

Rural Poverty, CPRs and Rural People's Livelihood Sustenance: Findings from Tamil Nadu

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ABSTRACT:

The present research paper is entirely based on primary data which was collected from a single village located in Pudukkottai district of Tamil Nadu. Moreover the present study attempts to estimate the extent to which the rural poor, in general and the people living in below poverty line (BPL), in particular benefit from CPRs. The collected primary data have been classified into two categories such as the people living in below poverty line (BPL) and those living in above poverty line (APL) based on the New Poverty Line Report, 2014. Based on data collected from 295 households, the study reveals major contribution of CPRs towards income and employment generation for the people living in below poverty line in the selected sample village. Around 68.1 percent of the households completely depend on CPRs for their daily livelihood requirements as far as the study village is concerned. Compared to the private sources, the CPRs accounted for 51.5 percent of the BPL households and 13.2 percent of the APL households for fuelwood collection. It finds that per household per year income derived from CPRs estimated at 11.5 percent to total income of the families. It accounted that 16.8 percent of the income to the total income of the BPL households and 6 percent of the income to the total income of APL households has been derived from CPRs.

Keywords: CPRs; employment; income; livelihood sustenance; material collection, poverty line

Environmental Economics Subject Classification Number: Q5

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1. INTRODUCTION

Since time immemorial, the CPRs have been playing a vital role in the life and livelihood of the local population, in general and the landless labour i.e. rural poor, in particular in the rural pockets of India. But in recent years, the trend and magnitude of such vital land resources have degrading conditions due to several factors like rapid population growth, market forces, public intervention, privatization and liberalization, commercialization and environmental stress (Jodha 1986, 1989; Pasha 1992; Iyengar 1989). In addition to that, subsistence farming practices, soil and water erosion, unreliable rainfall, high density of human and livestock population have contributed to unsustainable

land use that has led to degradation of valuable land resources (Mani 2010). Host of studies conducted by the eminent researchers across India finds that the area under CPRs has declined by 31 percent to 55 percent in various states in India during the period from the early 1950s to the early 1980s (Jodha 1989), 39 to 58 percent in 1950-51 to 16-28 percent in 1980-82 in different villages in India (Jodha 1995) and in Karnataka state, the CPR area was estimated to be around 35 percent in 1960-61 and it has declined to 30 percent in 1990-91 (Dadibhavi 1998). Kannan et al., (2011) for example, finds that in India, the proportion of CPRs has come down from 30 percent in 1950-51 to 18 percent in 1993-94. In Tamil Nadu, it was estimated to be at 24 percent in 1950-51 and it came down to 18 percent in 2001-02.

Nevertheless, the CPRs have been continuously contributing a part and parcel of the total expenditure of the families through provisioning role of income and employment to the dependent sections, in general and the vulnerable sections, in particular in the rural pockets of India. In India, eradication of poverty is thus an important objective of the government, and it has been stressed by the central and state governments in all of their planning. Since the historical past, CPRs have been playing a crucial role in reducing income inequalities and reduction in poverty amongst rural households by contributing quite extent of income to the total income of the families through material collections, provision of employment when other options are more or less absent. In this background, the present study made an attempt to estimate the contribution of CPRs to the life and livelihood of local population and very primarily, the people who belonging to the below poverty line in the selected sample village of Andakkulam in Pudukkottai district of Tamil Nadu.

2. METHODS AND MATERIALS

This study was done in Tamil Nadu covering one agriculturally less developed and being a dry district in the State. The main purpose of the study is to assess the extent to which the rural poor, particularly the people who belongs to BPL are benefit from CPRs for their life and livelihood have been studied. This study is completely based on primary data which were collected through interview with the respective respondent households with the help of a pre-tested interview schedule containing all relevant questions. In addition, numerous casual discussions also were made with aged residents and administrative authorities of the study village to obtain certain historical information regarding the utilization pattern of CPRs by the village people. From the district, one revenue village has been selected based on the sampling procedure was adopted in the study. For primary survey, one-fourth of the households (i.e. 295 households) from the total households were chosen for this study. The field survey for the present study was conducted in six months during June 2018 to November 2018.

The selected sample respondent households were grouped into two categories such as those living in Below Poverty Line (BPL) and those living in Above Poverty line (APL) to estimate the extent to which the people who belongs to BPL are benefit from CPRs in the selected sample village. For classifying the respondent households, Dr.C.Rangarajan committee report 2014 of the new poverty line estimate has been used for the present study. As per the committee report, the monthly per capita consumption expenditure of Rs.972 in rural areas and Rs.1,407 in urban areas in 2011-12

prices (Planning Commission Report, 2014 p.60). Hence, the present study takes into account the monthly per capita consumption expenditure of Rs.972 in 2011-12 prices for grouping the sample respondent households in the study village.

3. RESULTS AND DISCUSSION

This section is devoted to the discussion of the results of primary data which was collected from the selected 295 sample households for the present study. In recent days, land degradation, in general, and the degradation of CPRs, in particular, threaten the life and livelihood of the many poor, vulnerable and weaker sections of the developing economies including the countries like India. Despite their size and quality, CPRs has also accomplished the day-to-day livelihood requirements including food security of the rural mass by providing materials for their daily livelihood needs. CPRs provide manure, fuelwood, fodder, medicine and some cash income to the community and timber for minor constructions (Jodha 1986, 1989, 1995; Pasha 1991, 1992; Iyengar 1989; Mani 2010; Dadibhavi R. V, 1998; Kannan et al, 2011, 2012, 2015, Kannan, 2016).

Table 1: Percentage of Households dependence on CPRs

People living	Total sample HHs	Dependence on CPRs	Dependence due to poor family conditions	Principal dependence	Uses of CPR materials	
					Fully HHs	Partly selling
BPL	186	52.9	49.5	51.9	44.1	8.1
APL	109	15.3	13.6	13.9	13.2	0.7
All	295	68.1	63.1	65.8	57.3	8.8

Source: Primary data

In table 1 reveal that, the proportion of households reliance on CPRs for their life and livelihood in the selected sample village. Of the total selected sample households, 68.1 percent of the households depended exclusively on CPRs for their daily livelihood requirements. Of which, 60 percent of the households belongs to the below poverty line (BPL) and only 15.3 percent of the households belongs to the above poverty line (APL) depends upon CPRs for their daily livelihood sustenance. Besides 63.1 percent of the households to the total sample households depends on CPRs due to their weak economic conditions. It further shows that around 49.5 percent of the households from the BPL, and very low percentage of 13.6 percent of the households from APL has primarily depended on CPRs due to their underprivileged economic status.

Overall, the study estimated that 65.8 percent of the households in the sample village depend on CPRs as the primary source for their livelihood. This table further makes known that 51.9 percent of the households who belonging to BPL and 13.9 percent of the households who belonging to APL has depended on CPRs as the principal source for their day-to-day necessities. The study data further implies that majority of the households used the collected CPR materials completely for the household uses and very few of them have been engaged in selling it in the nearest market for earning income.

Table 2: Households dependence on CPRs for fuelwood

People living	Total sample HHs	For fuelwood	Source of fuelwood collection		
			CPRs	Private	Both
BPL	186	52.9	51.5	6.8	4.7
APL	109	15.3	13.2	14.9	8.8
All	295	68.1	64.7	21.7	13.5

Source: Primary data

According to the data given in table 2, 68.1 percent of the households in the study village uses fuelwood as the major source for cooking and heating purposes. However, this proportion varied between categories of households. For instance, above fifty percent of the households (52.9 percent) in the BPL category and only 15.3 percent of the households in the APL category uses fuelwood as the only source for their cooking and heating purposes. The primary survey results further show that, above sixty percent (64.7 percent) of the households in the study village have collected fuelwood from CPRs, 21.7 percent of the households collect fuelwood from private sources and only 13.5 percent of the households collect fuelwood from both CPRs and private sources.

The above table further indicates that, around 51.5 percent of the households in the BPL category and only 13.2 percent of the households in the APL category collect fuelwood from CPRs. It represents that the people belonging to the BPL does not have other options other than CPRs for fuelwood collection in the study village. There are increasing evidences supported in this regard that, the dependence of CPRs by the poor households was estimated to be at 66 to 84 percent and by rich, it was accounted about 8 to 32 percent. For grazing and space for grazing, it was estimated to at 69 to 89 percent of the poor and 11 to 42 percent of the rich depended on CPRs (Jodha, 1986). As described in Iyengar (1989) that 35 to 46 percent of the households depend on CPRs for fuelwood collection and Pasha (1992) study also substantiated to the above fact is that 77.2 percent of the poor and 71.3 percent of the non-poor collect fuelwood from CPRs.

Table 3: Difference in quantity and value of materials collected by the HHs from CPRs

Material	People living	Mean	Std. Deviation	Std. Error Mean	F	Sig.
Fuelwood quantity in Kg.	BPL	1418.95	675.773	49.550	18.208	.000
	APL	599.36	735.312	70.430		
Fuelwood value in Rs.	BPL	4508.47	2135.140	156.556	20.313	.000
	APL	1919.17	2349.253	225.018		
Other material quantity in Kg.	BPL	33.33	48.747	3.574	23.358	.000
	APL	8.75	22.269	2.133		
Other material value in Rs.	BPL	276.59	310.371	22.757	24.400	.000
	APL	89.36	224.443	21.498		

Source: Primary data *Significant at 0.05 percent

The CPRs still provide a significant proportion of household fuel, especially to the landless and marginal farming households in the selected sample villages in Haryana, north-western India

(Qureshi and Kumar.1996, p.343). The present study also has collected data with regards to quantity and value of fuelwood collection made of from CPRs by the sample respondent households in the study village.

In the table three gives an important insight about the pivotal role played by the CPRs through the provision of materials to the life and livelihood of the people who belongs to the below poverty line category in the study village, in particular and local population, in general. The above data reveal that, the average quantity and value of fuelwood collection made of from CPRs have contributed about 1419 kg. and its imputed market value is estimated to be Rs.4508 per annum per household for the sample respondent households who belong to BPL. The same for the households who belong to APL is accounted for about 599 kg. and Rs.1919 per household per annum. While, the quantity and value of other materials collected by the sample respondent households also varied between categories of households in the study village. For instance, the quantity and value of other materials collected by the sample respondent households who belong to BPL is accounted for about 33kg. and Rs.276.5 and the same for the sample respondent households who belong to APL is estimated to be at 8.75kg. and Rs.89 respectively in the study village.

The estimated 't' test result has witnessed that there is a significant difference ($p < 0.05$) in quantity and value of fuelwood and other materials collection made of from CPRs by the sample respondent households belonging to BPL and APL in the sample village. The standard deviation value of the 't' test results have also further witnessed that there is a higher uniformity as well as homogeneity of the quantity and value of materials collection made of from CPRs by the BPL households than that of APL households in the study village. Its represent that, the quantity and value of fuelwood and other materials collected by the sample respondent households belonging to BPL were observed in the study village was not shown much difference as compared with those belonging to BPL category households in the study village. From this, we can conclude that the CPRs contributed more to the people who belongs to BPL than that of those who belongs to APL in the study village and indirectly it indicates that the people belonging to BPL depends more on CPRs than that of the other sections of the society in the study village for their basic survivals.

One of the primary causes of environmental degradation in the country could be recognized to faster growth of population, which is adversely affecting the natural resources and environment(Manasranjan Dashmishra, 2011 p.85). The degraded environment can accelerate the process of poverty, because the poor people depend directly on natural resources. As described by Debnath et al., (2003) that the presence of human and cattle population on the forest resources coupled with poverty since 1956 has led to a rapid deterioration of forests in Madhya Pradesh. As a result, the per capita forest area has shrunk from 0.66 hectares in 1956 to 0.23 hectares in 1991. However, the rural people collect the non-timber forest products (NTFP) in some month of the year, which support them for survival and livelihood, varying from 10 percent to 50 percent of their total income depending upon the potentiality of the resources. Though, there has been a significant fall in the poverty ratio in the country from 55 percent in 1973 to 36 percent in 1993-94 (Mani, 2010 p.5).

However, the percentage share of CPRs to the income of the households was substantial. Majority of the findings of the study conducted in India and abroad states that one-fourth of household income has come from the available CPRs in the concerned villages. CPRs contribute a lot to the rural people's livelihood by providing income and employment particularly when the scope for other opportunities are almost absent in the rural areas. Majority of the findings states that CPR product collection provided employment between 128 to 204 days and 134 to 185 days per annum among poor and large farming households respectively in India (Jodha, 1986), the value of physical product derived from CPRs amounts to 13.5 percent of the gross households income in three forest villages in Uttar Kannada district of Karnataka (Nadkarni et al., 1989) and yet another study by Pasha (1992) has brought out that the CPR income including the values of fodder and fuelwood and the imputed value of grazing accounts for about 10 percent of the gross income of the poor and 6.2 percent of the gross income of the non-poor households respectively in Karnataka. In Swalik regions of Punjab state, accounted that CPRs contribute 27.3 percent of the total gross income of the landless and 22 percent of the total gross income of the cultivating households (Singh et al., 1996). A study conducted by Iyengar (1989) in this regards reveals that in Gujarat, the percentage of households reporting dependence on common property resources for income generation varied from 2.5 percent to 15 percent and most of the income generating activities like collection of fuelwood, minor forest products, raw materials, dung, sand and stone, cultivation of vegetables in the river bed and animal grazing were undertaken by the landless and marginal households in the state.

Table 4: Contribution of CPRs in income and employment to the HHs

People living	Total sample HHs	No. of days employment generated through CPRs per HHs per annum			% share of CPR income to the total family income per annum per HHs		
		Charcoal making	Basket making	Brick making	Employment	Material collection	All CPR income
BPL	186	129	224	90	10.3	15.4	16.8
APL	109	240	9	90	4.6	5.3	6.0
All	295	166	209	90	7.3	10.5	11.5

Source: Primary data

In table 4, clearly show that the contribution of BPL households in these activities was estimated that 224 days of employment through basket making, 129 days of employment from charcoal making and 90 days of employment from brick making activities per household per annum. For the APL households, it accounted 240 days of employment by charcoal making, 90 days of employment through brick making and only 9 days employment in basket making activities per household per annum from CPRs, For the purpose of brick making, except labour, the people use mud, sand, water and fuel from the common resources in a free of cost. Most of the CPR related employment activities were carried out by both men and women together was observed in the study village. For this purpose, they usually go together and collecting the inputs from various places and fields on a daily basis and mostly in the lean season when they fail to earn income from other sources. After processing the collected inputs for nearly 2 to 3 days, they spend a minimum of 4 to 6 hours in a basket weaving. Mostly they sell the basket and charcoal within their dwelling units or a

distance by bicycle. However, a few items, particularly basket were sold during their conventional ceremonies in and around of their residential areas.

In table (4) further prove that employment from CPR related activities yield a part of their household income. For instance, in the study accounted, for 11.5 percent of the income to the total income of the households has exclusively come from CPRs. The contribution CPR income to the total income of the households was high in the BPL households as compared to the APL households in the study village. It is estimated that 16.8 percent of the income to the total income of the BPL households and 6 percent of the income to the total income of the APL households has been derived from CPR related activities in the study village. Hosts of studies have also contributed to the above fact is that the per household per year income derived from CPRs ranged from Rs.530 to Rs.830 in different regions of India and this were higher than the income generated by a number of anti-poverty programme in some regions of India. The dependence of rich households on CPRs is much less as compared to those in poor households in the studied regions (Jodha, 1986 p.1169).

A study undertaken by Adhikari (2005) reveals that the average 'poor' households receive in Nepalese rupees (Nrs) 7756 gross income from community forest per year, whereas the more 'rich' households receive on an average Nrs 24466 per year. CPR helps to reduce the rural inequalities in India. It is estimated from 80 villages in 21 districts in dry regions of seven states study revealed that the values of the Gini coefficient varied from 0.37 to 0.50 in different areas of the study states when income from all sources excluding the CPRs was considered. But once CPR-related income was incorporated in household income, the value of the Gini coefficient declined and ranged between 0.32 and 0.41 in different areas in India (Jodha, 1986 p.1177). CPR income supplements for 14 to 23 per cent of household income from all other sources in the study villages. More significantly, the accumulation of CPR income in total household incomes from other sources, minimizes the extent of rural income inequalities as indicated by lower values (0.32 and 0.41) of the Gini-coefficient (Jodha, 1990 p.66).

The table below further substantiate to the above fact that the income obtained from CPR related employment and the imputed value of materials collected by sample respondent households has significantly and positively contributed to the total family income of the households.

Table 5: Association between total CPR income and the income gained from employment and material collction through CPRs.

Independent variables	Dependent variables		
	Total CPR income	Income from employment	Income from matrial collection
Income from employment through CPR	.977**	-	-
Income from matrial collection	.743**	.376**	-
Total fuel quantity (Kg.)	.411**	-.021**	.648**
Total other material quantity (Kg.)	.414**	-.011**	.542**
Total fuel value (Rs.)	.415**	-.022**	.651**
Total other material value (Rs.)	.596**	.230**	.792**

** Significant at 0.01 level (2-tailed)

Table 5 confirms that there is a positive association between total CPRs income of the sample respondent households with the income obtained through employment and materials collected from CPRs by the selected sample respondent households in the study village. It is pointed out that there is 97.7 percent of the relationship exist between total CPR income and the income gained in CPR-related employment in the study village. It indicates that there is a positive association between income gained by the sample respondent households from material collection and total CPR income obtained through CPRs at 74.3 percent. Both values were turned out at the 1 percent level of significance. It is further found that there is a positive association between quantity and value of fuelwood and other materials collected from CPRs by the sample respondent households with the total CPRs income at 41.1 percent and 41.5 percent in quantity and value of fuelwood collection and 41.4 percent and 59.6 percent respectively of the quantity and the value of the other materials collection to the total CPR income of the respondent households in the study village.

Besides that, CPR income obtained through material collection has also been positively correlated with its quantity and value of fuelwood and other materials collection was made of from CPRs by the sample population. It finds that 64.8 percent and 65.1 percent of the relationship exist between the quantity and value for fuelwood collection with the total income received from material collection of the sample respondent households from CPRs and about 54.2 percent and 79.2 percent respectively of quantity and value of the other materials collection with the total income received from material collection in the study village from CPRs, It is pointed out that the income contributed by the CPRs to the total family income is an important factor for determining the types and magnitude of the dependence of the sample respondent households on CPRs in the sample village.

4. CONCLUDING REMARKS:

The ecological and socioeconomic sustainability of the rural society is largely determined by status of CPRs in the rural pockets of India. The study found that even today, CPRs play a critical role in the rural people's life and livelihood, in general and those living in BPL, in particular. Around 68.1 percent of the households completely depend on CPRs for their daily livelihood requirements as far as the study village is concerned. Compared to the private sources, the CPRs accounted for 51.5 percent of the BPL category households and 13.2 percent of the APL category households for fuelwood collection. It finds that the people belonging to BPL depends more on CPRs than that of the other sections of the society, particularly APL for their basic survivals as far as the study village is concerned. The income from CPRs received by the APL households is relatively low in comparison with BPL households in the study village. It accounted for 16.8 percent and 6 percent of the income to the total income of the BPL and APL households respectively has comes from CPR related activities in the selected sample village. Correlation result of the present study further confirms that there is a positive association between total CPRs income of the sample respondent households with the income obtained through employment and materials collected by the selected sample respondent households in the study village from CPRs. Hence, there is the need of the hour to look into matter of

conservation and management of such critical environmental resources for the sustainable life and livelihood of the rural areas, in general, and the rural poor, in particular, in the rural pockets of India.

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