households Dependence on Common Pool Resources: An Empirical Study” critically examined the some recent studies on forest based common pool resources that have interpreted that households choose to spend time on collection from forest common for sale and value addition as an income enhancing activity that is an independent of the commons role as a safety net. The paper tests for the hypothesis by distinguishing between no-timber forest produce for sale and for self consumption using the NSSO data for a sample of 78,000 households in Bihar, Madhya Pradesh, Maharastra and Karnataka. It found that households collecting only for sale purposes are not likely to be income poor. They may collect because they have more secure property rights, greater access to forests and for market and may even be asset rich.

Pathania and et.al. (2008) in their study of two agro-climatic zones of hilly region of Himachal Pradesh has revealed that the average size of operational holding in the region is small at 0.69 hectare and therefore CPRs assure significant importance for sustaining the lively hood of people. The channels emanating water of CPRs are the main source of irrigation. The consumption of different products from CPR land has been found to increase with decrease in the size of the land holdings which underlines the need to increase the productivity of CPR lands. The analysis of linkage between different farm sectors has revealed storing
forward linkages of CPRs with livestock and agriculture and weak backward linkage with other sectors. The farm forestry and CPR lands have depicted weak linkage but strong indirect linkages. The gravity water irrigation channels have also revealed strong linkages with agriculture and livestock. The analysis of linkages has suggested that there is a need to strengthen the backward linkages of agriculture, livestock and farm forestry with CPRs. The study has suggested for strengthening the management and conservation of CPRs.

CONCLUSION

A synoptic view of the various studies conducted by researchers on CPRs has been provided below. This will enable use to get clear picture of the CPR’s role in different parts of the India

<table>
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<tr>
<th>Name of the Researcher and Year</th>
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<th>CPRs studied</th>
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| N. S. Jodha                     | Arid and semiarid districts of India | All public land (Forest Land?) | a) Size of the CPRs reduced (1947-1980) due to legal and illegal privatization. Extent not specified but observed to be significant.  
b) Productivity of CPRs declining.  
c) Unsustainable exploitation of CPRs due to opening up of new markets in the post independence era.  
d) Income from CPLRs ranged between Rs. 530 and 830 per annum/household in the early 1980s. |
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| Chen: 1989                      | One village in Ahmadabad district, Gujrat | All commons including water bodies and village forests | a. Area under CPLRs reduced (1960 to 1987) by 33 percent due to encroachment and legal privatization.  
  b. Dependence was mainly for fuel and fodder.  
  c. Access denied to weaker sections in the village |
| Sudarshan Iyengar 1989 1987     | Selected Villages in Gujrat | All public land excluding forests | a. The size reduced (1960-1987) due to legal and illegal privatization ranged between 1 and 100 percent in specific categories.  
  b. In all part of Gujrat people's perception was that the status of CPLRs had deteriorated.  
  c. Dependence higher in semi-arid regions; however major dependence for grazing and fuel wood.  
  d. With improved agricultural prospects due to irrigation, dependence on CPLRs declines even among poor households. |
| Lal: 1987                       | 13 villages in tribal areas of Gujrat | Non-timber forest produce (NTFP) | a) Dependence on NTFP was found to be around 82 percent households.  
  b) Average earning was 129 per household per annum. The range was between Rs. 20 to Rs. 3800. |
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| Singh et al: 1988 | Five villages of Cuttach in Orissa | Forest produce including timber | 1) More than $\frac{3}{4}$ of the households depended on forests for firewood.  
2) For 4.4 per cent of all households forest produce was main source of livelihood. |
| Sarabhai et al 1991 | Four villages in Rajpipla district, Gujrat | Forest land | a. In the three villages, forest produce contributed 38.5 to 46.3 per cent to the total village income.  
b. 48 per cent of the income from forests was in the form of fuel and fodder. |
| Chopra et al 1989 | Seven states in India (Secondary land use data) | CPLRs including forests | 1) The size reduced between 1970-71 and 1986-87 from 4 % (Maharastra) to 30% (Haryana) of the total area.  
2) The decrease in area is more significant in arid and semi arid states. |
| Chopra and Gulati 1997 | Western Rajasthan | (Not specified) | Decline in CPLRs from 60.5 per cent (1951-52) to 45.1 per cent (1977-78) of the total geographical area. |
| Pasha: 1992 | 14 villages in Karnataka | CPLRs including forests | 1) CPLRs declined from 35.6 per cent to 23.7 per cent of the total geographical area during 1980s.  
2) Income from CPLRs was Rs. 794 per annum (10) per cent among poor and Rs 1392 per annum (6.20) per cent among non-poor. |
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<td>Beck 1994</td>
<td>Three villages in West Bengal</td>
<td>CPLRs including water bodies</td>
<td>The average income of a household was Rs 4000 and the share of CPLRs was between 782 (19%) and Rs. 1195 (29%).</td>
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| Nadakarni 1997                  | Four villages in Karnataka | CPLRs including forests                | 1) Poor farmers earned Rs 2583 per annum (24.3% of the total income) and non-poor earned 6537 (18.1%) from forests.  
2) On an average, 67 per cent of total cost was accounted for by imputed cost of fodder through open grazing; for poor farmers it 89 per cent |
| Manohohara N. Gowda 2001        | 4 villages in Karnataka | CPLRs excluding water bodies           | a. There was a marginal decline CPLR area between 1978-79 and 1998-99.  
b. Forest accounted for 95% of total CPR area  
c. More than 2/3rd of households meet their fuel wood needs from CPRs  
d. CPRs meet 50% of fodder requirements.  
e. CPR based income accounted for 1/4th and 22% of the total income of the poor and non-poor respectively.  
f. Fuelwood collection mainly carried out by male members.  
g. Due to overexploitation the CPR situation fastly moving towards 'Tragedy of Commons'. |
The above review of literature on CPRs revealed that the majority of the studies were concentrated at relatively high CPR areas of the country. There are very few studies conducted covering various agro-climatic zones of Karnataka particularly low CPR areas. Therefore in the present study an attempt has been made to fill this gap by studying the CPR situation in all the agro-climatic zones both in high as well as low CPRs areas of the Karnataka state.