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Remoteness and chronic poverty in a forest region of Southern Orissa

A tale of entitlement failure and state apathy

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What is Chronic Poverty?

The distinguishing feature of chronic poverty is extended duration in absolute poverty.

Therefore, chronically poor people always, or usually, live below a poverty line, which is normally defined in terms of a money indicator (e.g. consumption, income, etc.), but could also be defined in terms of wider or subjective aspects of deprivation.

This is different from the transitorily poor, who move in and out of poverty, or only occasionally fall below the poverty line.

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Abstract

The recent round of poverty estimates, placing Orissa as the poorest state in India, has pressed an alarm bell among planners, practitioners and also international donors. This, in turn, has triggered a sense of urgency for salvaging the situation of chronic poverty, where the central thrust is on expediting growth. Agricultural growth occupies a special significance in this approach since the sector, of late, has demonstrated direct and significant impact on poverty reduction across states, including some of the high-poverty states in the country. While the need to foster growth, particularly, agricultural growth can hardly be over emphasized, what appears to be missing in the emerging perspective on linkages between growth and poverty reduction is integration with one of the most critical segments, i.e. the forest based economy, in the state. The segment has special significance not only in terms of its contribution to the states, revenue but also in terms of supporting poors' livelihood besides rendering environmental services that are often realized beyond the state boundaries. Generating a better understanding of dynamics of forest and development thus, is important for facilitating a shift in the policy perspective within the state.

This paper seeks to examine the extent, nature and structural factors (social, physical and legal) leading to poverty in southern region of Orissa, which has a dubious distinction of having the highest incidence of poverty among rural regions in India. The analysis is based on both secondary as well as primary data; the later pertain to a sample of households from four villages in Southern Orissa. The analysis reinstates the fact that chronic poverty in terms of- both severity and long duration- is an overarching reality for almost nine out of ten households in the region. Similarly, it highlights severe deprivation in terms of food consumption, with a significantly large proportion of households consuming just about half of the prescribed norm of cereal intake. The paper dwells at length on the existing policy initiatives and suggests alternative framework for addressing the issue of chronic chronic poverty in the region.

Keywords: poverty, forest, India, Orissa

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1 Introduction

1.1 Policy perspectives on poverty in Orissa: some reflections

The latest round of poverty estimates, identifying Orissa as the poorest state in India, has pressed alarm bells among planners, practitioners and international donors. This, in turn, has triggered a sense of urgency to salvage the situation, with a thrust on expediting growth. Agricultural growth occupies a special significance, since this sector has of late demonstrated direct and significant impact on poverty reduction across states, including some of the high-poverty states in the country.[1]

While the need to foster growth, particularly agricultural growth, can hardly be over emphasised, what is missing in the emerging perspective on linkages between growth and poverty reduction is integration with one of the most critical segments in the state, i.e. the forest-based economy. This segment has special significance not only in terms of its contribution to the state's revenue but also in terms of supporting the livelihoods of the poor, besides rendering environmental services that are often realised beyond the state boundaries. Forests of Orissa (accounting for 30 percent of the land) support about 40 percent of the population (constituting half of those in poverty in the state).[2] Notwithstanding this significant link between forest and poverty, the growth and developmental discourse in the state continues to address the issues pertaining to forest resource management and livelihoods in a disjointed manner.[3] The issue is not so much one of marginalisation of tribals as one of segregating forest resources from the mainstream strategies for growth that could reduce poverty among forest dwellers in the state.

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[1] According to recent estimates, poverty elasticity with respect to income (per capita total expenditure) is -1.68 for rural areas. It is therefore argued that to achieve a more than 3 percent rate of reduction of rural poverty, it is essential that agriculture grows at 4 to 5 percent (Parikh and Radhakrishna, 2005: 3). It is in this context that the

Poverty Task Force (PTF) in Orissa has recommended that 'growth of agricultural and allied sectors would hold the key to poverty alleviation within a time frame of a decade or two on several grounds' (PTF, 2003: 11).

[2] It has been estimated that 25 percent of the total population that belongs to scheduled tribes (and located mainly in forest-based regions), account for 40 percent of the total rural poor in Orissa (Glinskaya, 2003: 14).

[3] For the 10th Five-Year Plan, the Ministry of Environment and Forest has adopted the Integrated Approach for Forest Conservation and Livelihood for the Forest Communities. This is being facilitated by converging various centrally sponsored schemes under the Forest Development Agencies (FDA) constituted in every forest division. The persistence of high poverty in Southern Orissa has also led to a realisation that restoration of ecological balance between water, soil and plants and requirements for human as well as livestock populations should form the basic consideration for developmental strategy for the area. The Long-Term Action Plan (LTAP) for the Kalahandi-Bolangir-Koraput region is an offshoot of this approach. What is still missing in this approach is that plans for forest development and sustainable livelihood support continue to remain separate entities; employment generation is the link between the two.

A disjointed view of development results in a lose-lose scenario, whereby forests are not properly conserved, protected and managed (despite their significant contribution to the state's revenue), nor are livelihood options adequately explored (owing to a loss of potential revenue from forests, forming an important source of investment) in the rest of the economy.[4] The immediate and the worst sufferers are the forest dwellers, who have neither proper entitlement to manage the forest resources, nor equitable share in the developmental opportunities emanating from forest conservation/management elsewhere. The situation is aggravated because the state, unable to link conservation and economic development in the context of a close interface between highland and lowland within the forest ecology, fails to provide for compensation to the forest dwellers against the foregone opportunities. In fact, the opportunities are lost not mainly because of the 'conservation' objectives; rather, the loss of opportunities owes more to ineffective measures, resulting in limited realisation of the conservation goals.

1.1.1 Missing link between forest and development

High concentration of chronic poverty in the forest areas of Orissa is an outcome of failure of policy in terms of balancing the twin objectives of regeneration/conservation of forest on the one hand, and meeting livelihood needs on the other. Instead of working out a proper interface between the two, the forest policies sought to alienate people from the forest resources, thus setting up a downward spiral of overuse of resources (by a large number of players in addition to the tribals), deprivation, extraction of resources, increased control by the state (for conservation) and degradation through clearing of forest for crop cultivation. Such policies of alienation at best could have worked as a short-term solution to reduce overuse of forest resources, provided that adequate investment for regeneration of community forest and other marginal land for cultivation were in place. Unfortunately, state allocations have been marginal, at only 1.3 percent of total revenue expenditure (Sarap, 2004: 15). Not surprisingly, therefore, the Long-Term Action Plan (LTAP) prepared for the development of Koraput-Bolangir-Kalahandi (KBK) region for the period 1995-1996 to 2001-2002 treats conservation of natural resources, especially forests, as only a part of the various sectoral development programmes, rather than being at the centre stage of the developmental plan for the region. This suggests that the development perspective is yet to incorporate ecological/environmental perspectives while setting up priorities for resource allocation across different sectors of the state economy. Incorporating appropriate value to the forest resources, both for direct use as well as for conservation, may then pave the way for more sustainable management of forests of the state.

[4] Forest resources in Orissa constitute an important component of the non-tax revenue in the state. Of late, revenue from forest produce has declined. The total revenue (at current prices) declined from Rs. 109 crores in 1990-1991 to Rs. 84.2 crores in 2000-2001 (Mallik, 2002: 186).

Ideally, investment for forest regeneration/conservation should be treated as compensation for the lost opportunities or disability fund, which the state should mobilise from the rest of the economy, within and beyond the state boundaries.[5]

1.2 Growth-induced poverty reduction: implications for the transitory phase

The contemporary discourse on policies for poverty reduction lays special emphasis on expediting economic growth and sectoral diversification of the state economy. It is envisaged that, once the trajectory of high economic growth is achieved, it may pull out a substantial proportion of poor located in forest-based regions of the state. This assumption needs systematic assessment in the light of the growing population and a large number of underemployed workers already existing in other parts of the region. It is thus likely that the high growth trajectory may bypass a part of the poor in forest-based economies, even in the long run.

In any case, in the intermittent period, people in these regions need to be supported through 1) various schemes for income and employment generation based mainly on forest resources; and 2) income transfer through public distribution of food.

The above prescription for a growth-linked poverty reduction strategy is quite valid, provided it could be realised within a reasonable timeframe. Till then, the main plank of poverty reduction may rest on development of forest resources (including land and water), and extraction thereof so as to generate employment income for the poor. Assuming that the state is able to mobilise adequate funds, e.g. through various centrally sponsored schemes, the strategy still suffers from two inherent limitations. First is the extractive nature of forest development. Second is inadequacy of funds and/or administrative/institutional capacity for implementing various employment generation schemes, as well as food distribution programmes, especially in the remote areas within these regions, as suggested by recent experience with respect to a number of employment and income generation schemes in some of the 'backward' and remote areas in the state. Notwithstanding these limitations, the issue of sustainable extraction/use of forest resources remains unattended. In fact, the sustainability issue, at least till recently, has seldom been addressed when designing plans for collection/marketing of non-timber forest produce (NTFP) – an important source of livelihood for the poor, especially the severely poor, in these regions. The forest policy in the state, as is the case for most parts of the country, has been trapped in a negative spiral,

[5] The concept of compensation for lost opportunity has been invoked recently by seeking a 'disability fund' from the Planning Commission. The issue needs to be brought into the larger discourse on sustainable development in the context of the existing system of federal finance.

where depletion of forest resources has led to increased emphasis on conservation (i.e. exclusionary approach).

This has been reflected by the fact that there is hardly any systematic effort to assess the needs for income employment support for the present as well as future population in the forest-based regions. The developmental plans prepared by the forest department of the state incorporate certain elements of employment generation and food distribution. But these provisions are incidental to the plans where the primary focus is regeneration and conservation of forests.

This phenomenon has been reflected by the fact that the area under reserve forest has increased significantly, from about 40 percent in 1959 to 74 percent in 1993 (Sarap, 2004). It may be noted that the increase in this category of forest took place at a time when the total area under forest had declined from about 65,000km^2 to 57,000km^2. Much of the decline could be attributed to utilisation of land for agriculture, and also for the various developmental projects.

During the same period, human population in the forest-based economies may have at least doubled. The obvious outcome is substantial decline in the per capita forest dwellers' access to forest resources. In the absence of alternative sources of income/employment, this phenomenon of reduced access to forest resources would almost automatically translate to deepening of poverty for a majority of the people in these regions.[6] Promoting alternative sources of income employment in the forest-based economies may, arguably, go against the very existence, and thereby conservation value, of forest resources. Faced with an inherent dilemma like this, the state has been under constant pressure to divert a large amount of forest area for alternative uses under various developmental projects, including irrigation. The available estimates suggest that, between 1947 and 1984, about 2000km^2 of forest area were diverted for promoting alternative activities, which in turn may help in diversifying the state economy. Subsequently, an additional 177km^2 of forest land were converted for such activities till 1993. By now, about 4-5 percent of the total forest area seems to have been diverted for non-forest uses, besides the area already under 'illegal' cultivation.

While in terms of magnitude this may not appear very large, land alienation owing to developmental projects has caused serious adverse impacts for those who have been

[6] Forest in Orissa declined more sharply during 1991-1997; the decline is particularly acute in dense forest (Mallik, 2002: 27). The Eastern Ghat region, which overlaps with Southern Orissa, has the highest proportion of open degraded forest. Koraput has forest cover only in scanty patches in southern, south-western and northern parts (CPSW, 1994). This is particularly important in the light of the fact that, during 1991-1997, forest cover declined more steeply in the districts with better forest resources (crown density being greater than 40 percent). The notion of carrying capacity (i.e. the capacity of the natural resources, given the status of degradation) becomes relevant for defining the limit, especially in the wake of population growth.

displaced from their traditional resource base without appropriate compensation or rehabilitation policies (Mahapatra, 1995).

The immediate solution lies in mobilising funds for investment so as to foster economic growth and diversification of the state economy. One of the possible ways is to seek additional funds through the system of federal finance by way of compensation for regeneration/conservation of forest and other natural resources that provide benefits/ecological services, not only at the local and regional level, but also in the national and international arena.

Pleading a case for compensation, however, would require that management of forest resources and the people, especially the chronically poor, are brought to the centre stage of development and resource allocation within the state. While states like Himachal Pradesh, Arunachal Pradesh and Madhya Pradesh have already made a case for 'disability funds' to obtain additional resources from the centre, the task of evolving a comprehensive perspective on environment and development still remains an unfinished agenda.

Till then, the main thrust of the state's poverty reduction programme rests on agricultural growth, which in turn is to be promoted through increased irrigation. The Orissa State Development Report (SDR, Government of India, 2004) provides a detailed analysis of how increased irrigation could help enhance productivity and income on the one hand and employment and wages on the other.

The regions to gain from irrigation-induced agricultural growth are mainly in the coastal and plain regions that are downstream of the watersheds. The forest regions, especially in southwest Orissa, are thus likely to continue to suffer from low and undependable irrigation facilities.[7] The phenomenon of depleting groundwater owing to loss of vegetation in the upland has increasingly been recognised by various studies (Chengappa, 1995). What is less recognised is the link between development of forest and irrigation-induced agricultural growth. The inventory of new initiatives (PTF, 2003: 96) in irrigation in the state by and large reflects the missing link between forest ecosystem and growth in the region. Highlighting the critical importance of topographical features in the state, it has been noted that highland (constituting nearly 42 percent of the cultivated area in Eastern Ghat, incorporating a large part of Southern Orissa), with its poor intrinsic fertility, may be suitable only for low-water-intensive crops (Human Development Report – HDR 2004, Government of Orissa, 2005) or for plantation.

[7] Uneven and erratic rainfall has resulted in a situation of chronic drought in the KBK region. Nearly 0.9 million hectares of cultivable land of the Western part of Southern Orissa faces severe droughts in most years. Upland areas in these regions should therefore adopt low-water-intensive crops (Swain, 2002: 120). Plantation and pasture development may form a part of the farming system in the region.

It may perhaps be envisaged that agricultural growth will create a significant pull effect for people from the forest regions, constituting a large proportion of the state's poor population. This kind of movement of population is a fairly common phenomenon, especially in Orissa, where population density varies significantly from 375.4 per km^2 in the developed coastal region, to 169.1 in the northern and 109.9 in the southern region of the state. A reverse pattern is observed with respect to incidence of poverty, varying from 31.8 percent in the coastal region to 49.8 percent in the northern region and 87.1 percent in the southern region (Panda, 2004). To an extent, the link between relatively higher population density and incidence of poverty might be a reflection of mobility from low- to high-growth areas. However, this may not be true in the case of tribals in forest regions, whose mobility is constrained by physical remoteness and lack of financial and social capital essential for supporting migration.[8] Two issues need attention in the context of a growth-induced migration approach for development and poverty reduction. First, the relative ability of the tribal poor of the forest regions vis-à-vis potential migrants from different places gravitating towards the newly emerging centres of agricultural growth. The second issue pertains to the accentuation of the already existing regional disparity, which may further dampen opportunities for those who are left behind, unless a significant resource transfer takes place through remittances at the household level and through allocation of resources by the state. But this is not likely to happen, as the agricultural sector is already overcrowded,[9] creating a dampening impact on wages. The new opportunities may, at best, improve the wage rates for some. Physical remoteness is an integral part of a conservation strategy (so as to check commercial and illegal exploitation of forest resources). Forest dwellers are constantly between high-cost migration and over-depletion of forest resources (within or beyond the legal system), so as to avoid out-migration. It is in this context that remoteness in a forest-based economy may exert a compounding impact on resource alienation and chronic deprivation, as noted earlier.

[8] Despite high incidence of poverty, interstate migration in Orissa is relatively low as compared with other states, like Bihar, Uttar Pradesh and Rajasthan. A part of this could owe to physical remoteness and access to forest resources. Within Southern Orissa, the undivided Kalahandi and Phulbani districts have better connectivity as compared with Koraput, which is isolated owing to hills on both sides. Out-migration is therefore found to be higher in Kalahandi and Phulbani as compared with Koraput. There are, however, no systematic estimates on out-migration from districts in Orissa.

[9] While there is substantial scope for enhancing irrigation in the medium and lowland areas in the state, this ideally should improve livelihood conditions among those who have already shifted out of the forest regions owing to economic distress, rather than pull more workers from high poverty areas. What is essential is to undertake a systematic study of resources – potential and carrying capacity in a dynamic context. The recent SDR (2004) does mention this but a detailed analysis of carrying capacity is yet to be undertaken (Dash *et al*., 2002). Essentially, this would call for adapting the framework from environmental economics.

1.3 Exploring an alternative approach

Compensation need not necessarily be in terms of promoting agricultural productivity within forest regions. Instead, the focus could be on improving the forest resources in the forest regions, and at the same time enhancing forest dwellers' access to opportunities in the areas that are downstream of the forest regions. The central thrust, therefore, is to recognise the forest dwellers' stakes in the conservation measures within the forest-based regions, as well as in the developmental opportunities outside that. Essentially, this approach is different from the present policy thrust on the various forms of participatory forest management, especially joint forest management (JFM). The basic difference lies in the fact that JFM and other programmes for participatory management hinge mainly on enhancing people's access, and thereby use a part of the forest and its produce, in isolation of a coherent policy for enhancing the status of forest and the associated agro-ecological system consisting of land use, irrigation and pastures. As noted earlier, this kind of disjointed approach may not work, since productivity of NTFP depends essentially on how the rest of the system is managed.

Moreover, there is a limit to livelihood support without adversely affecting the long-term sustainability of forest. The population exceeding a reasonably defined carrying capacity obviously needs to be supported through a smooth transition to a migratory path and/or resource transfer.

Unfortunately, the predicament of the state in Orissa is that it does not get sufficient funds for resource transfer such as this, because the richness of the state's major resource (i.e. forest or minerals) lies in its existence itself, rather than in its extraction, that is too, in a not so systematic manner.

Of course, sustaining the existence of this resource tends to generate positive externality beyond the administrative/financial unit of the state. Unless the federal financial system facilitates the state to sustain the resource, the state, even if it is benevolent, may not be able to invest in management of forest resources, let alone address the issues of livelihoods of the people dependent on that the forest. If the state is not so benevolent, the fate of both – the resource as well as the people – is likely to be jeopardised. What is worse is that the state does not have effective institutional mechanisms to ensure implementation of the legal system governing its natural resources. This is what seems to have triggered poverty among forest dwellers in Orissa. Rooted deeply in the web of socioeconomic, financial and legal structures, poverty in the state is most likely to be chronic in nature – severe, long duration and multidimensional. Exiting from this would require a substantial shift in the mindset of policymakers, who often tend to isolate the very resource that is the foundation of the state's economy, especially for the poor. It is for both the state and the poor to capitalise on this resource as a strategic negotiating point, rather than keep it away from the developmental discourse at national, regional and local levels.

Evolving a coherence of approach and commitment at different levels would require appropriate political representation, especially from the people and region (or resource) whose survival is at stake. The present discourse on growth/development and poverty reduction does not seem adequately to recognise the criticality of bringing forest and the poor living in these regions to the centre stage of development. Generating a better understanding of dynamics of forest and development may thus facilitate a shift in the policy perspective for poverty reduction in the state. Given this backdrop, the present study seeks to examine the extent, nature and structural factors (social, physical and legal) leading to poverty in the southern region of Orissa, which has the dubious distinction of having the highest incidence of poverty among rural regions in India.

With as high as 87 percent of the people living below the poverty line, poverty is most likely to be chronic among a large proportion of the poor in the region. Apart from being forest based, the region is also characterised by predominance of socially marginalised groups, i.e. scheduled castes and tribes (SCs and STs), accounting for 54 percent of the population, and also physical remoteness from the mainstream economy. This is reflected in the fact that, whereas incidence of poverty has increased in most of the forest-based districts of the state, poverty is found to be significantly higher in the southern region as compared with the north. The worst scenario prevails in Koraput (before it was divided into three districts) district, with as high as 92 percent of people below the poverty line (Panda, 2004: 14). This causes deep concern among academicians, civil society organisations (CSOs) and policymakers.

Fortunately, a number of studies have been carried out in the recent past, focusing on estimates of poverty in a more disaggregate manner (e.g. de Haan and Dubey, 2003; Government of India, 2004; NCDS, 2003; Panda, 2004; Pandey and Jena, 2004). While these studies provide policy recommendations for enhancing social as well as physical infrastructure for promoting productivity growth in the lagging regions within Orissa, the analyses do not adequately address the issue of why such an abysmal situation of stark poverty continues to exist in the southern region, when some other parts of the state have managed to escape the poverty trap. The present analysis tries to move in this direction by conducting a micro-study in Koraput district in the southern region of Orissa. The analysis further seeks to develop detailed understanding of the status of poverty and policy implementation so as to be able to evolve an alternative perspective that seeks to integrate the objectives of environment and economic growth for poverty reduction, especially in the forest-based economies in the state. The analysis is mainly exploratory in nature.

1.4 Objectives and research questions

The objectives of the study are:

(1) To examine the relative status of poverty in the southern region in Orissa and reflect on the larger processes in the state;

(2) To prepare a profile of poverty in terms of severity as well as multidimensionality and trace the changes in economic wellbeing (i.e. consumption pattern) over time;

(3) To examine the impact of socioeconomic attributes of households and physical remoteness of the area in a micro setting.

The specific questions addressed by the study are:

(4) Why is incidence of poverty particularly high in the southern region, especially Koraput district compared with other districts with high forest cover in the state?

(5) Is social identity (i.e. being tribal) a more important factor as compared with spatial characteristics, such as availability of forest produce and physical remoteness, in explaining high incidence of poverty in the region?

(6) Does variation in physical remoteness influence poverty within a micro setting of a district/block?

(7) What is the interface between income (expenditure) poverty and social capability?

(8) What is the extent of access to forest produce, land and water resources? Does it have a significant influence on severity of poverty under conditions of shocks? What is the incidence of migration, and what are the major constraints for out-migration?

(9) Has there been any improvement in the quality/quantity of consumption and amenities over the past 10 years? If so, then who are the ones to have benefited from these improvements?

(10) What kind of policy support has been extended to the people in this remote region? Who has benefited more? Does physical remoteness influence differential performance of delivery mechanisms for providing state support?

The analysis has been divided into seven sections, including the introduction. The next section presents a brief overview of poverty in terms of different indicators across districts/regions in the state. This is followed by a discussion on the various processes influencing/constraining development in the southern region, especially in Koraput. Section 4 presents a profile of the villages and households selected for the micro-study. Section 5 presents typology of poverty and its correlates among sample households. Section 6 presents the status of access and effectiveness of the developmental programmes supported by the state, and the problems thereof. The last section discusses adequacy as well as appropriateness of policy support, especially in the context of the carrying capacity of the region's resources, and identifies the need for further analysis so as to be able to explore policy options.

1.5 Coverage and methodology

The study is based on four villages in Lamptaput block in the undivided Koraput district. Lamptaput, situated at distance of 35km from Jeypore, a major trading centre in the district, has a relatively larger proportion of area under open (degraded) forest and is physically remote in terms of connectivity. Lamptaput is on the southern border, with mountains as natural boundaries between Orissa and Andhra Pradesh. Out of the four villages selected for the study, Hanumal and Kamel are located near the road, whereas Balel and Sindhiguda are about 5km from the road. The more remote villages are almost the last points of habitation in the foothills of the mountains on the state border. Table 1.1 presents some basic information about the sample villages.

Table 1.1: Profile of sample villages

Indicator	Balel	Sindhiguda	Hanumal	Kamel
Total HHs	141	52	126	57
Total population	527	NA	457	226
Total area (km^2)	643.05	NA	1073.61	323.77
% of SC population	19.0	NA	23.2	11.5
% of ST population	80.4	NA	74.8	40.7
Household size	3.7	NA	3.6	4.0
Sex ratio (female/male)	0.99	NA	1.14	1.05
% of workers Male Female	55.5 57.2	NA NA	60.1 27.9	60.9 65.5
Nearest market place/distance	Approach by walk to Lamptaput 10-12km	Approach by walk to Lamptaput 10-12km	Approach by walk to Onkadeli 4-5km	Lamptaput 6km
School facility	Yes (primary)	No	Yes (primary)	Yes (primary)
Health facility	Integrated Child Development Support (ICDS) and village health workers at Lamptaput (both the services are irregular)	ICDS services at Lamptaput/ Khairput	ICDS service at Lamptaput plus village health extension services by NGO (Ashakiran)	ICDS and village health workers at Lamptaput
Drinking water	Hand pump/tube well/river/ Drainage *(nala)*	Deep tube well	River/nala/ shallow/open water/tube well	Deep tube well
Electricity	No	No	No	No
Transport	No transportation facility. Private four-wheeler comes to the village occasion ally. Travel 3-4km to catch bus	No transportation facility. They come to Khairput to catch bus or to Lamptaput	No transportation facility. They come to Onkadeu to catch bus	Yes 0.5km

Indicator	Balel	Sindhiguda	Hanumal	Kamel
Distance from road (State Highway/ Disrict Road)	5km	14-15km	10km	0.5km
Distance from Lamptaput	15-17km	65km	41km	5km
Panchayat	Yes	Yes	Yes	Yes
Wage rate (Rs./day) Male Female	 40 30-35	 30-40 25-35	 40 30	 35-40 30-35

The study is based mainly on primary data collected from households in the sample villages.[10] A quota sampling method was used for selecting households in collecting primary information; 40 households were selected by random sampling from each village. The total sample size is 159 households, since one household did not respond to the survey (see Table 1.2).

Besides this, focus group discussions (FGDs) were conducted in order to obtain a better understanding of issues pertaining to institutions and governance.

Table 1.2: Distribution of sample households by village

Village	HH	
	Number	% of all HHs in the village
Balel Sindhiguda	40 40	28.3 (141) 76.9 (52)
Subtotal	**80**	**41.4 (193)**
Hanumal Kamel	39 40	30.9 (126) 70.1 (57)
Subtotal	**79**	**43.2 (183)**
All HHs	**159**	**42.3 (376)**

[10] Initially, a complete listing of households was carried out by organising group meetings and a participatory rural appraisal (PRA). This exercise faced difficulties with respect to enumerating access/ownership of land, the most contentious issue in this forest-based economy owing to inadequate land settlements and absence of proper land records on the one hand, and encroachment, as well as illegal shifting cultivation practices, on the other. As a result, we tried to rely more on personal interviews based on sample households. Given the fact that communities within the sample villages are fairly homogeneous in terms of economic wellbeing, and also that the villages are relatively small in terms of the number of households, a subset of households was selected for detailed enquiry.

2 Regional disparity and social exclusion: an overview of poverty in Orissa

2.1 Poverty across regions in Orissa

The important features characterising the poverty scenario in Orissa are: 1) high incidence with significant regional disparity; and 2) high concentration in the forest-based economy in the state. The southern region emerges as a clear outlier in the process of poverty reduction experienced by the state since the early 1980s. The estimates prepared by de Haan and Dubey (2003) indicate that although rural poverty, measured in terms of headcount ratio (HCR), had reduced significantly in the coastal and southern region, incidence of poverty in the southern region registered an increase from 81 percent in 1983 to 87 percent in 1999-2000 (See Table 2.1). Urban poverty in the southern region also increased between 1983 and 1987-1988, and thereafter declined.

Table 2.1: Poverty among regions in Orissa (HCR, %)

Year	NSS regions			Orissa state
	Coastal	Southern	Northern	
Rural				
1983	57.97	80.76	75.22	68.43
1987-1988	48.37	82.98	61.01	58.62
1993-1994	45.33	68.84	45.82	49.80
1999-2000	29.30	86.16	50.98	48.13
Urban				
1983	46.15	45.48	54.35	49.66
1987-1988	42.11	52.93	39.90	42.58
1993-1994	47.24	41.94	32.54	40.68
1999-2000	41.65	43.97	45.81	43.51
Combined				
1983	56.47	79.08	72.28	66.24
1987-1988	47.67	80.29	58.16	56.75
1993-1994	45.57	66.07	43.92	48.64
1999-2000	31.51	81.28	50.10	47.37

Notes: 1) NSS (National Sample Survey) regions consist of undivided districts as follows: Coastal: Baleshwar, Cuttack, Puri, Ganjam; Southern: Phulbani, Koraput, Kalahandi; Northern: Sundargadh, Bolangir, Sambalpur, Kendujhar, Dhenkanal, Mayurbhanj.;

Source: Compiled from de Haan and Dubey (2003: 6).

A closer look at the estimates in Table 2.1, however, suggests two important features: 1) while the rise in rural poverty has been experienced in both southern and northern regions, the increase is significantly higher in the case of southern region; 2) poverty in the southern region increased even during the early part of the 1980s. The only period during which poverty in southern Orissa declined was between 1987-1988 and 1993-1994.

It is likely that the marginal increase in poverty – both rural and urban – during the two sub-periods (1983 to1987-1988 and 1993 to 1999-2000) could have been marked by severe drought conditions during the respective financial years. Similarly, it is plausible that part of the increased poverty during 1993-1994 and 1999-2000 in both the southern and northern regions could owe to problems in converting physical units of food grain into consumption expenditure by using market prices rather than the price actually paid by the poor (de Haan and Dubey, 2003). Nevertheless, it is argued that, even if one uses a 10 percent lower poverty line for the southern region, incidence of poverty still remains around 77 percent (Panda, 2004). Notwithstanding these problems in gauging the actual increase in poverty, the issue remains that a significantly large majority (i.e. about 70-80 percent) of people in Southern Orissa have experienced poverty over a long period of time. Hence, the questions that need to be addressed in the context of the trajectory of poverty reduction described above are twofold. First, what were the major factors responsible for reducing the incidence of poverty during 1987-1988 and 1993-1999? Second, what kinds of processes were at work, triggering the (likely) reversal in poverty reduction during the later part of the 1990?
There are a few possible explanations for the phenomenon described above:

(1) The reduction in poverty between 1983 and 1987-1988 could owe to the development of the mining and industrial sectors, and the spread of modern agricultural technology, especially irrigation – within and outside the southern region. This may have triggered a spate of out-migration from the region, especially from Kalahandi and Phulbani districts, which have better connectivity and/or stronger compulsion to move out owing to relatively more depleted forest. This trend may have reached saturation once a large number of migrants entered existing clusters of mining, industrial and agricultural growth.

(2) A steep rise in rural poverty during the subsequent period could be attributed to a slowing down of public expenditure, especially in irrigation and the public distribution system (PDS) network, owing to the economic reforms and fiscal discipline followed by the state, as well as central government.

(3) A more probable reason for the increase in rural poverty during the mid-1990s could be lagged effects of displacement and land alienation, which may have started in the mid-1980s but got consolidated during the 1990s in the wake of economic liberalisation. This phenomenon is likely to hold good, since a number of infrastructural and mining projects were initiated during this period; the actual benefits in terms of employment and connectivity are yet to be realised.

While adequate information is not available to substantiate these conjectures at this stage, the estimates of sectoral growth in Table 2.2 substantiate a part of the explanations put forward. It is observed that, whereas agricultural growth was positive (1.36 percent during the 1980s), it declined to -0.43 percent during the 1990s. Similarly, growth in the industrial sector suffered a major setback, declining from 7.4 percent to 2.5 percent over the two decades. The significant decline in agriculture and industrial sector has been seen as the main cause of increased poverty which, in turn, reinstates the strong link between growth and poverty reduction in the state (Glinskaya, 2003; PTF, 2003). The linkage between the two may have

particularly affected the backward regions, such as Southern Orissa, where the mainstay of the people's livelihoods is agriculture and forests, although dependence on the latter may have declined.[11] It is, however, likely that the projects under which land was diverted for non-forest use may have a long gestation period. Hence, employment/income benefits, if at all expected, may not have started flowing to the poor in the forest region.

Table 2.2: Sectoral growth rates in Orissa and India

Year	Sector		
	Agriculture	**Industry**	**Services**
Orissa			
1980-1981 to 1990-1991	1.36	7.38	5.93
1993-1994 to 2000-2001	-0.43	2.49	7.02
All India			
1980-1981 to 1990-1991	3.12	6.60	6.48
1993-1994 to 2000-2001	2.73	6.25	8.13

Source: Compiled from PTF (2003: 17, Table 2.4).

The trends in sectoral growth noted above raise further questions that need to be addressed. These are: 1) What has led to a significant fall in agricultural growth, on which the poor, especially in forest regions, depend? 2) Even if agricultural growth assumes the earlier momentum and gets further expedited, can it help to resolve the livelihood problems of 69 percent of the rural population, which lived under poverty conditions even at the time when growth performance was somewhat better?

One possible explanation for the negative growth in agriculture during the mid-1990s could be uncertain rainfall, especially in the terminal year. Hence, even if agricultural production reverts back to the level of the early 1990s, the second question still remains unattended. The tentative answer, based on some of the broad indicators, is that agricultural growth may help achieve a substantial reduction in poverty, especially in forest-based regions such as southern Orissa. This is particularly so because the agricultural base, given the agro-ecological conditions in the region, is quite limited (Government of Orissa, 2005). The poverty-reducing impact of agricultural growth could be seen in the light of a recent exercise[12] of correlates of agricultural growth across different districts in the state (see Table 2.3). While the results by and large substantiate the expected positive association between agricultural growth and rural poverty, they also reinforce the widely known reality that agricultural growth is inversely linked with the proportion of forest area and tribal population in the district. The analysis further confirms that agricultural growth is positively linked with

[11] Similarly, there are estimates suggesting that the allocation of forest area for non-forest use has increased significantly since the 1990s. Of the total allocation of 25,343 hectares of land since 1982, nearly 72 percent was allocated during 1990 and 2000-2001 (Samal, 1998: 112).

[12] For details, see Shah (2003).

development of irrigation and other infrastructure; both are often found to be weak in forest-based economies such as Southern Orissa. The growth poverty reduction mechanism, therefore, is likely to be mediated by migration, especially of male members, as suggested by the positive link with population density on the one hand and the negative link with sex ratio on the other. Given the fact that the poor, especially in remote areas in forest-based regions, face additional constraints with respect to long-distance migration, it is likely that a large proportion of rural communities in the region may continue to live in poverty, notwithstanding the irrigation-induced agricultural growth taking place in other parts of the state.

Table 2.3: Correlation between agricultural growth and socioeconomic variables

Variable	Orissa
Population growth	.446
Sex ratio	-.489***
Population density	.907*
Infant mortality	.340
Rural literacy	.712*
Female literacy	.851*
Scheduled tribe	-.654**
Urban population	.209
Forest area	-.570**
Rural poverty	-.746*
Female workforce	-.890*
Area irrigated	.705*
Development index	.527***
Agricultural productivity	-.095
Land productivity	.643**
Non-farm workers	.681**
Area under non-food crops	NA

*Notes: *Correlation is significant at the 0.01 level; **Correlation is significant at the 0.05 level; ***Correlation is significant at the 0.10 level.*

Sources: CMIE (2000); Census of India (1991, 2001); Parikh and Radhakrishna (2005).

2.2 Poverty among social groups

Like in most parts of India, SCs and STs in Orissa suffer double disadvantages, i.e. they are socially as well as economically marginalised. The available estimates suggest that in 1999-2000 these communities constituted 64 percent of the poor in Orissa. A significantly large proportion of them are likely to be located in forest-based districts, especially in Southern Orissa.

Table 2.4 provides estimates of poverty by social group during 1993-1994 and 1999-2000. It is important to note that, whereas poverty among non-SC/ST groups has declined significantly, it increased among the SCs and STs during the 1990s, faster among STs compared with SCs. The pattern is somewhat in tune with the macro-level evidence for 1993-1994 to 1999-2000, suggesting that the 'poverty situation of ST households worsened

relative to both SC households and the average population in rural and urban areas in the country' (Sundaram and Tendulkar, 2003: 5267).

Table 2.4: Distribution of rural poor by region and social group

Social group	HCR	NSS regions			Total
		Coastal	Northern	Southern	
1999-2000					
ST	73.10	4.10	18.29	18.62	41.01 (22.2)
SC	52.30	11.15	5.15	6.43	22.74 (16.2)
Other Backward Communities	39.70	16.19	9.97	10.10	36.25 (61.6)
Other	24.01	31.44	33.40	35.15	100
Total	48.14	(47.61)	(35.09)	(17.30)	
1993-1994					
ST	71.31	4.23	15.23	16.52	35.98
SC	49.79	9.87	4.29	4.41	18.51
Other	40.23	28.99	5.74	10.77	45.51
Total	49.81	43.03	25.26	31.71	100

Note: Figures in parentheses indicate share in total population among regions and social groups
Source: Based on Panda (2004, Tables 2 and 6)

An important question that often arises in the context of high incidence of poverty among tribals is whether poverty among tribal communities is high mainly because of their social identity and marginalisation or whether it is so more because of their forest dependence and physical isolation. Since both the processes are at work simultaneously, it may be useful to examine this issue empirically in the light of the poverty estimates generated by de Haan and Dubey (2003) for the year 1999-2000. Table 2.5 presents estimates of poverty by region and by social group. It is observed that, whereas 73 percent of tribals are poor, the proportion is significantly higher in the southern region, which holds three out of the seven forest-based districts in the state. Conversely, the incidence of poverty among tribals is fairly low in the northern (61.7 percent) and coastal (66.6 percent) regions. In comparison, the non-SC/ST population in the southern region has higher incidence (77.7 percent) of poverty even in comparison with STs in the northern and coastal region. This implies that one might be better off being a member of a ST outside the southern region, than being a member of any other community within the southern region.

Table 2.5: HCR by region and social group (rural): 1999-2000

Regions	Social group			
	ST	SC	Other	All
Coastal	66.63	42.18	24.32	31.74
Southern	92.42	88.90	77.65	87.05
Northern	61.69	57.22	34.67	49.81
All (Orissa)	73.08	52.30	33.29	48.04

Source: Based on estimates by de Haan and Dubey (2003).

The above observation lends support to the assertion made earlier about the overriding impact of forest on the high and increased incidence of rural poverty in Orissa. This is very important as it may have significant bearing on agriculture-led strategy for growth and poverty reduction among these marginalised communities, which constitute 41percent of the poor in the state. The relatively stronger impact of the spatial characteristic needs to be seen in the light of the fact that the tribals have a relatively larger size of cultivable land as compared with all other social groups across regions in Orissa (de Haan and Dubey, 2003). Only 'other communities' in the northern region have similar size land holdings as the tribals in the southern region. This suggests that ownership of land *per se* is not a major issue. Rather, the real issue with respect to the prospects of agricultural growth-induced poverty reduction in the region pertains to the agronomic potential of the region, where forest ecology takes priority over crop cultivation. As noted earlier, land owned by these tribals is likely to be on a sloped terrain, located upstream in the catchment of a watershed area and have poor connectivity with markets. While these are serious issues, the fact remains that, even if the tribals own forest-land, there are severe limitations to ensuring livelihood security. Conceding that increasing connectivity may have adverse impacts on the conservation objective in a forest-based region, livelihood options may have to be increasingly tilted towards forest management, rather than towards increased extraction of forest resources. It is in this context that recent experiences with respect to NTFP-based livelihood support may hold special relevance.

2.3 Forest resources and livelihood security: the issue of access vs. regeneration

Forest (being the most important resource for the state economy in providing a livelihood base to the poor) should (ideally) assume the focal point of development programmes in the region. To a large extent, tribal development programmes reflect this, with the main thrust on improving access of the poor to forest resources, especially NTFP. A plethora of studies have examined the scope and constraints in providing livelihood support to the people in the forest-based regions in the state. According to one estimate, about 10 million workers are directly or indirectly engaged in forest-related activities in the state (Sarap, 2004). Similarly, a study by Mallik (2003: 1) suggests that NTFP constitutes nearly 20-50 percent of household income in forest-based regions in the state, although the intensity of forest dependence has been found to be declining in the wake of increasing population and simultaneous depletion of forest resources.[13] To a large extent, increased degradation could be attributed to inadequately defined property rights, absence of developmental opportunities and lack of

[13] The issue of changing intensity of forest dependence is somewhat complex. The study by Samal and Meher (2005) suggests a reduced share of forest resources in household income, but other evidence suggests increased value of forest collection per household even at constant prices (Mallik *et al.*, 2005). The two observations are not necessarily incompatible.

transparency in the state-controlled management of forest resources. There has been growing recognition of the fact that, unless people are involved in the management of the forest, there cannot be any effective solution checking the depletion of forest, not only by the people, but more importantly by state functionaries and private operators, unless management practices are made more broad based and transparent. In this sense, people's involvement through JFM and other participatory mechanisms is being seen as a device to make communities operate more as protectors rather than as beneficiaries of resource regeneration.

Experience from a large number of cases, however, suggests that such a truncated view of forest protection and regeneration may seldom work, because it gives only limited rights and responsibilities to the people through participation in the management of a subset of forest resources, which not only constitutes a small part of the integrated forest system but also is highly degraded. Empirical evidence clearly suggests that, even if management of these depleted forests improves, it is still unlikely that such initiatives will be able to lift a large proportion of the people out of poverty. The reason for this is that, even in the early 1980s, when population pressure was lower than at present, and forest resources were relatively better, NTFP did not succeed in lifting 87 percent of the tribal population, engaged at least partly, in collection/processing of NTFP, out of poverty. The fact that 80 percent of all the people living in the southern region during 1983 could not exit poverty is a pointer to the fact that access to NTFP, and people's involvement in managing the non-reserved and non-protected forest by itself, may not help poverty reduction.

One of the major remaining issues pertains to that of prices and market access for NTFP, despite efforts made in past decades to improve marketing and processing. Recent reforms in marketing of NTFP since 2000 have made a significant departure in terms of enhancing income among forest dwellers. While these are commendable efforts, it is difficult to gauge the extent of income support that NTFP could provide to the people in the absence of systematic assessment of the resource availability over a sustained period of time.

The official statistics on the status of forest resources in Orissa suggest that forest area declined substantially during the 1980s, and that the decline was particularly confined to closed forest, which reduced from 37,320km^2 in 1972-1975 to 28,812km^2 in 1980-1992. More recent estimates suggest that forest area as a percentage of total geographical area has declined from 37 percent, to 30.2 percent in 1999, and that the proportion of dense forest to total geographical area had reduced from 24.5 to 17 percent by the turn of the last century. Besides, deforestation and degraded forest land constitute a significantly large proportion of the total forest area, ranging from 72 percent in Gajapati to 62 percent in Koraput and 52 percent in Phulbani – the last two districts constituting part of the southern region in the state. It is thus noted that severe depletion of forest resources might have contributed towards further deepening of poverty among a large proportion of people, who were already poor even at the beginning of 1980s. Over time, the impoverishment may have worsened, if other

things remained unchanged. A recent study suggests that the majority of the households in the region are facing scarcity of food and biomass to sustain their livelihoods. It is thus imperative for the policy approach to shift from its central thrust on participatory management and improved access through better sharing of resources, to conservation and regeneration of the forest ecosystem in order to derive livelihood support on a sustainable basis. This would necessitate a twofold approach: 1) increased investment in forest conservation and development; and 2) resource transfer to sustain the livelihoods of forest dwellers so as to allow proper protection and restoration of the forest ecosystem. The recent upsurge in policy support for food distribution and employment generation programmes in some of the most backward districts in the state is a move in the direction of resource transfer.

However, the issue of increased investment for sustainable development and management of forests is yet to be addressed, given the financial crunch faced by the state.[14]

The issues of lost opportunities and compensation thus need to be sorted out in the light of the existing inequality across regions, sectors and social groups. The two overarching perspectives, which may help address this most complex and politically non-tenable issue, could be: 1) the perspective on resource sharing between stakeholders located upstream and downstream of a forest ecosystem within the state; and 2) evoking the present federal finance system, as well as the fiscal reforms framework, to incorporate cost of conservation and regeneration of forest, which have far-reaching and wide-ranging benefits going beyond the state boundaries. The important point is to recognise the fact that the value of these critical resources lies in their conservation and sustainable use; those who possess and preserve them cannot be penalised for retaining the value of the resource. Nevertheless, it should also be kept in mind that, if not properly compensated, the poor will be compelled to overexploit rather than protect the resources.

3 Remoteness in Koraput: manifestations and processes

This section portrays various factors of remoteness in Koraput district, where 20 percent of Orissa's rural poor live. The analysis is divided into two parts. The first gives a brief description of how various socioeconomic, political and physical factors have culminated into a situation of isolation and sustained high incidence of poverty, where even less than one out of ten persons had crossed the poverty line by the turn of the last century. The second presents a statistical profile and mapping of important features of Koraput district as they stand now.

[14] For further details, see PTF (2003, Table 14).

3.1 Koraput: a historical profile

3.1.1 Location and remoteness

The undivided Koraput district is characterised by certain special features – historical, natural and geographical. The district lies on a section of the Eastern Ghat and contains five natural divisions, with a mean elevation of 3000, 2500, 2000, 1000 and 500 feet above sea level, respectively. A number of mountain ranges and isolated hills rise out of this tableland. The district has two parts, each characterised by a distinct type of rock: the 2000 feet plateau of Jeypore, with its much lower extension into the Malkangiri subdivision (present Malkangiri district), and the high hilly regions of the Eastern Ghat, lying between the Jeypore plateau and the Visakhapatnam coastal plains. The peculiar geographical setting has to a large extent made this region isolated from the plain coastal districts of Orissa. As a result, the region has been able to preserve much of its varied and prolific wild fauna and flora. Moreover, owing to this comparative isolation, its present aboriginal inhabitants have not undergone a radical change as a result of contact with modern civilisation.

3.1.2 Communication

The major part of Koraput district was isolated for several centuries from the plains owing to non-existence of communication. Outsiders never penetrated into it as a result of steep hills, fear of malaria and dense forest. The process of road construction started only after 1863, when the Madras government first took over the administration of the Jeypore estate. The road construction work intensified only after World War I. During World War II, it slowed down, but it gained momentum again after independence. There are still certain pockets that are not yet linked to the main road by approach roads. Lack of a lateral communication system remains a major constraint with respect to connectivity in the district.

3.1.3 Forest resources

At the time of independence, about 70 percent of the area in Koraput district was covered by forests. The whole forest range, at one point in time, was under shifting cultivation and, because of this, forest coverage now comprises plants at various stages of growth. However, in the more densely populated areas, as in the hills to the south of Koraput, repeated shifting cultivation over a long period of time has reduced the forest to an open scrub type or barren soil. The hills of Koraput originally supported a subtropical evergreen type of forest, which has been largely depleted owing to repeated burning. The forests in these ranges are of great climatic importance, as they help in controlling the temperature and act as an important factor influencing substantial rain in the district.

From 1891, management of forest resources in the district was governed under the Madras Forest Act, which came to be known as Jeypore Forest Rule. A number of specific

regulations were framed under the Act. With the abolition of the *zamindari* system (characterising exploitative agrarian relations between landlord and tenants) in 1952, the government of Orissa took over the management of the forests. Separate rules were framed for the forests, such as the Koraput District Forest Rule, the Waste Land Rule and the Koraput Reserved Land Hunting and Shooting Rule. Under the Koraput Forest Rule, the forest area was divided into three categories: reserve land, protected land and unreserved land. Protected forests were conserved solely for the use of villagers in the nearby areas. Nevertheless, no rights with regard to forest management were given to the villagers, although the management of the forest was far from scientific. By and large, the sketchy work plans drawn up during the zamindari system were continued even in the post-independence era. Prevention and control of shifting cultivation (known as *podu* or *jhoom* cultivation) occupied centre stage in forest management for many years. Abolishing the age-old practice is almost impossible without facing strong resistance from the people. The practice is particularly rampant among the most primitive tribes, which inhabit the remotest part of the district. Remoteness thus emerges as one of the important factors explaining the very high proportion of degraded forest in Koraput.

The general land surface, which is a difficult terrain of rugged tracks and varying altitudes, makes flow irrigation impossible in many areas. Tank irrigation was not practised in the district in the past. Most of the old tanks, called *mundas* or *bandha*, were intended for bathing and drinking purposes. More recently, *sagars*, formed by the construction of large embankments, and tanks have been used for irrigation, but this is available on only a very small proportion of agricultural land. Culturable waste land being scarce, about 40,000 hectares of forest were cleared under the Dandakaranya project for the settlement of tribals and refugees. Similarly, forest land was given to STs and SCs to check further increase in the area under jhoom cultivation. There are about a hundred minor irrigation sources, mostly tanks and small reservoirs, each irrigating fewer than 60 acres. These sources together are estimated to irrigate about 5000 acres. There are two larger irrigation projects on the Rivers Kolab and Indravati. The estimated irrigation potential of the medium and large projects is 40,000 acres, although very little is available to the forest dwellers in remote parts of Koraput district.

At present, the government has restricted the practice of shifting cultivation and cultivation beyond a certain height on the hilltops. To prevent destruction of the forest, the government has initiated a scheme to settle the tribal people in the district: tribal inhabitants are brought from the hilltop and settled in colonies on the plain. Land is given free along with facilities for irrigation and drinking water. Roads and schools are also provided. Bullocks were also provided along with agricultural implements, so as to instigate regular cultivation. If implemented successfully, the scheme might have reduced the area under jhoom cultivation. Unfortunately, this did not happen.

Apart from forests, the district is also rich in mineral deposits. For instance, deposits of China clay of inferior quality are found in several places in the Koraput plateau. Pottery clays are also found in some parts of the district. Gold in the form of very fine particles is also found scattered in the river sands. Graphite in small quantities is found widely. Among others, limestone, manganese and mica are also found in certain parts of undivided Koraput district. Extraction of minerals thus poses another challenge to the forest and forest dwellers who face dislocation without compensatory employment/income support.

3.1.4 Land revenue systems

The land revenue administration was a survivor of the ancient feudal system. No survey or settlement was ever carried out in any part of the district. After the abolition of the Jeypore zamindari, the *jirayati* lands on the estate were administered partly using the *ryotwari* system using land revenue and partly using a village rent system called *mustajari*. Relations between landlords and tenants were governed by the provisions of the Madras Estate Land Act of 1908, administered by the district collector and the revenue divisional officers. Under the Act, the tenants had the occupancy rights on their holdings. Previously, they did not possess this right. Moreover, the landlord could evict a tenant only by means of the law.[15] The uncertainty of their tenure worked as a serious impediment to tenants undertaking any measure for land development. Excessive rent assessment often resulted in tenants shifting out and cultivating elsewhere. The landlord, in turn, tied as many ryots (land owners) to his lands as possible so as to put pressure on the tenants. The zamindari system was finally abolished in 1952, having continued until Orissa became a separate province in 1936. Subsequently, under the Orissa Bhoodan Act of 1953, the *bhoodan samiti* (voluntary contribution of part of the land by big land owners for distribution to the landless households) received around 76,566 acres of land by the end of 1964 and distributed this among the tribals, as most of the land in the district was owned by non-tribals. At present, the majority of the tribals in the district have clear land rights, protected under the Orissa Estate Abolition Act. Nevertheless, land

[15] The ryotbari system placed the ryots in a better position than those in mustajari villages. The system was prevalent in 587 villages in 1945. Agreements such as *cowls* and *kodpas* were executed between the landlords and tenants, by which the latter secured the holdings against regular revenue establishments. The holdings were described by their local names and a rough description of their boundaries was given, the area being estimated either on their seeds or plough capacity. *Inams* in the district were of three kinds, namely gift, *dana mokhasa* and service, but the last two terms were used interchangeably. The payment made by the grantee to the maharaja was known alternatively as *tonki* or *kattubadi*. Dana grants were usually made to brahmans for religious purposes. Mokhasas were granted in favour of the raja's relations or other persons of the rank and subject to lapse on failure of direct heirs. In all the above systems, rent was paid either in cash or in kind. Where cash rents were in force, the assessment was usually a certain sum on each plough and hoe used. Normally, a single ryot was assessed on the assumption that he possesses one plough and a hoe and was permitted to cultivate as much land as he could. Where grain rents were in force, the rent was generally fixed upon the seed capacity of the land, the usual rule being that the ryot paid as rent a quantity of grain equal to that required to sow the land. In addition to cash or grain rent, one or two minor miscellaneous dues were still levied.

alienation continues to be widespread owing to lack of land records, perpetual indebtedness and asymmetric power structure between the forest dwellers and the outsiders.[16]

3.2 Koraput: a statistical profile

The undivided district of Koraput has certain dubious distinctions. The district not only represents the conditions of degraded forest, but also ranks highest or among the top three districts in terms of several indicators such as: incidence of poverty; percentage share of total rural poor in Orissa; percentage share of total geographical area; percentage of degraded forest to total area; rural illiteracy; frequency of droughts; percentage of tribal population; and relative development index (RDI).

Table 3.1 presents important features of Koraput district in comparison with the state of Orissa. It is observed that Koraput has significantly low population density, with 9.6 percent of the state's population, of which 54 percent are tribal. One-third of the geographical area in the district is officially under forest, much of which is degraded. The district is facing severe constraints in terms of productivity of land under agriculture, which is significantly lower than the state average. It has been found that members of the socially marginalised communities seem to migrate less outside the district; the higher sex ratio may partly be an indicator of lower incidence of male out-migration from the district as compared with other districts in the state.

Table 3.1: Koraput district: A comparative picture

Details		Koraput	Orissa
Human development indices			
1	Human Development Index (HDI 2001)	0.236	0.404
2	Per capita district domestic product/income in 1998-1999 (at 1993-1994 prices)	4688	5264
Infrastructural development index (2000-2001)			
1	Transport	89.58	100
2	Energy	82.29	100
3	Irrigation	85.24	100
4	Banking	73.22	100
5	Communication	77.5	100
6	Education	105.47	100
7	Health	84.86	100
Population			
1	Share of state's population (2001)	9.62	100
2	Density of population (persons per km^2) (2001)	131	236

[16] The issues of land alienation and preparation of land records are being treated as high priority, at least in the contemporary discourse on poverty reduction in the state. While there is scattered evidence on the total forest area converted for various developmental projects, there is no systematic prioritisation of such projects and little transparency with respect to the process of land alienation, let alone consultation with local stakeholders.

Details		Koraput	Orissa
3	Decadal growth of population 1991-2001	17.57	16.25
4	Urban population (%) (2001)	11.51	15
Employment			
1	Share of primary sector in total workers (2001)	77.82	64.77
2	Share of households industrial sector in total workers (2001)	2.13	4.91
3	Share of other workers in total workers (2001)	20.05	30.32
4	WPR (All) (2001)	48.7	38.79
District information			
1	Area (km^2) (2001)	26962	155707
2	No. of Community Development Blocks (1991)	42	171
Education			
1	Literacy rate (all) (2001)	34.8	63.08
2	Literacy rate (male) (2001)	46.56	75.35
3	Literacy rate (female) (2001)	23.1	50.51
Gender			
1	Sex ratio (all) (2001)	1003	972
Agriculture			
1	Area of food grains ('000ha) (1978-1998)	768.03	6858.1
2	Yield of food grains (kg/ha) (1978-1998)	943.56	948.57
3	Cropping intensity in food grains (%) (1998-1999)	131.5	139
4	Fertiliser Consumption per hectare of GCA (kg/ha) (1998-1999)	20.5	36
5	% Gross irrigated to gross cropped area (1998-1999)	30.9	41.6
6	Per capita output of food grain (kg per annum) (2001)	189.08	205.86
7	Cultivator as percentage of total main workers (2001)	58.62	44.3
8	Agricultural labour as percentage of total main workers (2001)	72.67	52.13
9	Land productivity (Rs/ha) (1995)	1477	6317
Poverty			
1	Poverty Ratio (1999-2000) (Rural)	92.2	48.1

Sources: Government of Orissa (2005); Census of India, 2001; Panda (2004).

All the above features indicate a logjam of adverse conditions, leading to a significantly high proportion of the population in the district living below the poverty line. In 1999-2000, as much as 92 percent of population in Koraput was poor as compared with 48.1 percent at the state level. The picture is equally dismal with respect to indicators of human capabilities such as literacy, and the overall HDI. The pertinent question, therefore is whether Koraput faces special disadvantages even in comparison with other forest-based districts in the region/state. This question has been examined in the light of detailed information pertaining to selected districts in the state.[17]

[17] A similar question has been raised and analysed in the context of the separate 'Koshala' state, covering a large part of the forest area within the state. For details see Pradhan *et al*. (2004).

3.3 Comparing Koraput with other forest-based districts

Table 3.2 presents changes in the status of RDI of Koraput and other forest-based districts (undivided) in the state. Koraput had the worst score in 1991, and that status had worsened compared with 1971. Koraput is followed by two other districts from the same region. The forest-based districts in the northern region (Keonjhar, Mayurbhanj, Bolangir and Dhenkanal) follow the worst three districts in the southern region.

Table 3.2: Changes in the Rural development Index (RDI) in some of the forest-based districts of Orissa

Districts	**RDI**		
	1971	1981	1991
Southern region			
Kalahandi	9	11	11
Phulbani	13	12	12
Koraput	11	13	13
Northern region			
Dhenkanal	8	9	7
Keonjhar	12	10	10
Bolangir	6	8	8
Mayurbhanj	10	7	9
Coastal region			
Ganjam	5	5	5

Source: Government of India (2004, Table 10.3).

Recent documents like the SDR (Government of India, 2004) and the HDR (Government of Orissa, 2005) for Orissa provide useful information on some of the major indicators of poverty, human development and infrastructure across districts in the state. The authors use the estimates to prepare a comparative profile of districts in southern and northern regions where forest area forms a substantial part of the resource base. These estimates are available for the new districts only. Data for the 20 new districts, which constituted nine districts in the earlier scheme, are presented in Table 3.3. Four new districts in the undivided Koraput district are adversely placed in terms of several of the infrastructural indicators, e.g. literacy, infant mortality rates, HDI, proportion of open (degraded) forest and below poverty line (BPL) ratio. What is noteworthy is that the low developmental as well as poverty outcomes in these districts cannot be attributed to the relatively weak infrastructural indices as indicated by the estimates in Table 3.4.

On the other hand, these districts have lower ranks in terms of energy, communication and banking, as compared with other districts in the two regions. Strangely, the data in Tables 3.3 and 3.4 indicate that the districts in Koraput, despite having comparable education–infrastructure indices, have relatively very poor outcome in terms of literacy. One of the possible explanations is physical remoteness, as reflected in terms of lower population density in the three districts except Nabarangpur, although literacy in Nabarangpur is more or

less the same as the rest of the three districts. Low incidence of out-migration, as reflected by higher sex ratio in these four districts, could be yet another factor preventing the poor in the region from enhancing income, and thereby accessing existing infrastructural facilities in the region. One of the possible reasons for low migration from this area is its low connectivity with the main channels of transport and trade, even in comparison with other parts of the southern region, having traditional links with markets in Raipur and mining activities in the northern part of the state. However, what is more likely is that physical remoteness may have further worsened the conditions of infrastructure such as roads, transport, schools, health centres, etc. It is quite possible that the administrative machinery finds it relatively more difficult to communicate, travel and reach out to the people in the interior villages.

In this case, the issue of physical remoteness becomes particularly important. The phenomenon of adverse impact of physical remoteness in Koraput may have been aggravated by the fact that the region is physically divided by the mountains on the southern border, hence is relatively more disconnected from any major centre of trade and/or mining, and industrial and agricultural development. A major part of the northern region seems to have better connectivity with the trading centres in the western as well as northern part of the region. The above observation is further substantiated by the fact that the southern region has a fairly small share in state gross domestic product (GDP). Table 3.5 indicates that, in 1998-1999, the southern region constituted only 13 percent of the state domestic product as against 39 percent for the northern region. What is still worse is that the share had declined from 16.2 percent in 1993-1994. This scenario, indicating low and declining share in the state's economy, is likely to reflect both the cause as well as the effect of the long drawn-out processes of marginalisation of the region and the district.

Table 3.3: Remoteness among regions: a comparative profile

District	Population density (2001)	% of Tribal Population (2001)	Sex ratio (2001)	Literacy (2001)	Infant Mortality Rate (1999)	HDI	Forest area as % of geog. area 1999-2000	Open forest area as % of total forest area 1999-2000	BPL (rural) (1992)
I. Southern Orissa									
1. Koraput	**134**	**49.6**	**998**	**36.20**	**136**	**0.431**	**16.9**	**54.9**	**86.6**
Malkangiri	83	57.4	996	31.26	151	0.370	37.8	50.8	91.9
Nabarangpur	192	55.0	992	34.26	117	0.436	21.7	40.3	90.6
Raygada	116	55.8	1029	35.61	131	0.443	38.6	52.1	81.6
2. Kalahandi	**168**	**28.6**	**1000**	**46.2**	**51**	**0.606**	**27.0**	**45.7**	**86.8**
Nuapada	138	34.7	1006	42.29	62	0.581	32.1	52.5	86.3
3. Phulbani	**N.A**	**N.A**	**N.A**	**N.A**	**N.A**	**N.A**	**N.A**	**N.A**	**93.0**
Boudh	120	12.5	985	58.43	104	0.536	41.3	39.8	85.2
Kandhamal	81	52.0	1008	52.95	169	0.389	67.2	43.2	
II. Northern Orissa									
4. Bolangir	203	20.6	983	54.93	97	0.546	15.1	49.2	91.9
Sonepur	231	9.8	966	64.07	96	0.566	13.4	44.7	67.4

District	Population density (2001)	% of Tribal Population (2001)	Sex ratio (2001)	Literacy (2001)	Infant Mortality Rate (1999)	HDI	Forest area as % of geog. area 1999-2000	Open forest area as % of total forest area 1999-2000	BPL (rural) (1992)
5. Sambalpur	140	34.5	970	67.01	102	0.589	49.4	30.3	65.6
Bargarh	231	19.4	976	64.13	100	0.565	15.5	53.2	70.0
Deogarh	93	33.6	980	60.78	49	0.669	46.2	42.5	78.5
Jharsuguda	245	31.3	946	71.47	71	0.722	13.3	61.2	53.7
6. Dhenkanal	239	12.8	962	70.11	97	0.591	28.4	47.9	84.2
Angul	179	11.7	941	69.4	95	0.663	41.6	37.4	84.3
7. Sundargadh	188	50.2	957	65.22	62	0.683	42.2	35.9	80.9
8. Keonjhar	188	44.5	977	59.75	117	0.530	40.7	50.6	82.9
9. Mayurbhanj	213	56.6	980	52.43	48	0.639	39.7	30.2	90.8
Orissa (Total)	236	22.1	972	63.61	97	0.723	31.4	42.7	78.7

Note: The table refers to nine out of 13 old districts. The estimates pertain to the divided districts as per the new scheme.

Sources: Census of India (2001); Government of Orissa (2005).

Table 3.4: Infrastructural development index of districts in Orissa, 2000-2001

District	Transport	Energy	Irrigation	Banking	Communication	Education	Health
I. Southern Orissa							
1. Koraput	119.64	68.82	106.65	84.30	100.99	107.48	93.95
Malkangiri	53.22	55.27	117.23	65.45	51.55	110.14	125.80
Nabarangpur	60.95	101.22	42.17	47.11	51.99	97.08	48.34
Raygada	106.58	51.68	75.05	94.38	89.93	117.02	91.60
2. Kalahandi	75.89	77.29	70.62	96.69	79.86	95.46	87.16
Nuapada	61.99	82.23	58.01	87.27	72.68	95.15	123.31
3. Phulbani	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Boudh	86.42	75.85	92.24	97.52	94.00	100.28	64.66
Kandhamal	53.84	63.08	42.89	99.67	125.54	137.28	120.44
II. Northern Orissa							
4. Bolangir	115.03	115.09	71.87	90.41	84.20	117.41	90.08
Sonepur	78.69	104.70	219.19	85.79	58.11	121.59	88.49
5. Sambalpur	142.21	88.61	105.72	139.01	143.98	75.16	163.38
Bargarh	83.30	133.62	175.30	87.27	68.84	91.54	85.58
Deogarh	106.85	46.10	98.32	120.66	53.06	93.38	79.81
Jharsuguda	131.16	133.65	61.76	107.11	112.84	106.57	84.23
6. Dhenkanal	102.77	119.71	66.58	97.85	88.85	91.90	92.15
Angul	99.46	105.31	54.97	100.17	121.64	82.71	71.28
7. Sundargadh	118.50	116.13	69.37	107.60	136.54	88.62	86.64
8. Keonjhar	56.72	111.37	68.13	92.07	80.65	90.66	94.25
9. Mayurbhanj	81.16	87.40	70.23	98.18	95.81	109.86	101.00
Orissa (Total)	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Sources: Government of Orissa (2005).

Table 3.5: District domestic product by region in Orissa

Region	1993-1994	1998-1999
Coastal	702,769 (44.3)	857,376 (46.0)
Northern	625,649 (39.4)	730,036 (39.1)
Southern	257,712 (16.2)	242,903 (13.0)
Orissa State	1,586,130 (100.0)	1,862,971 (100.0)

Source: Government of Orissa (2005).

Overall, the region depicts a scenario of sustained deprivation emanating from physical remoteness, adverse land relations, rapid depletion of forest resources, low agronomic potential, and poor employment conditions. It may however, be noted that the situation of a logjam of adversities such as this, persists despite a large number of policy initiatives undertaken in the post-independence era. This suggests a substantial gap in governance, owing mainly to the resources, as well as the people of the region.

4 People in the study villages: a profile of sample households

Table 4.1 presents some basic information on the villages covered by this study. It may be noted at the outset that compiling village-level information, especially on land use, has been a major hurdle, because of the inadequacy and/or non-transparency of land records. As a result, information on land use patterns and access to land among households has not been recorded in the study.

Table 4.1: Profile of sample villages

Indicator	Balel	Khadaput	Sindhiguda	Hanumal	Kamel
Households					
Total landed landless	141	17	33	130	57
Population	700	80	200	700	250
Sources of drinking water	Hand pump, river, nala	Hand pump, river, nala	River, nala	Hand pump, river, nala	Hand pump, well
Primary school	Yes	No	No	Yes	Yes
Electricity	No	No	No	No	Yes
PDS shop	Lamptaput – 15km	Onkadeli – 15km	Onkadeli – 25km	Onkadeli – 5km	Lamptaput – 6km
Anganwadi (nursery school)	Yes	No	No	Yes	Yes
Road infrastructure	Kachcha (mud houses)	Kachcha	No road	Kachcha	Kachcha
Transportation	No transportation facility. Private four-wheeler comes to village	No transportation facility. Have to walk 15km to get a bus	No transportation facility. Have to walk 25km to get a bus	No transportation facility. Have to walk 5km to get a bus	Yes, 0.5km

Indicator	Balel	Khadaput	Sindhiguda	Hanumal	Kamel
Households					
	occasionally. Have to walk 8km to get a bus				
Nearest market and distance	Lamptaput – 15km	Onkadeli – 15km	Onkadeli – 25km	Onkadeli – 5km	Lamptaput – 6km
Nearest health centre and distance	Ashakiran – 8km, Lamptaput – 15km	Ashakiran – 5km, Onkadeli – 15km	Ashakiran – 15km, Onkadeli – 25km	Ashakiran – 0km, Onkadeli – 5km	Ashakiran – 0.5km, Lamptaput – 6km
Land (acre) Cultivated Irrigated Shifting cultivation Forest (kaju)	 300 0 150 80	 25 0 30 15	 120 0 60 60	 350 0 140 75	 240 0 80 60
Yield(kg/acre) Paddy Ragi Alsi Kaju (Rs.)	 560 320 150 1300	 450 300 100 1200	 450 300 125 1500	 580 350 150 1500	 550 325 150 1500
No. of HHs migrated for work	25	4	5	20	35
NGO activities	Jagruti Trust and Asha Kiran Trust – SHG group, horticulture, health	No	No	Asha Kiran Trust – SHG group, horticulture, health, cow shed, motivation camp	Jagruti Trust and Asha Kiran – SHG group, horticulture, health, adult education, seeds
Wage rate agriculture*	Male 40 Female 35 Other 50	Male 35 Female 30 Other 50	Male 35 Female 30 Other 50	Male 40 Female 35 Other 50	Male 40 Female 35 Other 50

*Notes: 1) Information based on PRAs conducted in the study villages; may not reflect data on official records, which was difficult to obtain, especially for land use; 2) Khadaput is a small hamlet adjacent to Sindhiguda. The two villages have been treated as a single entity (Sindhiguda) for the purpose of the study. *Includes wages in cash and kind; the nominal wage rate is around Rs. 25-30 per day.*

Source: Unless otherwise noted, data presented in tables are derived from primary data collection.

While it is hypothesised that physical remoteness may exert significant impact on some of the basic features, such as literacy, access to health services, employment and income, the impact may not be substantial, especially within a micro setting, where the difference in physical remoteness is not so significant. Moreover, the impact may not be realised in a predominantly tribal setting such as that in the villages covered by the study, where the economy is still at a mere subsistence level and marketisation is fairly low. A typical

household in the village is either landless or operates a very small holding. The members of such households collect various minor forest produce during most parts of the year, seek wage labour in and around the village, visit weekly markets for small purchases such as grains available from the PDS, indulge in drinking country liquor (and of late the branded ones) in the case of adult males and seek credit for incurring substantial expenditure on social functions, food grain procurement and health services. While one-third of the households do not own any land, about 17 percent of the sample households reported encroachment on public land. This consists of both landed as well as landless households. With an average land holding size of three acres owned by these forest dwellers, it is a problem not of access but of the quality of land titles, since a large proportion of land is un-surveyed.

4.1 Socio-demographic profile

4.1.1 Population and social groups

The sample households comprise 58.5 percent ST, 28.9 percent SC and 12.6 percent belonging to other communities. The proportion of STs is significantly higher in Sindhiguda, with 92 percent of households belonging to this category (Table 4.2).

Table 4.2: Distribution of households by social group

Village	Total HHs	SC	ST	Other	Total	% of Total HHs
Balel	141	18 (45.0)	21 (52.5)	1 (2.5)	40 (100.0)	28.4
Sindhiguda	52	3 (7.5)	37 (92.5)	-	40 (100.0)	76.9
Hanumal	126	16 (41.0)	22 (56.4)	1 (2.6)	39 (100.0)	30.9
Kamel	57	9 (22.5)	13 (32.5)	18 (45.0)	40 (100.0)	70.2
All	376	46 (28.9)	93 (58.5)	20 (12.6)	159 (100.0)	42.3

Table 4.3: Average size of households

Village	Age group				All
	< 20	20-30	31-40	40+	
Balel	5.1	5.4	3.5	4.0	5.0
Sindhiguda	5.0	6.1	4.5	4.0	5.2
Hanumal	5.1	4.1	3.5	4.4	4.4
Kamel	4.8	4.6	4.2	3.8	4.5
All	5.00	4.9	3.9	4.1	4.8

In all, the sample households have 761 persons: 391 male and 370 female. The average size of the households is 4.8 persons (Table 4.3). The sex ratio (female/male) for the population in sample households works out to be 94.6. This varies from 101.2 in Hanumal and 97 in Kamel to about 90 and 91 in the other two villages. This suggests a higher sex ratio among less remote villages compared with the others. A higher sex ratio may be

indicative of better connectivity, hence higher incidence of male migration in the less remote villages (see Table 4.4).

Table 4.4: Sex ratio among sample households

Village	Female: male population
Balel	90.5
Sindhiguda	90.8
Hanumal	101.2
Kamel	97.8
All	94.6

4.1.2 Literacy and health services

Nearly 47 percent of households report at least one literate member (see Table 4.5). What is striking, however, is that the proportion varies significantly, from 75 percent in Kamel to 10 percent in Sindhiguda. The proportion of households having at least one literate person in Hanumal is nearly 60 percent. *Prima facie*, the data suggest that physical remoteness does matter significantly in terms of attainment of literacy. Conversely, the very low incidence of literacy in Sindhiguda is explained by the fact that the village does not even have a primary school: children have to go to Hanumal to attend school. Incidentally, Hanumal has a boarding school which functions reasonably well. Among the sample households, only 18 percent of the population among the sample households has attained literacy. The literacy rate is significantly low partly because the estimates are not adjusted for children below the age of six years. This aspect was addressed in the study by deducting 10 percent of the population under the age group of five years for all the sample villages. As a result, the literacy rate increased marginally to about 20 percent. The percentage of literate persons in the less remote villages is also in the range of 32-35 percent. This is abysmally low, notwithstanding the fairly high incidence of literacy at household level.

This may be because schools may have started operating only in the past 10-15 years. But having a school in the village is no guarantee for its actual functioning, as teachers are seldom there to teach. The fact that a significantly large majority of households seek to access whatever facility is available implies that the problem appears to be mainly on the supply side. Remoteness does become an important constraint for the state to set up a school in such locations. Sindhiguda has only 52 households: the state machinery would not be able to reach out to such small settlements. The stark difference in literacy attainment between the remote and not so remote villages raises the issue of a complementary role that CSOs could play in enhancing access to education in such remote villages. Discussions with such organisations in these areas indicated that, whereas the CSOs do envisage a complementary role, their first priority is to fill the gap in the field of health services; education and mobilisation of the tribal community come next in the order of their priority. It was, however, heartening to note that, realising the importance of literacy, villagers have come forward to contribute Rs. 10 per household per month in case they can get someone from the

local area to come and teach in the school. This reinstates our earlier observation regarding supply-side deficiency in meeting the goal of universal primary education in the area.

On examining the incidence of literacy among households across different social groups, it was found that incidence of literacy is lowest among the STs at household level (41.9 percent), followed by SCs (43.5 percent). Among other communities, the literacy rate at household level is as high as 75 percent. What is important is the fact that literacy among the tribals is low not only because of their social marginalisation, but also because they happen to live in the more remote villages such as Sindhiguda. This phenomenon is substantiated by the village estimates, which show that Kamel has the highest incidence of literacy and also more or less the same level of literate households among tribals (76.9 percent) as among other communities (77.8 percent). The proportion among the SCs is 62.5 percent. About 30 percent of households reported expenditure on education of children, but this ranged from less than Rs. 100 to about Rs. 1100 per year. While these are aggregate estimates per household, rather than per school-going child in a household, the data indicate that, despite the state objective, education, especially primary education, is not entirely free in this region. This may work as a demand-side constraint for very poor households.

Table 4.5: Incidence of literacy by caste

Village	Literate HH				Literate as % of total
	SC	ST	Others	All	
Balel	4 (22.2)	13 (61.9)	-	17 (42.5)	14.0
Sindhiguda	-	4 (10.8)	-	4 (10.0)	2.4
Hanumal	10 (62.5)	12 (54.5)	1 (100.0)	23 (59.0)	32.1
Kamel	6 (66.7)	10 (76.9)	14 (77.8)	30 (75.0)	35.0
Total	20 (43.5)	39 (41.9)	15 (75.0)	74 (46.5)	18.1

Notes: Figures in parenthesis indicates percentage of households in each category. Literacy refers to households having at least one literate person.

4.1.3 Health and family planning

Table 4.6 presents information on the number of children born and not surviving beyond the age of five. It is observed that about 40 percent of the households reported child death of this kind. A total of 570 children were born, out of whom 122 did not survive beyond the age of five. This works out to be 21.4 percent of the total number of children born in the sample households. Surprisingly, the incidence of child death is higher in the less remote villages and among the socially better-off households, as shown in Tables 4.6 and 4.7.

Table 4.6: Number of births and deaths among children

Village	Total children born	Total children died	%
Balel	139 [3.5]	20 [0.5]	14.4
Sindhiguda	152 [3.9]	31 [0.8]	20.4
Hanumal	135 [3.5]	34 [0.9]	25.2
Kamel	144 [3.6]	37 [0.9]	25.7
Total	570 [3.7]	122 [0.8]	21.4

Note: Figures in brackets indicate average number of children per sample household.

Table 4.7: Number of births and deaths among children by social groups

Caste	Total children born	Total children died	% of deaths to no. of children born
SC	185	36	19.5
ST	320	71	22.2
OBC	26	5	19.2
Other	39	10	25.6
Total	570	122	21.4

One of the possible explanations for this apparently strange pattern is that a voluntary organisation is working in the remote areas, especially in Sindhiguda, providing health support. This may have helped reduce the death rate significantly in the village. An enquiry was made regarding adoption of family planning practices, and attitude towards this among the sample households. About 50 percent of the households in the three villages reported that they had availed themselves of family planning services (see Table 4.8). Literacy at the household level may have significant impact on adoption of family planning. Table 4.9 indicates that, of the total out of 64 households adopting family planning practices, 62.5 percent are literate. The proportion is higher in the less remote villages as compared with the more remote villages. In Hanumal, 80 percent of households practising family planning measures are literate. Nevertheless, this observation needs to be seen in conjunction with the fact that literacy itself is influenced by physical remoteness, as already seen in Table 4.5. Thus, to the extent that physical remoteness determines the level of literacy, which in turn influences the adoption pattern, remoteness plays a crucial role with respect to the outcome in terms of family planning practices and the number of births per households. The evidence from the sample villages suggests that literacy has a greater impact compared with physical remoteness in determining the outcome, since the difference in literacy level vis-à-vis remoteness is larger as compared with the difference in adoption of family planning practices.

Table 4.8: Households reporting adoption of family planning measures by caste and village

Village	Caste	Family planning	% of all HHs
Balel	SC ST Others	8 12 -	44.4 57.1 -
	All	20	50.0
Sindhiguda	SC ST Others	- 5 -	- 13.5 -
	All	5	12.5
Hanumal	SC ST Others	8 11 -	50.0 50.0 -
	All	19	48.7
Kamel	SC ST Others	5 5 10	55.5 38.5 55.5
	All	20	50.0
All	SC ST Others	21 33 10	45.6 35.5 50.0
	All	64	40.2

Table 4.9: Link between family planning practices and literacy

Village	HHs adopting family planning (no.)	% of households with literacy*
Balel	20	50.0
Sindhiguda	5	20.0
Hanumal	19	68.4
Kamel	20	80.0
Total	64	62.5

*Note: *The percentages refer to the number of households having adopted family planning measures.*

It was noted that preference for a male child was the most important factor responsible for non-adoption of family planning practices. This was followed by the apprehension regarding adverse impact on health and physical strength in the event of adopting such measures (see Table 4.10). Regarding expenditure on health services among sample households, 26.4 percent did not report any expenditure on heath services during the past year.

Among households that reported expenditure on health, 61.5 percent had incurred less than Rs. 300 per year (see Table 4.11). The number of households not reporting any expenditure on health was highest in Balel, followed by Hanumal and Kamel. Conversely, a larger proportion of households reporting expenditure on health services suggests effective access to health services provided by the local organisation in Sindhiguda.

Table 4.10: Major constraints in accessing family planning services

Constraints in family planning	Balel	Sindhiguda	Hanumal	Kamel	Total*
Losing physical strength	2	6	4	5	17
More children for more income	3	1	0	2	6
Preference for having at least one male child	8	11	8	4	31
Require another male child since the first died	0	0	1	1	2
Total	13	18	13	14	58

*Note: *Based on multiple responses.*

Table 4.11: Expenditure on health among households by social group

Village	Caste	Expenditure (Rs./year)					
		00	<100	100-300	300-500	500+	All
Balel	SC	9	3	2	-	4	18
	ST	5	-	6	7	3	21
	Other	-	-	-	-	1	1
	All	14	3	8	7	8	40
Sindhiguda	SC	1	-	-	-	2	3
	ST	7	12	14	1	3	37
	Other	-	-	-	-	-	-
	All	8	12	14	1	5	40
Hanumal	SC	3	3	5	2	3	16
	ST	8	4	6	3	1	22
	Other	-	-	1	-	-	1
	All	11	7	12	5	4	39
Kamel	SC	3	1	2	1	2	9
	ST	2	1	3	1	6	13
	Other	4	2	7	4	1	18
	All	9	4	12	6	9	40
All	SC	16	7	9	3	11	46
	ST	22	17	29	12	13	93
	Other	4	2	8	4	2	20
	All	42	26	46	19	26	159

Of the 761 persons, 20 were reported as physically and/or mentally challenged, belonging to 20 households, which constitute about 12 percent of the sample households in the sample villages.

4.2 Assets, employment and migration

4.2.1 Physical assets

As noted earlier, 105 out of 159 sample households, 66 percent, reported ownership of land. A substantially large number of households (67 percent) reported undertaking jhoom cultivation, whereas 27 households reported encroachment. Only 10 households reported not having any land under any of the categories noted in Table 4.12.

Table 4.12: Ownership of land by caste and village

Village	Ownership of land	Caste			
		SC	ST	Other	All
Balel	Landed	6 (33.3)	17 (81.0)	1 (100.0)	24 (60.0)
Sindhiguda	Landed	2 (66.7)	19 (51.4)	- (-)	21 (52.5)
Hanumal	Landed	6 (37.5)	20 (90.9)	- (-)	26 (66.7)
Kamel	Landed	5 (55.6)	13 (100.0)	16(88.9)	34 (85.0)
All	Landed	19 (41.3)	69 (74.2)	17 (85.0)	105 (66.0)

The average size of (owned) land holding is 3.0 acres, ranging from 1.64 acres in Sindhiguda to 4.8 acres in Kamel. This indicates significant variation. The smaller size of land holding in Sindhiguda may reflect relatively better status of forest.

Land transactions through leasing, sharing and mortgaging have been reported by a small subset of households. Such transactions are seldom reported accurately, owing to complex and often uncertain land titles. A similar situation prevails with respect to encroachment of land under public ownership, and also under jhoom cultivation. In fact, the issue of reporting ownership of land or operational land holdings is so tricky that it is difficult to gauge actual size, as well as control over land in this area.

Table 4.13: Pattern of land holding among sample households

Village	Caste	Own Land		Lease in		Lease out		Mortgaged-in		Jhoom		Encroach	
		No	Area	No	Area	No	Area	No	Area	No	Area	No	Area
Balel	SC	6	14.6	1	1.0	-	-	1	2.0	1	0.4	-	-
	ST	17	48.7	2	2.5	-	-	3	3.0	2	1.5	5	9.9
	Other	1	3.5	-	-	-	-	-	-	1	0.8	-	-
	All	24	66.8	3	3.5	-	-	4	5.0	4	2.7	5	9.9
Sindhiguda	SC	2	2.0	-	-	-	-	-	-	2	3.0	-	-
	ST	19	32.6	1	1	-	-	-	-	27	37.1	8	13.0
	Other	-	-	-	-	-	-	-	-	-	-	-	-
	All	21	34.6	1	1	-	-	-	-	29	40.1	8	13.0
Hanumal	SC	6	9.0	-	-	-	-	2	3.0	11	12.5	2	2.0
	ST	20	44.6	-	-	-	-	1	1.0	15	19.5	6	9.5
	Other	-	-	-	-	-	-	-	-	1	0.5	-	-
	All	26	53.6	-	-	-	-	3	4.0	27	32.5	8	11.5

Village	Caste	Own Land		Lease in		Lease out		Mortgaged-in		Jhoom		Encroach	
		No	Area	No	Area	No	Area	No	Area	No	Area	No	Area
Kamel	SC	5	21.4	-	-	-	-	-	-	-	-	3	17.3
	ST	13	60.4	-	-	-	-	1	3.0	3	5	2	2.7
	Other	16	82.5	-	-	2	1.5	-	-	4	7	1	1.0
	All	34	164.2	-	-	2	1.5	1	3.0	7	12	6	21.0
All	SC	19	47.0	1	1.0	-	-	3	5.0	14	15.9	5	19.3
	ST	69	186.2	3	3.5	-	-	5	7.0	47	63.1	21	35.1
	Other	17	85.9	-	-	2	1.5	-	-	6	8.3	1	1.0
	All	105	319.1	4	4.5	2	1.5	8	12	67	87.3	27	55.3

Table: 4.14: Average size of owned land by caste by village

Village	SC	ST	Other	All
Balel	2.4 (6)	2.9 (17)	3.5 (1)	2.8 (24)
Sindhiguda	1.0 (2)	1.7 (19)	- -	1.7 (21)
Hanumal	1.5 (6)	2.2 (20)	- -	2.1 (26)
Kamel	4.3 (5)	4.6 (13)	5.2 (16)	4.8 (34)
All	2.5 (19)	2.7 (69)	5.1 (17)	3.0 (105)

Note: Figures in parentheses indicate number of households.

The average land holding size is found to be the highest among 'other' communities, which are concentrated mainly in Kamel. Against the average holding of 5.05 acres among 'other' communities, landholding size among tribals is 2.7 acres and among SCs 2.5 acres. This suggests a reverse picture from that at the macro level, where tribals have the same size of land holdings as others, and much more than among SCs and OBCs (de Haan and Dubey, 2003). The contrast between the macro and micro patterns thus reflects the ground realities of conversion and land alienation.

4.2.2 *Livestock*

Livestock is an important part of the traditional livelihood system in the region. This is reflected by the fact that over 88 percent of the households own livestock. This varies from 82.5 percent in Balel to 95 percent in Sindhiguda (See Table 4.15). Of the total 922 livestock, 262 are cows, 161 are bullocks, 42 buffalos and the rest small animals including sheep and goats. This suggests that, on average, each livestock-owning household has more than one cow/buffalo, and almost all households with operational land have one bullock.

Over time, however, ownership of assets seems to be losing its importance as a survival/coping mechanism owing to depletion of forest resources in the region. This is reflected by the fact that a large proportion of the households, about 54 percent, have reported a decline in livestock population during the past 10 years. A number of factors are responsible for this, such as high rate of mortality owing to frequent droughts, lack of support

services, selling of livestock to meet cash requirements, use for social functions and inability to replenish stock as a result of financial crunch.

Table 4.15: Ownership of livestock among sample households

Village	Total livestock					HHs with livestock					Average number of livestock per HH				
	Cow	Buf.	Bul.	Other	All	Cow	Buf.	Bul.	Other	All	Cow	Buf.	Bul.	Other	All
Balel	43	10	22	62	137	25	7	13	16	33	1.7	1.4	1.7	3.9	4.1
Sindhiguda	61	1	50	207	321	31	1	25	37	38	2.0	1.0	2.0	5.6	8.4
Hanumal	55	11	42	93	201	26	5	19	24	34	2.1	2.2	2.2	3.9	5.9
Kamel	103	20	47	93	263	31	9	20	18	35	3.3	2.2	2.3	5.2	7.5
All	262	42	161	455	922	113	22	77	95	140	2.32	1.9	2.1	4.8	6.6

4.2.3 Ownership and type of house

Table 4.16 provides information on the type of house owned by the sample households. While it is observed that a majority of households (76 percent) live in *kachcha (made of mud)* houses, about 63 percent of the households report that housing conditions have improved over the past 10 years. This comprises those who live in *pucca (made of concrete/stones)* or mixed type houses, or those who might have undertaken extension or major repairs. This could be considered an important indicator of improvement in households' economic wellbeing. Besides land, livestock and house, the sample households have a very small asset base in terms of consumer durables. For instance, only 20 households (12.58 percent) were found to own a bicycle and 18 households reported having gold. However, households tend to underreport possession of gold, silver and other valuables to outsiders.

Table: 4.16: Types of house and change over time

Village	Caste	House type			HH with (+) change
		Kachcha	Mixed	Pucca	
Balel	SC	77.8	16.7	5.5	7.8
	ST	80.9	14.3	4.8	66.7
	Other	100.0	-	-	100.0
	All	80.0	15.0	5.0	72.5
Sindhiguda	SC	66.7	-	33.3	33.3
	ST	86.5	8.1	5.4	48.6
	Other	-	-	-	-
	All	85.0	7.5	7.5	47.5
Hanumal	SC	81.3	6.2	12.5	37.5

Village	Caste	House type			HH with (+) change
		Kachcha	Mixed	Pucca	
	ST	72.7	27.3	-	72.7
	Other	100.0	-	-	-
	All	76.9	18.0	5.1	56.4
Kamel	SC	66.7	22.2	11.1	77.8
	ST	69.2	7.7	23.1	61.5
	Other	55.5	27.8	16.7	83.3
	All	62.5	20.0	17.5	75.0
All	SC	76.1	13.0	10.9	60.9
	ST	79.6	14.0	6.4	60.2
	Other	60.0	25.0	15.0	80.0
	All	76.1	15.1	8.8	62.9

4.2.4 Workforce and employment

About 49 percent of the population are reported to be engaged in economic activities such as agriculture, livestock, collection of forest produce and casual labour; only a few persons are employed as salary earners. The total number of workers undertaking economic activities is 375, which works out to be 2.35 workers per household (Table 4.17). The proportion of workers is only 40 percent in Sindhiguda. Of the total workers, tribals constitute about 57 percent, which is almost the same as their share in the total population in the sample villages.

Table 4.17: Workforce among sample households

Village	No. of workers				% of total population
	SC	ST	Others	All	
Balel	50 (43.5)	61 (53.0)	4 (3.5)	115 (100.0)	57.5
Sindhiguda	7 (8.4)	76 (91.6)	-	83 (100.0)	39.9
Hanumal	31 (39.7)	44 (56.4)	3 (3.8)	78 (100.0)	45.1
Kamel	17 (17.2)	32 (32.3)	50 (50.5)	99 (100.0)	55.0
All	105 (28.0)	213 (56.8)	57 (15.2)	375 (100.0)	49.3

The distribution of households across different principal and subsidiary activities is represented in Table 4.18. Some households have reported more than one worker undertaking different principal activities. The demarcation of principal and subsidiary activities has been made in terms of income derived from different activities. Such households would have been counted more than once, depending on the number of principal activities undertaken by the workers within the households. There are 180 households with workers engaged in different principal activities. The same applies to the distribution of households in the case of subsidiary activities.

Table 4.18: Activity profile among workers

Activity	Balel		Sindhiguda		Hanumal		Kamel		All	
	Pri.	**Sub.**	**Pri.**	**Sub.**	**Pri.**	**Sub.**	**Pri.**	**Sub.**	**Pri.**	**Sub.**
Cultivation	22 (19.1)	1 (0.9)	38 (45.8)	-	32 (41.0)	11 (14.1)	33 (33.3)	3 (3.0)	125 (33.3)	15 (4.0)
Wage labour	19 (16.5)	21 (18.3)	2 (2.4)	33 (39.8)	8 (10.3)	31 (39.7)	11 (11.1)	28 (28.3)	40 (10.7)	113 (30.1)
Service	1 (0.9)	-	-	-	1 (1.3)	-	2 (2.0)	-	4 (1.1)	-
Business	2 (1.7)	1 (0.9)	-	3 (3.6)	2 (2.6)	2 (2.6)	1 (1.0)	-	5 (1.3)	6 (1.6)
Other	2 (1.7)	8 (7.0)	2 (2.4)	5 (6.0)	-	2 (2.6)	2 (2.0)	-	6 (1.6)	15 (4.0)
Total	46 (40.0)	31 (27.0)	42 (50.6)	41 (49.4)	43 (55.1)	46 (59.0)	49 (49.5)	31 (31.3)	180 (48.0)	149 (39.7)

As much as 79 percent of households report at least one person engaged in cultivation as a principal activity. This is higher than the proportion of households (i.e. 66 percent) owning land. This implies that a large number of the households not owning land are also engaged in agricultural activities. What is more important is that 113 households report at least one person engaged in wage labour as a subsidiary activity in terms of income. A large proportion of these are likely to be engaged in agriculture.

Table 4.19 provides information on employment in the two major activities, i.e. cultivation and wage labour. It is observed that 297 workers (principal) belonging to 125 households are engaged in cultivation. This works out to be 2.4 workers per household. Together, these workers were engaged for 171 days per household. The average number of days thus works out to be 72 per worker. It may be noted that these workdays are not adjusted for the norm of eight hours a day. Obviously, this suggests substantial amount of underemployment among the workers engaged in agriculture. It is likely that some of the workers engaged in agriculture also seek wage employment, especially in agriculture. There are 92 workers (principal) from 40 households engaged in wage labour in different activities, including agriculture. This works out be 165 days per household and 72 days per worker. Conceding that the two activities together create a total of 27,938 days of work for the 375 workers in the village, the average workdays per worker works out be 72 per annum, irrespective of the

quantum of work per day. Given the inherent constraints to out-migration from this remote region, collection of forest produce and livestock become a part of the livelihood system. However, both these may have adverse impacts on sustainable use of forest resources.

Table 4.19: Person days of employment by different activities

Village	HHs	Worker	Days	Days per HH	Days per worker engaged in particular activity
Cultivation					
Balel	23 (57.5)*	62 (2.7)**	3470	150.87	55.97
Sindhiguda	38 (95.0)	79 (2.1)	6290	165.53	79.62
Hanumal	32 (82.0)	70 (2.2)	5578	174.31	79.68
Kamel	32 (80.0)	86 (2.7)	5990	187.19	69.65
All	125 (78.6)	297 (2.4)	21328	170.62	71.81
Wage employment					
Balel	19 (47.5)	55 (2.9)	4490	236.31	81.64
Sindhiguda	2 (5.0)	3 (1.5)	220	110.00	73.33
Hanumal	8 (20.5)	11 (1.4)	840	105.00	76.36
Kamel	11 (27.5)	23 (2.1)	1060	96.36	46.09
All	40 (25.1)	92 (2.3)	6610	165.25	71.85

*Notes: *Percentage of total HHs; ** No. of workers per household.*

4.2.5 Income from major activities

Table 4.20 presents estimates of average income from different sources across categories of households and villages. Estimates of income exclude livestock, as it was very difficult to impute the value of products that are used mainly for consumption. Similarly, the estimate for forest produce includes the value of marketed products only. To that extent, the income estimates are underreported. Agriculture is the major contributor, accounting for 42.5 percent of the estimated income of households. This is followed by wage income, contributing 25.2 percent and then forest resources (15.1 percent) and other activities (17.2 percent). The highest per capita income from all sources is in Kamel. Similarly, Kamel has the highest income per household from agriculture, and also the highest land holding size. However, what is surprising is that the average income from agriculture in the two more remote villages is higher than that in Hanumal, which is a less remote village. It is also interesting to note that Sindhiguda has the highest average income from the forest, which confirms the earlier observation that the village may have relatively better forest resources. This is followed by

the two less remote villages, which may have benefited owing to better access to markets. It is also important to note that STs have relatively higher than average per capita income in the case of three villages (except Kamel). However, STs have lower than average income per household (except for Hanumal). Overall, the evidence suggests that the sample households have an average income ranging from Rs. 9147 to Rs. 13,854, which is significantly lower than the official poverty line for the region.

Table 4.20(a): Average annual income per household by social group

Village	Caste	Cultivation	Wage labour	Forest	Other	Average annual income (all sources)	
						Per HH	Per capita
Balel	SC	4750.00	4476.56	1803.83	7229.33	13918.56	2662.43
	ST	8007.94	3791.67	1304.16	4960.67	13747.24	2980.37
	Other	7250.00	2700.00	3800.00	1200.00	14950.00	2491.67
	All	6976.35	4073.57	1606.53	6041.71	13854.40	2825.08
Sindhiguda	SC	4410.00	4600.00	2576.67	2016.67	10600.00	1684.13
	ST	4603.24	2710.00	2165.81	1600.00	9029.61	1944.48
	Other	-	-	-	-	-	-
	All	4593.07	2824.55	2197.41	1778.57	9147.39	1924.96
Hanumal	SC	3178.21	3697.86	1717.94	4217.14	9579.50	1925.51
	ST	5206.36	2663.33	1770.00	6700.00	10432.27	2732.35
	Other	900.00	9350.00	2095.00	2400.00	14745.00	2457.50
	All	4322.57	3251.39	1756.97	4729.09	10193.00	2394.29
Kamel	SC	5209.00	3806.25	1867.67	3066.67	9167.11	2380.27
	ST	6039.62	2197.92	1255.77	8250.00	11862.69	2641.38
	Other	9013.29	3136.88	1504.22	7440.00	14871.78	3437.37
	All	7365.31	2972.64	1505.25	6616.67	12610.28	2940.83
All Villages	SC	4046.90	4076.12	1836.85	5471.78	11263.26	2287.10
	ST	5623.94	2860.55	1755.70	5175.13	10822.72	2462.19
	Other	8493.47	3457.78	1648.55	5828.57	14869.35	3341.09
	All	5688.55	3284.64	1765.89	5397.21	11459.18	2522.09
% of total HHs		42.5	25.2	15.1	17.2		

The income from collection of NTFP varies across households, as shown in Table 4.20(b).

Table 4.20(b): Income from collection of forest produce among households

Village	Income (Rs./year)			
	0	<1000	1000+	All
Balel	2 (5.0)	14 (35.0)	24 (60.0)	40 (100.0)
Sindhiguda	1 (2.5)	8 (20.0)	31 (77.5)	40 (100.0)
Hanumal	- -	8 (20.5)	31 (79.5)	39 (1000)
Kamel	- -	17 (42.5)	23 (57.5)	40 (100.0)
All	3 (1.9)	47 (29.6)	109 (68.5)	159 (100.0)

4.2.6 *Migration*

As noted in the initial part of the analysis, people in forest-based economies are less likely to migrate when the basic minimum livelihood is supported by the forest ecosystem. However, as the forest starts depleting, owing to pressure from external and/or internal forces (including increase in the local population), forest dwellers are compelled to go out in search of employment, mainly as a survival strategy. Physical remoteness reinforces this basic characteristic, owing to two interrelated processes. First, remoteness generally ensures low level of forest depletion. At the same time, remoteness also involves higher cost of migration, given limited financial resources, information and social contacts. Conceding that the region represents one of the most remote areas among the forest economies, and at the same time has a larger area under forest as compared with other forest-dominated districts in the state, low incidence of migration as compared with that in some of the other areas in Southern Orissa is expected.

The results of the field survey confirm the above assertion regarding low incidence of migration in the sample villages. Only 20 households in the sample villages have at least one person migrating outside the district. Of these, 17 households belong to only one village, Balel. The study tried to capture migration of workers seeking work outside the village, which also includes commuters. It was observed that 85 out of the 159 (53 percent) households report migration of this type, which is mostly for a period of 15-20 days per year. In all, there are 143 migrants working outside the village. This works out to be 1.6 workers per household. Only five households reported family members settling outside the village on a long-term basis.

Table 4.21: Households with intra-district migration

Village	Caste	No. of HHs with Migration	No. of migrating workers
Balel	SC	15	24
	ST	13	19
	Others	1	1
	Total	29	44
Sindhiguda	SC	2	4
	ST	24	50
	Total	26	54
Hanumal	SC	12	19
	ST	12	19
	Others	-	-
	Total	24	38
Kamel	ST	2	2
	Others	4	5
	Total	6	7
All	SC	29	47
	ST	51	90
	Others	5	6
	Total	85	143

The responses reveal that non-migration owes mainly to socioeconomic factors, such as absence of any other member to look after the family or agricultural operations, having old persons or very small children and lack of information/contacts outside the village. Remoteness seems to have played some role in this context, as 17 out of the 29 households indicated this as a reason. Some of these responses may implicitly indicate that households can still manage their livelihood without migration; 28 respondents explicitly mentioned that migration was not an absolute requirement for sustaining their livelihood. These households are likely to be economically better off than others. All these responses indicate that migration is not a preferred option till a point where the household has exhausted all other options for meeting basic needs.

Table 4.22: Factors explaining non-migration (outside the district)

Factors in non-migration	Balel	Sindhiguda	Hanumal	Kamel	Total
Absence of other adult male member to look after the farming	10	15	24	11	41
Lack of information/contacts	6	11	9	3	29
Work available in the nearby area	2	3	6	2	13
Ill health of family members	1	2	3	4	10
Old age	4	1	2	14	21
Small children/old persons needing care	4	5	4	11	24
No need to go out	7	11	8	2	28
All responses	34	48	56	47	185

4.3 Coping strategy during shocks

Given that migration is not an important component of livelihood strategies under normal situations, it is important to study how households cope during shocks, and whether migration appears as an important component of coping strategies adopted by sample households under shocks – external, internal and price-related. Internal shocks refer to household-specific events such as death or illness of the household's main earner, or huge expenditure on social or other occasions; external shocks refer to drought, floods, etc. Of course, it is likely that some households have not actually experienced any internal shocks; for these households, responses are based on perceptions.

Table 4.23 presents information on the various strategies that households adopt when facing an internal shock. It is important to note that reducing cereal consumption in terms of quantity and/or quality is the most important strategy reported by a large number of households. For instance, as much as 38 percent of households report partial shifting from rice to ragi as an important strategy. What is more concerning is that about 30 percent of households resort to a reduction in cereal consumption in order to cope with an internal shock. It is likely that most of these households belong to the category of severely poor.

Table 4.23: Coping strategy during internal shocks (% of HHs)

Coping strategy	Balel	Sindhiguda	Hanumal	Kamel	Total
Exploitation of forest resource	0.0	15.7	7.5	6.3	29.6
Reduced consumption of rice	3.1	20.1	9.4	5.7	38.4
Reduction in consumption	7.5	9.4	5.0	8.2	30.2
Borrowing from moneylender	3.1	9.4	2.5	6.3	21.4
Credit from shops	3.8	1.0	1.6	8.2	16.3
Borrowing from relatives	0.0	0.0	0.0	2.5	2.5

Note: Borrowing here refers to taking money with interest.

Another concern with respect to households' coping mechanisms is increased use of forest resources for self-consumption and selling in the market. Of course, the latter is generally underreported. The ground reality is that NTFP is an important part of the households' livelihood system under normal situations. It becomes an increasingly important component of coping mechanisms during shocks.

About 21 percent of households report borrowing from moneylenders in order to cope with the difficult situation caused by internal shocks. Also, 16 percent of households report borrowing from shopkeepers/traders. It is likely that many of those who borrow under stress may not be able to get out of indebtedness for a very long time which, in turn, may push households into a downward spiral of chronic poverty. The situation could be further aggravated by the fact that the region is prone to frequent external shocks, especially droughts. Exiting from poverty thus may become almost impossible for most of the households, once trapped in a downward spiral as a result of the death or ill health of the main earner of the household, for example (Krishna, 2003). In this context, it may be useful to examine the coping strategy adopted by households during external shocks (see Table 4.24).

Table 4.24: Coping strategies during external shocks (% of HHs)

Coping strategy	Balel	Sindhiguda	Hanumal	Kamel	Total
Selling of assets	0.0	0.6	1.3	0.0	1.9
Mortgaging of assets	1.3	0.0	2.5	0.6	4.4
Work diversification	6.9	0.0	0.0	1.3	8.2
Reduction in consumption of food	9.4	23.9	15.1	13.8	62.3
Use more ragi than rice	2.5	3.8	6.3	10.7	23.3
More dependency on forest	6.9	11.9	14.5	6.3	39.6
Borrowings from other sources	11.3	14.5	8.8	40.9*	75.5
Credit from shops	5.0	5.7	10.1	7.5	28.3
Higher degree of dependency on government schemes	0.0	0.6	0.6	5.0	6.3
Migration	5.0	0.0	0.6	0.6	6.3
Increased jhoom cultivation	1.9	4.4	5.0	1.3	12.6

Although there is some kind of continuity in the pattern of responses obtained on the coping mechanisms adopted during internal and external shocks, a few observations need special attention in this context. These are:

(1) The number of coping options adopted by households is significantly higher during external as compared with internal shocks. The average number of options to be adopted by a household increases from 1.38 to 2.69. A part of this could be explained by the fact that, for some households, an internal shock may not be an actual experience, as noted earlier.

(2) Notwithstanding the above limitation, the responses presented in Table 4.24 suggest that, whereas 40 percent of households report increased dependence on the forest as an important coping mechanism, 12.5 percent report that they would increase the area of jhoom cultivation. There is likely to be an overlap between these households. The phenomenon of encroachment of land, already reported by 27 households as part of the livelihood base in normal situations, may increase during or following an external shock, although this may not be reported in a survey. This observation reinforces the already existing vicious circle of inappropriate forest management–forest degradation–increased impact of droughts–increased extraction from forest–further degradation–increased poverty in the region.

(3) The proportion of households reporting reduced food consumption is as high as 62 percent. In fact, these households suffer hardcore poverty, since most of them are likely to have relatively lower food consumption even in a normal year, given the frequent occurrence of droughts in the region. The proportion of households resorting to reduced food consumption is relatively higher (66 percent) in more remote as compared with less remote villages. What is more striking is that about 95 percent of the households in Sindhiguda reported this as part of their coping mechanism during external shocks.

(4) Migration continues to remain an insignificant component of the livelihood strategy under external shocks; for internal shocks, it did not appear as an option to be adopted.

(5) The highest number of households reporting borrowing as a coping strategy is in Kamel, a less remote village. This signifies the impact of better access to markets. It could be argued that those in the less remote villages like Kamel have better ability to borrow (because of their better asset or income base), as compared with Sindhiguda. If so, it is all the more important that people's borrowing capacity improves before improvement in their access to credit support. Finally, the authors tried to understand how the sample households had coped with the increased price of rice, which has almost doubled in the past 10 years. This is important because most of the households are not net sellers of food grains, hence may not gain much from the increased price of agricultural produce. Similarly, wage employment is available only to 40 households, where at least one person undertook this as a principal activity. For 112 households, it is only a subsidiary activity. Given this context, a large proportion of the households may not benefit much from increases in the wage rate, if the increase takes place. Table 4.25 presents the responses of households to increases in the price of food grains.

Table 4.25: Coping strategy under price rises

Price hike and coping	Balel	Sindhiguda	Hanumal	Kamel	Total
Increase in wage rate	18.9	23.9	12.6	11.3	66.7
More use of ragi in place of rice	6.9	21.4	18.2	14.5	61.0
Seek more work in nearby places	20.1	15.7	15.7	11.9	63.5
Managed from home produce	0.6	0.0	0.6	0.6	1.9
Borrow from moneylender	5.7	6.3	10.7	10.1	32.7
Dis-saving	0.0	0.0	0.6	1.3	1.9
Reduced consumption of food	2.5	0.0	1.3	3.1	6.9

Note: Based on multiple responses of sample households.

4.3.1 *Changes in livelihood pattern in the past 10 years*

The foregoing analysis depicted the current status of households with respect to various indicators. It is likely that households have experienced certain important changes in their wellbeing over time. This has been captured through perception-based responses from the households (Table 4.26).

Table 4.26: Change in livelihood base over the past 10 years

Changing life pattern	Balel	Sindhiguda	Hanumal	Kamel	Total
Consume better quality food	11.3	19.5	23.9	20.1	74.8
Wear better clothes	9.4	15.1	22.6	19.5	66.7
Access to improved transport (motored vehicles) facility	15.1	2.5	6.9	15.7	40.3
Improvement in housing	10.7	3.8	6.3	16.4	37.1
Decrease in death rate	10.1	0.0	0.6	13.2	23.9
Access to medicine from government hospital	6.9	20.8	13.2	15.1	56.0
Exposure to outside world	8.8	3.	2.5	11.9	26.4
Use chemical fertiliser	6.3	1.9	3.1	13.8	25.2
Turning forest to agricultural land	0.0	21.4	5.7	13.2	40.3
Increased livestock population	3.1	2.5	2.5	8.2	16.4
Decrease in superstitious belief	0.0	0.0	3.1	5.7	8.8
Increase in temperature	1.3	0.0	0.0	9.4	10.7
Decrease in wild life	0.0	0.0	3.1	0.0	3.1
Increase in violence	4.4	1.3	3.1	11.3	20.1
Reduction in liquor consumption	0.0	1.3	0.0	4.4	5.7
Education for children	5.0	0.0	0.0	8.2	13.2

A substantially large proportion of households reported improvements in quality of food, housing and clothing. Besides these, improvements have been noticed in terms of connectivity, information/exposure and agricultural practices. There have been some negative changes as well, with respect to conversion of forest to agricultural use, reduced wildlife and increase in temperature. This suggests some kind of trade-off between the improved livelihood base and quality of environment. Obviously, sustaining the improvement may be increasingly difficult, and this is being reflected in the sustained high level of poverty, especially in the wake of the increasing population in the region.

5 Typology and correlates of poverty

This section maps the sample households by typology of poverty. While the exercise is based mainly on quantitative data pertaining to expenditure and consumption of food grains at household level, an attempt has been made to identify households' wellbeing in terms of community wealth ranking. This was ascertained by using participatory method covering all households in the villages when the study was conducted. The idea was to extend the exercise and trace the change (if any) in households' position with respect to community ranking over a period of 10 years. Unfortunately, the exercise did not yield significant variations, as most of the households were found to have clustered around the category of chronic poor, in terms of both severity as well as duration. The ranking exercise thus referred to the fivefold categorisation of extreme poor to non-poor. Besides this, an attempt has been made in the study to link up community ranking with the official status of BPL in order to compare the two indicators.

5.1 5.1 Community ranking among households

Essentially, community ranking reflects shared assessment of relative level of households' wellbeing. Generally, the ranking is based on a number of criteria pertaining not only to economic status, but also to social standing and overall wellbeing, including human capital. This was brought out during discussions at the time of conducting PRAs. In practice, however, community ranking is found to reflect the households' asset/income base. The reason could be that a significantly large proportion of households live in severe deprivation in terms of the basic requirements. Thus, economic wellbeing becomes the most overpowering reality, notwithstanding the other forms of vulnerability faced by the income-poor households.

Table 5.1 presents distribution of households according to community ranking. As much as 98 percent of the households have been considered poor, i.e. those covered by categories 1 through 4. This proportion is higher than the BPL estimate, which is about 87.5 percent. Of the total households, about 50 percent were categorised as extreme and highly poor, and another 28 percent as average poor. The remaining one-fifth of the households was in the category of low poverty owing to external shocks like very severe droughts. Incidentally, the eight non-poor households were in Kamel only.

The above depiction of poverty is based mainly on community perception. This is examined below in the light of the quantitative data collected from the sample households. According to the estimates, 77 percent of the households in the villages where the study was conducted were treated as BPL. This is fairly low compared with only 2 percent of the households ranked as non-poor by the wealth ranking exercise.

Table 5.1: Distribution of households by community ranking BPL status

Village/rank	Typology of poverty (no. of HHs)					All HHs
	Extreme poor BPL	Highly poor BPL	Average poor BPL	Low poor BPL	Non-poor BPL	
Balel	33	24	56	28	-	141
Sindhiguda	16	15	12	9	-	52
Subtotal (I)	49 (25.4)	39 (20.2)	68 (35.2)	37 (19.1)	- (0)	193 (100)
Hanumal	42	34	25	25	-	126
Kamel	14	9	12	14	8	57
Subtotal (II)	56 (30.6)	33 (18.0)	37 (20.2)	39 (21.3)	8 (4.4)	183 (100)
All %	105 (27.9)* (79.0)**	82 (21.8) (71.9)	105 (27.9) (81.9)	76 (20.2) (80.2)	8 (2.1) (12.5)	376 (100)(77.0)

*Notes: *Percentage of all households; *BPL as percentage of HHs in each category of community ranking.*

5.2 Consumption expenditure and poverty estimates

An attempt has been made to estimate incidence of poverty by using the official poverty line. In 1999-2000, the poverty line in terms of per capita monthly consumption expenditure (MPCE) for rural Orissa was Rs. 300 (Deaton, 2003). This, according to some scholars, is on the high side, since the actual price of staple food grain paid by rural households in Orissa is likely to be lower than the price considered in defining the poverty line (Panda, 2004). Hence, instead of inflating the poverty line of 1999-2000 to apply it to the consumption expenditure data of 2004, MPCE Rs .300 has been used to identify the poor.[18]

Table 5.2(a) presents estimates of poverty among the sample households. About 31 percent of the households belong to the category of severe poor, whereas about 43 percent belong the category of medium poor. Together, they constitute the hardcore poor in the region whose consumption expenditure level is >25 percent below the poverty line. This leaves about 26 percent of the households, out of which 15 percent are moderate poor and only 11 percent are non-poor. This confirms the district-level estimate for Koraput (Panda, 2004), suggesting 92.2 percent of the people in Koraput were living below the poverty line in 1999-2000. An important observation emerging from Table 5.2(a) is that the proportion of severe poor is significantly higher among more remote villages (36.3 percent) as compared with less

[18] Initially, an attempt was made to classify the households into four categories >25 percent and <25 percent below the poverty line, and <25 percent and >25 percent above the poverty line – based on MPCE. But this scheme of categorisation did not work, since three-fourths of the households were getting clustered in the first group, i.e. >25 percent below poverty line. Hence, the households were classified into three categories by splitting the first groups into two. On the other hand, there were only a few households above the poverty line.

Hence, the two groups of non-poor households have been merged. Thus, the four-way categorisation of poor refers to those having MPCE >50 percent, 25-50 percent and <25 percent below the poverty line, and the group above the poverty line. We have termed these categories as severe poor; medium poor, moderate poor and non-poor, respectively.

remote villages (25.3 percent). Conversely, the proportion of non-poor is higher in the less remote compared with the more remote villages. In this sense, it confirms the expected positive association between physical remoteness and incidence as well as severity of poverty. A similar pattern is observed in terms of average expenditure among households in the two categories of villages; however, the difference is less sharp as compared with that in the case of proportion of poor households across the two sets of villages (see Table 5.2(b)).

Table 5.2(a): Incidence of poverty among sample households

Village	MPCE group (Rs.)				All
	Severe poor	Medium poor	Moderate poor	Non-poor	
Balel					
%	22.5	55.0	15.0	7.5	100.0
(n)	(9)	(22)	(6)	(3)	(40)
Sindhiguda					
%	50.0	27.5	15.0	7.5	100.0
(n)	(20)	(11)	(6)	(3)	(40)
Subtotal(I)					
%	36.2	41.3	15.0	7.5	100.0
(n)	(39)	(33)	(12)	(6)	(80)
Hanumal					
%	41.0	43.6	10.3	5.1	100.0
(n)	(16)	(17)	(4)	(2)	(39)
Kamel					
%	10.0	47.5	20.0	22.5	100.0
(n)	(4)	(19)	(8)	(9)	(40)
Subtotal (II)					
%	25.3	45.6	15.2	13.9	100.0
(n)	(20)	(36)	(12)	(11)	(79)
All					
%	30.8	43.4	15.1	10.7	100.0
(n)	(49)	(69)	(24)	(17)	(159)

Note: Figures in parentheses indicate number of households.

Table 5.2(b): Average total expenditure by MPCE group

Village	MPCE group (Rs.)				All
	Severe poor	Medium poor	Moderate poor	Non-poor	
Balel	123.66	181.00	252.96	331.85	190.21
Sindhiguda	112.26	176.95	264.37	423.11	176.18
Subtotal	115.79	179.65	258.67	377.48	183.19
%	(36.2)	(41.3)	(15.0)	(7.5)	(100.0)
Hanumal	122.92	174.36	254.55	402.64	173.19
Kamel	131.00	180.75	264.49	394.89	240.70
Subtotal	124.54	177.73	261.18	396.30	207.37
%	(25.3)	(45.6)	(15.2)	(13.9)	(100.0)
All	119.36	178.65	259.92	389.66	195.21
%	(30.8)	(43.4)	(15.1)	(10.7)	(100.0)

To a large extent, the relatively smaller difference in average level of consumption expenditure across the two sets of villages owes to the pattern of expenditure on food per household. It is observed that the average expenditure on food is higher among households

in more remote villages in the case of medium and moderate poor categories of MPCE. For the severe poor and non-poor, the pattern is reversed, i.e. households in less remote villages spend more on food as compared with those in the more remote villages (Table 5.3). One of the possible reasons for this apparent distortion might be that the households in the medium and moderate poor categories of MPCE in less remote villages have better access to land and, hence, better availability of food from self-cultivation.

Table 5.3: Average total food expenditure by MPCE group

Village	MPCE group (Rs.)				All
	Severe poor	Medium poor	Moderate poor	Non-poor	
Balel Sindhiguda	86.07 82.66	120.43 128.30	155.62 190.64	219.83 133.37	125.43 115.21
Subtotal %	83.72 (36.2)	123.05 (41.3)	173.13 (15.0)	176.60 (7.5)	120.32 (100.0)
Hanumal Kamel	87.96 100.24	112.44 128.11	133.92 178.72	277.85 204.36	113.08 152.60
Subtotal %	90.42 (25.3)	120.71 (45.6)	163.79 (15.2)	217.72 (13.9)	133.09 (100.0)
All %	86.45 (30.8)	121.83 (43.4)	168.46 (15.1)	203.21 (10.7)	126.67 (100.0)

Notwithstanding the difference in food expenditure across the two sets of villages, it is pertinent to note that the average cereal consumption (per capita per day) is abysmally low among households across all the MPCE categories. The estimates in Table 5.4 indicate that per capita cereal consumption is only about 302 grams per day; this ranges from about 227 grams among the severe poor to 403 grams among the non-poor. The estimates are more or less in line with the national norm of 400 grams of cereal consumption required to lead a normal life. Only 17 out of the total 159 households (10.7 percent) belonging to the category of non-poor have attained the norm set by the Indian Council for Medical Research (ICMR). Among the rest of the categories, the gap in cereal consumption is significant. The gap reduces as one moves towards a higher MPCE group. This phenomenon is in line with the earlier observation about ‘reducing food consumption’ as a coping strategy among a large majority of the households.

Table 5.4: Average cereal consumption per capita by MPCE group (grams/capita/day)

Village	MCPE group				All
	Severe poor	Medium poor	Moderate poor	Non-poor	
Balel Sindhiguda	211.41 201.73	315.44 308.85	374.05 388.61	472.22 303.78	312.58 266.87
Subtotal %	204.73 (36.2)	313.24 (41.3)	381.33 (15.0)	388.00 (7.5)	289.73 (100.0)
Hanumal Kamel	247.73 305.08	297.88 318.56	312.92 359.29	500.17 392.00	289.22 341.88
Subtotal %	259.20 (25.3)	308.80 (45.6)	343.83 (15.2)	411.67 (13.9)	315.89 (100.0)
All %	226.97 (30.8)	310.92 (43.4)	362.58 (15.1)	403.31 (10.7)	302.72 (100.0)

The estimates in Table 5.5 indicate that incidence of poverty is highest among the SCs (93.4 percent), followed by STs (90.3 percent) and then other communities (75 percent). A similar pattern is observed in the case of the severe poor. As much as 45.7 percent of the SC households belong to this category as compared with 26.9 percent in the case of STs and 15 percent in the case of others. The medium poor category comprises a significantly high proportion of households (47.3 percent) and others (50.0 percent). The estimates thus reinstate the observation made earlier that it is not merely social marginalisation, rather the dependence on forest resources, that is at the root cause of chronic poverty, as reflected by the fact that three-fourths of the households among the non-SC/ST are poor.

Table 5.6 provides a comparative picture of the two typologies of poverty. It may be recalled that the incidence of non-poor by community ranking is 2 percent as against 11 percent in the case of expenditure-based categorisation of households. However, looking at the cross-classification, one finds that a substantially large proportion of those considered as extreme poor are categorised as moderate or non-poor by the expenditure-based classification. The same is true for the usually poor. About 60 percent of the sample households categorised as severe to medium poor have been perceived by the community as extreme, high or average poor. These households constitute the hardcore poor in the study region. What makes them more vulnerable than other deprived groups? This is examined in the light of some of the important features of the poor in different categories.

Table 5.5: MPCE group by caste by village

Village	Caste	MPCE group (Rs.)				All
		<150	150-225	226-300	>300	
Balel	SC	6	9	1	2	18
	ST	3	12	5	1	21
	Other	-	1	-	-	1
	All	9	22	6	3	40
Sindhiguda	SC	3	-	-	-	3
	ST	17	11	6	3	37
	Other	-	-	-	-	-
	All	20	11	6	3	40
Hanumal	SC	10	5	1	-	16
	ST	5	12	3	2	22
	Other	1	-	-	-	1
	All	16	17	4	2	39
Kamel	SC	2	1	5	1	9
	ST	-	9	1	3	13
	Other	2	9	2	5	18
	All	4	19	8	9	40
All	SC	21 (45.7)	15 (32.6)	7 (15.2)	3 (6.5)	46 (100.0)
	ST	25 (26.9)	44 (47.3)	15 (16.1)	9 (9.7)	93 (100.0)
	Other	3 (15.0)	10 (50.0)	2 (10.0)	5 (25.0)	20 (100.0)
	All	49 (30.8)	69 (43.4)	24 (15.1)	17 (10.7)	159 (100.0)

Table 5.6: Distribution of sample households by MPCE by community ranking

Community ranking	MPCE group (Rs.)				All
	<150	150-225	226-300	>300	
Extreme poor	34.7	27.5	25.0	11.7	27.6 (27.9)*
High poor	26.5	26.1	8.3	23.5	23.3 (21.8)
Average poor	30.6	23.2	29.1	35.2	27.6 (27.9)
Low Poor poor	8.2	18.8	33.3	23.5	18.2 (20.2)
Non-poor	-	4.3	4.2	5.8	3.1 (2.1)
All %	100 36.2	100 41.3	100 15.0	100 7.5	100 100.0

*Note: * Percentages by community ranking among all the households in sample villages*

5.3 Correlates of poverty: some evidence

5.3.1 Land

Generally, access to cultivable land is considered the most important factor influencing poverty in a predominantly agrarian economy like India. How far it impinges on the poverty outcome in a forest-based economy can be seen in the light of the information presented in Table 5.7. It is observed that 87 percent of households have access to operational land (as against 66 percent of households having ownership of land, as seen in Table 4.12). Of the 21 households without operational land, 15 belong to the more remote villages (13 in Balel and 2 in Sindhiguda). Of the households without operational land, 52 percent belong to the lowest MPCE group. This is followed by those with very small operational land (i.e. up to 1.4 acres), of which 43 percent of households were categorised as severe poor. On the other hand, a relatively larger proportion of households with larger operational holdings are found to be in the category of moderate and non-poor. The pattern is not very clear, perhaps owing to the income earned from forest resources. The results thus indicate a need to understand the interface between poverty and forest dependence in a dynamic context.

Table 5.7: Households operating land by MPCE group

Village	Land holding (acre)	MPCE group (Rs.)				All
		<150	151-225	226-300	300+	
All villages	No operational land	52.4	28.6	4.8	17.6	100.0 (21)
	0.01-1.40	43.5	30.4	13.0	13.0	100.0 (23)
	1.41-2.50	28.3	49.1	17.0	5.7	100.0 (53)
	2.50+	21.0	48.4	17.7	12.9	100.0 (62)
	All	30.8	43.4	15.1	10.7	100.0 (159)

Note: Figures in parentheses indicate number of households.

5.3.2 *Dependence on forest*

It is generally hypothesised that the poor have greater dependence on forest resources. What is missing in this generally held perception is that the direction of causation is the other way round. Initially, a higher level of poverty may induce greater dependence on forest resources, but the outcome may often be reduced level of poverty, at least in the short run. It is therefore difficult to gauge the multi-patterned interface between poverty and forest dependence (Nadkarni, 2000; Shah, 2005) in the light of a dataset pertaining to only one point in time. The picture that emerges from the household survey in the sample villages thus suggests a mixed pattern, as noted above (see Table 5.8). Forest dependence, in terms of proportion of households' income obtained from collection of forest produce, tends to decline along with increased MPCE. Similarly, the average level of dependence is marginally higher in more remote as compared with less remote villages. On average, 15 percent of households' income is constituted by forest produce; this ranges from nearly 18 percent among the severe poor to 12 percent among the non-poor. There are, however, significant exceptions to this pattern. For instance, the non-poor in more remote villages have relatively higher forest dependence among all the three categories of poor. This might represent a case of reverse causation, where a higher level of forest extraction may have led to overall enhancement of households' income.

Table 5.8: Percentage distribution of households by share of forest income in total income across MPCE categories

Village	MPCE group (Rs.)				All
	<150	151-225	226-300	300+	
Balel + Sindhiguda	17.69	16.72	9.40	18.74	15.95
Hanumal + Kamel	17.80	12.25	21.38	9.89	14.27
All	17.73	14.26	15.30	11.78	15.12

5.3.3 *Literacy*

Table 5.9(a) depicts the link between literacy and poverty at household level. It should be noted at the outset that the authors have not postulated poverty-reducing impact of literacy, especially at the lower level of educational attainment observed among the sample households. At best, literacy could be a result of better economic status of the households. The interesting issue at this stage is to examine how income (expenditure) and human capability aspects are related. Table 5.9(a) suggests that there is no systematic link between households' literacy level and level of poverty. The proportion of households with at least one literate person varies marginally, from 42.8 percent among the severe poor to 52.2 percent among the medium poor. The proportion is 41.2 percent among non-poor. The picture presented in Table 5.9(a) reflects more the supply-side dynamics than the forces operating on the demand side. This is further confirmed by the fact that Sindhiguda has a very low

literacy level because of the non-existence of schools in the village. To that extent, remoteness plays a role in determining literacy in these villages.

Table 5.9(a): Proportion of households with literate member/s by MPCE group by village

Village	MPCE group (Rs.)				All
	<150	150-225	225-300	>300	
Balel	44.4	36.4	66.7	33.0	42.5
Sindhiguda	5.0	18.2	16.7	0.0	10.0
Subtotal	17.2	30.3	41.7	16.7	26.2
Hanumal	75.0	58.8	25.0	0.0	59.0
Kamel	100.0	84.2	50.0	66.7	75.0
Subtotal	80.0	72.2	41.7	54.5	67.1
All	42.9	52.2	41.7	41.2	46.5

The authors tried to examine whether households in the relatively higher MPCE categories have a larger number of literate persons as compared with the severe and medium poor households. The distribution of households in Table 5.9(b) does not confirm this, except that the largest proportion of households with more than one literate person belongs to the non-poor category. The fact still remains that proportion of households without any literate person is higher among the higher MPCE categories, as already noted.

Table 5.9(b): Percentage distribution of households by number of literate persons across MPCE categories

% of HHs by no. of literate persons	MPCE group				All
	<150	150-225	225-300	>300	
Nil	57.1	47.8	58.3	58.8	53.5
1	16.3	23.2	16.7	5.9	18.2
>1	26.5	28.9	25.0	35.3	28.3
All	100	100	100	100	100

5.3.4 Family planning

Table 5.10 presents information on households having adopted or wishing to adopt family planning measures. Households in the very poor category have lower incidence of family planning practices as compared with the medium poor and moderate poor. Strangely, the proportion of households adopting these measures is lowest among the non-poor. While it is difficult to explain low incidence of adoption of family planning measures among the non-poor, the overall pattern nevertheless suggests a positive association between poverty and adoption of the family planning measure.

Table 5.10: Adoption of family planning measures by MPCE group

Village	MPCE group (Rs.)				All
	<150	151-225	226-300	300+	
Balel	5	11	5	1	22
Sindhiguda	5	1	2	-	8
Subtotal	10	12	7	1	30
Hanumal	7	10	2	1	20
Kamel	2	11	4	3	20
Subtotal	9	21	6	4	40
All	19 (38.8)	33 (47.8)	13 (54.2)	5 (29.4)	70 (44.0)

Note: Figures in parentheses indicate percentage of the total number of households in each MPCE category.

5.3.5 *Households' coping mechanisms*

Table 5.11 suggests that there is generally a negative association between the proportion of households reporting reduced food consumption as a coping mechanism and MPCE category. The proportion is also found to be higher in more remote as compared with less remote villages. The pattern is not so consistent if one looks at the specific cells in village MPCE categories. Nevertheless, the overall pattern does indicate situations of hunger, especially among the severe poor, where 71 percent of the households reported a reduction in food consumption.

Table 5.11: Households reducing food grain consumption to cope with external shocks

Village	MPCE group (% HHs)				All
	>150	151-225	226-300	300+	
Balel + Sindhiguda	72.4	69.7	58.3	66.7	68.7
Hanumal + Kamel	70.0	52.7	66.7	54.5	58.2
All	71.4	60.9	62.5	58.8	63.5

The above information needs to be juxtaposed against the fact that a number of households have reported improvements in quality of food, clothing and housing, the three basic requirements of livelihood. While improvement is a positive indicator of how things have moved in the past 10 years, the situation is still found to be grave when one looks at the conditions of abject poverty and severe food insecurity faced by more than three-fourths of households in the area where the study was conducted. Given the constraints in increasing area of cultivated land and enhancing crop productivity, owing to limited irrigation potential in a forest-based region, the need is to evolve an effective mechanism of resource transfer through effective food distribution schemes. This, of course, is not a new revelation. In fact, the government of Orissa and several international donor agencies have already initiated a number of programmes to ensure food security for the people of this region. However, in this approach, resource transfer is being viewed as a welfare programme or as charity to the poor, rather than as rightful compensation that the rest of the society (within and outside the state) owes to the forest dwellers in the region. The latter perspective might help in linking up

the forest resource and the people dependent on it with developmental planning in the state. Essentially, the cost of conservation and development of forest resources (and thereby the livelihoods of people in the region) needs to be internalised in every single developmental scheme that takes place in the state. This would imply changing the developmental discourse from a charity orientation to a rights-based approach. The real issue is who can bring the change – polity, bureaucracy, tribal leadership, CSOs or donor agencies?

6 State response, people's participation and major challenges

Faced with the major challenge of ameliorating poverty, the state government of Orissa has launched a multi-pronged approach consisting of food distribution, employment generation, information development, infrastructure development, capacity building, etc. Of late, the state, under the auspices of the Planning Commission, has prepared the first ever LTAP for KBK region, which accounts for nearly 31.9 percent of the rural poor in Orissa as against 19.7 percent of the total poor in the state. Ideally, the LTAP should be preceded by a long-term policy perspective within a consistency framework of overall developmental policy in the state, and specifically for the forest-based economies within that. A number of studies have been undertaken in the recent past to evolve a holistic perspective for development and poverty reduction in the state. The policy prescriptions, however, are at times influenced by macro perspectives, losing sight of the specific agro-ecological and social environment that characterises the forest-based regions. While the LTAP does focus on the most poverty-stricken region, the underlying framework still remains the same, i.e. echoing the usual approach of sectoral plans devoid of an in-depth situation analysis. Thus, although the document qualifies well in terms of the semantics of an area development plan, it still lacks an identification of the right questions to ask and the solutions to seek by addressing the trickiest issue of linking environment and development of people's livelihoods in this forest-based region.

Researchers, CSOs and policymakers (often in their individual capacity) tend to come up with more comprehensive approaches for betterment of the area. Such views get lost amid various activities and action plans, which often take priority over a sustained dialogue and search for long-term perspectives. To a large extent, this happens because of a misplaced sense of urgency, which is caused by frequent crisis situations, like floods, droughts and, of late, poverty. This, of course, is not to deny the importance of immediate action; rather, the point is to attach equal priority to evolving a region-specific developmental perspective, and to feed that into state-/national-level plans.

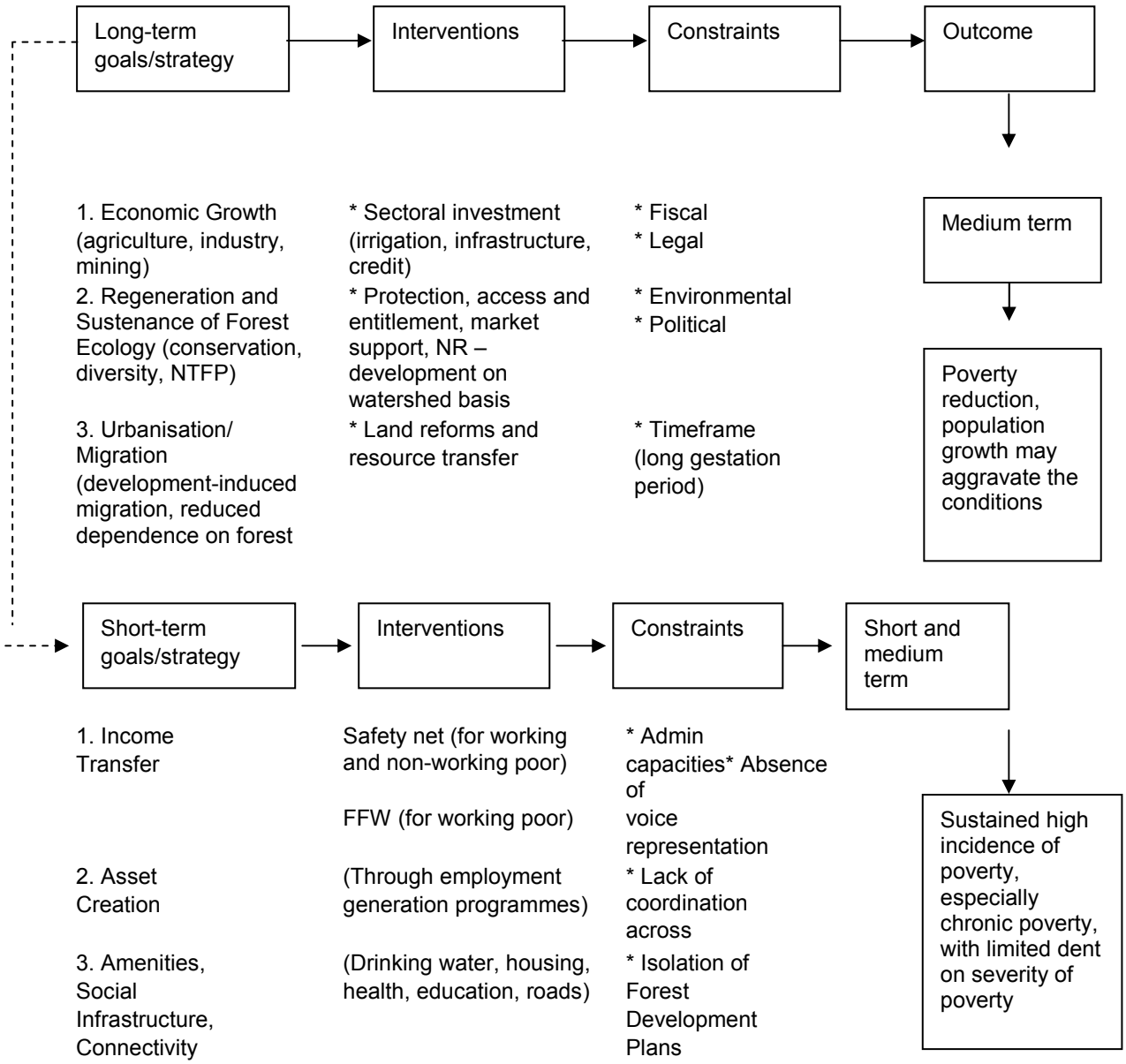
This scenario, juxtaposed against a long history of exploitation, discontinuity and apathy on the part of various rulers in the past, may tend to reinforce the adverse impacts of non-connectivity or remoteness that have been faced by the people over the centuries. It is

unfortunate that the current policy discourse on development and poverty reduction in the state has not made major strides towards establishing an organic link between forest economies and the rest of the economy. As a result, it is difficult to make any significant headway towards finding a long-term solution to the enduring poverty in the region. Again, this is not to undermine the positive impact of the various schemes that the state government has initiated in the most remote district/area. In the absence of these schemes, the poverty scenario in the region might have been worse; this is already reflected by the positive changes that a large proportion of the households have reported. It may also be noted that a large proportion of the poor population is concentrated immediately below the poverty line (Deaton and Dreze, 2002; Panda, 2004). Therefore, a small addition in income/expenditure may lift a substantially large proportion of the currently poor above the poverty line. Thus, income transfer, through schemes like the PDS, assumes special relevance, as reflected by a recent spur in the policy for promoting food for work programmes.

6.1 Policies and programmes for poverty reduction: a schematic view

As noted above, a plethora of schemes and programmes are being implemented to support a wide spectrum of activities/aspects influencing the wellbeing of the poor. While most of these schemes are relief oriented and sectoral, if not short term in nature, they constitute a substantial part of the state's approach to poverty reduction in the region (see Chart 1). The important observation that arises from Chart 1 is the lack of integration between the short-term and long-term strategies. It is likely that the transitional phase will be overstretched, resulting in a worsening of poverty conditions, with little or no improvement in forest ecology.

Chart 1: Policies for poverty reduction in Orissa



6.1.1 Public distribution of food: A brief review

While the PDS in Orissa has a better record in terms of coverage of population per outlet, the effectiveness in terms of physical access to the shop, availability of supply and ability to purchase food grains by the chronic poor is far from satisfactory. According to a study by Radhakrishna *et al*. (1997), the extent of income transfer in rural Orissa was third lowest, ahead of only Bihar and Uttar Pradesh. More recently, the state has made special efforts to improve the efficacy of the PDS. According to recent estimates, about 51 percent of rural households had accessed the PDS for purchase of rice during 1999-2000; the all-India average was only 32 percent (Dev, 2003). However, the situation is quite different in remote

areas of Southern Orissa, as has been suggested by a number of micro-level studies. For instance, a study by NCAER (National Council of Applied Economic Research) in the early 1990s indicated that only 5 percent of the households were using the PDS (de Haan and Dubey, 2003). This is more or less the same as what has been observed in the villages where the study was conducted (see Table 6.1). The important point, however, is that, even if the household accesses the PDS, there are other limitations with respect to adequacy, quality and periodicity. Some of the important observations emerging from the field are:

(1) 16 kg of BPL rice is supplied through the PDS to a four-member family, which only lasts up to 12 days in the case of marginal and small farmers, and eight days in the case of landless and daily wage earners.

(2) The price of BPL rice available through the PDS (Rs. 6.30 per kg) is 20.63 percent more than a better quality of rice available in the market.

(3) The mobile van visits the villages only three times a month. Only those who have the required money at those points in time can purchase rations. The remaining people do not get their ration for that particular month.

Of course, it should be recognised that the PDS alone may not fill up the entire gap in food consumption among the poor. It should be seen in conjunction with a number of other schemes, as listed below.

6.1.2 *Other schemes for food/nutrition support*

Table 6.1: Other food and nutrition programmes

A	Supplementary feeding programmes	
1 2	Integrated Child Development Programme (ICDS) Mid-Day Meal Programme	For children For school children
B	Consumer food price subsidy	
3 4 5	Targeted PDS Antyodaya Anna Yojna Annapurna Scheme	For BPL households For ultra poor For aged (pension of Rs. 100 per month
C	Food for work	
6 7	Sampoorna Gram Rojgar Yojna (SGRY) National Food for Work Programme (NFFP)	Employment guarantee 100 days work at the rate of Rs. 52.50 per day
D 8	Emergency Feeding for Aged Take Home Ration (THR)	For those above 65 years

Notwithstanding this wide net of food safety programmes, the question still remains as to whether increasing targeting would help improve effective coverage. Is the price subsidy adequate for the non-working poor, like the aged, widowed and disabled? Instead of partnership with private traders, should there be a specific role carved out for non-governmental organisations (NGOs) and other CSOs in the region?

6.1.3 *National Food for Work Programme (NFFP)*

The NFFP covers 18 out of the 30 districts of Orissa. These districts include most parts of Southern Orissa. The important features of the programme are:

(1) The poor families are assured of 100 days of gainful employment with the provision of food grains and cash equivalent to the minimum wage rate prevailing in the state.

(1) Each wage earner will be given 5kg of food grains at the BPL rate of Rs. 4.65 per day and the balance in the form of cash. In case more food grains are available, the distributing agency will give more food grains and less cash to equate with the minimum wage rate and vice versa.

(1) The new programme intends to create durable community-based assets that will contribute towards sustainable living for the rural poor, through wage employment involving unskilled manual workers.

(1) The focus of the programme is on *gram panchayats* (village assembly*)* covering the villages surrounding it.

(1) The programme will cover the following four principal activities: water conservation; drought proofing (including afforestation/free plantation) and land development; flood control and protection (including drainage in waterlogged areas); and rural connectivity in terms of all weather roads

(1) The programme envisages that the activities meant for the rural poor are carried out by the people themselves without involving labour-displacing machines.

(1) Pallisabha is the nodal agency at the village level where projects are selected by the villagers. The selected projects, after being finalised in the presence of ward members and panchayat executive officers, village level workers and welfare extension officers, are sent for suitable modifications and alternations to higher levels of panchayat raj institutions (institutions of local governance), gram panchayat samiti (committee of village assembly) and zilla parishad (district assembly).

(1) The collector is the nodal officer at the district level. He shoulders overall responsibility for planning, implementation, coordination, monitoring and supervision of the projects under his jurisdiction.

It is further intended under the new NFFP that works that can be undertaken within the resources available under any other ongoing central schemes will be taken up under the respective schemes without putting undue pressure on the funds available for NFFP. The NFFP is mainly for the working-poor (i.e. the poor in the workforce) unable to get sufficient work throughout the year at reasonable wage rates. It also seeks to create productive assets through the four focus areas (see point 5 above), most of which are already covered by some of the comprehensive programmes, such as Integrated Watershed Development, supported by the Ministry of Rural Development. While the programme intends to sort out overlap of activities among other schemes, the focus remains mainly on non-forest-based activities, even in the predominantly forest region of Southern Orissa. However, the programme fails to

form systematic links with other schemes, e.g. irrigation, as part of the mainstream strategy for sectoral growth. The most important lacunae are administrative mechanisms and institutional capabilities to prepare action plans and put them into actual implementation.
The initial response from the agencies facilitating the process suggest that the poor, even in remote areas, do not have a preference for undertaking manual work, especially in the vicinity of the villages. This phenomenon is fairly common during relief work programmes in Gujarat, Rajasthan and Maharashtra, where poverty conditions are likely to be less severe. Nevertheless, low preference for manual work among the severely poor in Orissa, besides cultural inhabitations, may also reflect physical incapacity to stand eight hours of hard work, as reported by the document on LTAP for the KBK region in the state.

Finally, the issue of adequacy of funding needs attention. According to official information, the total funds (combined for SGRY and NFFP) allocated for a district (i.e. Nabarangpur) in Southern Orissa are Rs. 575 crores for the next five years. Assuming that 50 percent of the total 2.14 lakh rural households are chronically poor, this would work out to 1.7 lakh households eligible for work under the programme. Given the project cost of Rs. 5250 for generating employment for 100 days per household per year, the funds required for five years would be Rs. 26,250. At this rate, the programme could cover about 2.2 lakh rural households. This obviously is fairly encouraging. The pertinent question, raised by a senior official at the helm of the scheme in Orissa is: where is the wherewithal to prepare such plans and implement them in due time? His remarks were: 1) if the allocation of finanacial resources was the problem, poverty would have already disappeared in the state; and 2) these are short-term and *ad hoc* measures at the cost of long-term investment in promoting growth in the state. If these are the concerns raised by the very people in the government who always have to deal with scarcity of funds to finance productive investment in the state, the programme, though well intended, certainly needs rethinking in the light of the disjointedness between the long-term and short-term strategies for poverty reduction and policies for sustained development. It is high time these issues were discussed among the various stakeholders, looking at the macro- as well as micro-level realities of both poverty conditions and policy implementation in the state.

6.2 People's access to state support and interface with local governance

It is interesting to note that the list of the schemes that are being (or expected to be) implemented in the region is enormously large. It consists of almost everything that one could think of in terms of addressing severity and multidimensionality of poverty, with special focus on vulnerable groups such as the old, disabled and landless. For instance, the developmental schemes in the region include irrigation, crop subsidy, livestock improvement, drought relief works, health and family planning services, widowhood pensions, emergency feeding, food for work, special employment programmes and several others. Nevertheless,

the extent to which these schemes have reached the people is abysmal.[19] Therefore, the questions that arise in the context of the state's response to dealing with poverty reduction in the region are as follows:

- Is there a need for so many schemes at a time? Is there any significant overlap between the schemes and the beneficiaries?
- Are there sufficient resources to meet the needs of the people entitled to the benefits even within a timeframe of five years?
- Since most of the schemes are by and large short term in nature, how do they connect with mainstream processes of growth and development?
- Are the targets clearly defined and benefits identified for different points in time during the plan period? Is the information about the targets and beneficiaries made available to local institutions, including CSOs working in the area?
- What are the indicators of achievements and success? And how transparent are the claims of success?
- What are the major constraints to achieving the expected results, especially in remote areas such as in Southern Orissa?
- What are the major initiatives undertaken by the NGOs/CSOs working in the area? Is there any systematic link between them and the state machinery?

While these questions require additional information, which needs to be collected in the next stage of the study, it might be useful to know current status with respect to the link between people and the institutions of local governance, i.e. village panchayat and the state machinery at the block/district level. This study addressed the above by examining people's participation in panchayat elections and whether they contacted officials at block/district levels regarding problems they faced. The information has been presented in Table 6.2.

19 Of course, it is likely that coverage is underreported in the sense that many more households may have been reached out to by schemes like the PDS, but may not have reported on this because of the gap between physical infrastructure created and actual benefits received, or between the expected and actual benefits received. In other words, what might have been reported here is not enrolment in a scheme but realisation of expected benefits, which appears to be fairly small.

Table 6.2: Participation in local governance and approaching authorities for solutions

	No. of sample households	
Village	**Voted during the election for gram panchayat**	**Approached local authorities**
Balel	39 (97.5)	28 (70.0)
Sindhiguda	13 (32.5)	4 (10.0)
Hanumal	26 (66.7)	17 (43.6)
Kamel	38 (95.0)	36 (90.0)
All	155 (97.5)	114 (71.7)

Note: Figures in parentheses indicate percentage of 159 sample households.

It is encouraging to note that as much as 97.5 percent of households had at least one person who had exercised their right to vote in the last local election for PRI. Similarly, a large proportion of households (72 percent) reported having approached officials of the state machinery at block/district levels. Subsequently, respondents were asked about their expectations from different agencies (see Table 6.3). Housing, electricity, education, drinking water and health facilities emerged as relatively more important demands as compared with agriculture-related support, employment or the PDS. The authors also obtained people's perceptions about what would be the improvement in their livelihood base if they were to move to a less remote location in the same region. The responses are presented in Table 6.4. It is interesting to note that a large number of respondents perceived better transportation, electricity, medical facilities and market access as the major benefits in moving to a less remote location; only a few mentioned additional employment/business opportunities. Similarly, improved facilities for education emerged as an important perceived benefit. These observations substantiate the critical importance of physical connectivity in terms of road and transportation facilities, as perceived by the people.[20]

[20] This poses an important policy dilemma: some NGOs plead against improving road connectivity since this brings increased commercialisation and exploitation of resources as well as people; mainstream development policies may like to support development of road infrastructure in the region. The forest department may have a mixed view on this. This issue needs further probing.

Table 6.3: Expectations from the state

	No. of sample households				
	Balel	**Sindhiguda**	**Hanumal**	**Kamel**	**All**
Expectation from PRI					
Indira Awas Yojana (subsidised housing for the poor) Portable drinking water Cooperative loan provision Pension Irrigation facility	18 8 14 1 -	26 25 1 - 6	15 3 7 - -	29 4 10 1 2	88(55.3) 40(25.1) 32(20.1) 2(1.2) 8(5.0)
All	41	58	25	46	170
Expectation from government					
Electricity facility Telephone facility Seed and water facility for agriculture Timely medical facility Crop loan	17 - - 15 11	8 - 7 7 4	9 - 1 8 2	20 1 7 10 11	54(33.9) 1(0.6) 15(9.4) 40(25.1) 28(17.6)
All	43	26	20	49	138
Expectation from other agencies					
Education Credit support Timely supply of medicine	12 4 6	22 - 5	- - -	11 1 1	45(28.3) 5(3.1) 12(7.5)
All	22	27	-	13	62

Note: Figures in parentheses indicate percentage of 159 sample households.

Table 6.4: Perceptions about implications of moving to less remote areas within the region

Prospect aspects	**Balel**	**Sindhiguda**	**Hanumal**	**Kamel**	**Total**
Village situated at roadside					
Good communication Facilities	36	40	37	39	152(95.6)
Business opportunities	8	2	3	2	15(9.4)
Electricity facility	24	2	6	18	50(31.4)
Education facilities	3	1	10	16	30(18.9)
Medical facilities	15	15	7	15	52(32.7)
Easy access to market	14	7	12	10	43(27.0)
All	100	67	75	100	342
Small town nearby					
Educational facilities	24	17	12	18	71(44.6)
Electricity facilities	26	4	16	7	53(33.3)
Availability of work opportunity	18	17	19	12	66(41.5)
Medical facilities	9	1	13	15	38(23.9)
Consumer goods available any time	-	2	-	-	2(1.2)
	77	41	60	52	230

Note: Figures in parentheses indicate percentage of 159 sample households; based on multiple responses of sample households.

While there may be constraints to enhancing connectivity to the region owing to conservation objectives, it is nevertheless crucial to fill in the fairly large 'governance gap'. The recent experience of implementing employment generation and food distribution schemes in the region has highlighted the problem of the capacity of the state machinery to absorb large funding, a part of which could be attributed to physical remoteness. At the same time, NGOs do not seem to have grassroots base in this remote region. The need, therefore, is to coordinate and consolidate the efforts made by the state as well as those made by various CSOs. The long-term solution, however, may lie in strengthening community-based organisations (CBOs), which may focus more on institution building and promoting rights-based approaches, rather than operating merely as service delivery mechanisms. It is in this context that examining the profile as well as the approaches of the various agencies, and the initiatives thereof, assumes special importance.[21]

7 Summary and way forward

The foregoing analysis of chronic poverty in a forest-based region in Southern Orissa reinstates the fact that chronic poverty in terms of severity and long duration is an overarching reality for almost nine out of ten households in the region. Similarly, it highlights severe deprivation in terms of food consumption, with a significantly large proportion of households consuming about half of the prescribed norm of cereal intake. The analysis also indicates high incidence of child mortality as well as illiteracy among the sample households. Size of land holding shows the expected negative association with severity of poverty. However, it may be noted that, although the major correlates of poverty confirm the expected relationships, the pattern is not very clear.

The analysis also brings out the following new insights:

(1) Unlike the common perception, people in the forest area have reasonably good access to forest resources such as land and NTFP. The contemporary policy discourse also emphasises the need to further enhance people's access to forest resources. Nevertheless, the real issue is that of matching needs with resources on a sustainable basis. This may call for linking up forest development with people's livelihoods, whereby the latter are treated as a matter of right, rather than as concessions.

(2) An overwhelmingly large proportion of the people live in severe poverty. This is despite the fact that there is a subset of people who have experienced improvements in the condition of food, clothing and housing. Thus, improvements may at best have helped reduce the extent of severity, but not the duration of poverty.

[21] The issue of governance has gained special importance while formulating the XI Five Year Plan for the country. For details see, Planning Commission, 2008.

(3) Although 66 percent of households own land, irrigation is almost non-existent. This may owe mainly to limited potential, since the region constitutes part of the upper catchments of river basins in the region. This is a major ecological constraint, which has to be kept in mind while planning for development, together with compensatory resources transfer, in the region.

(4) Migration as a livelihood option is almost absent. This may increase dependence on the forest during situations of shocks.

(5) Physical remoteness at regional/district level emerges as the most important factor explaining the level of poverty in Koraput, which is significantly higher in comparison with forest-based districts in Northern Orissa. It can be seen that the impact gets diluted when a comparison is made between a more remote village and a less remote village within the same district. Nevertheless, a negative impact of remoteness on literacy, accessing health (family planning) services and expenditure poverty can be noticed. The pattern of difference between the two sets of villages, however, is found to be somewhat mixed.

(6) Households with higher dependence on forest (as a proportion of their total income), are found to be located at the two extreme ends of MPCE groups, i.e. severe poor and non-poor.

(7) There is higher incidence of poverty among the SCs as compared with the STs. The incidence is as high as 75 percent among the non-SC/ST households. This may suggest that, more than the social identity, regional characteristics have a great impact on poverty.

(8) Reducing cereal consumption is the most important coping strategy in conditions of shock. This sets a downward spiral of low nutrition, leading to mobility and physical capability, which further leads to low intake of food. Physical remoteness and frequent droughts make this a perpetual reality; exiting this is almost impossible for a large majority of the poor in the regions where the study has been conducted.

(9) The state has initiated a number of developmental schemes in the region. However, the actual coverage of beneficiary households is very limited.

(10) A large proportion of households reported having exercised the right to vote during panchayat elections. More importantly, many of them reported having approached the state authorities at the block or district levels.

(11) The existing NGOs in the region seem to be engaged in delivering much-needed assistance with health services, education, food security schemes, market support for NTFPs, etc., rather than taking up the issue of entitlement for work and/or compensation.

(12) The major issue, therefore, refers to filling up the governance gap, rather than flow of funds, which of late has shown a trend to increase.

These are, of course, only initial findings. The analysis needs to throw more light on the following critical issues:

- What is the current status of the households that report improvements in food, clothing and housing? This will help ascertain the earlier status of the households.
- What is the status of forest degradation? What is the potential for increasing irrigation and improving agricultural productivity? This would help ascertain the carrying capacity of the forest-based region.
- What is the extent of migration in relatively less remote areas in Southern Orissa? This would help in examining the impact of remoteness on mobility, which may have special relevance to livelihood strategies and forest dependence among households.
- What is the nature of the polity and civil society's response to the conditions of chronic poverty in the region? This would help in understanding the scope for a consolidation of institutional support for better planning, as well as governance.
- What are the major hurdles in achieving a significant impact in the various schemes for food security implemented by the government and NGOs? This would help in identifying the locus as well as nature of malfunctioning at various levels of administrative hierarchies. These issues will be addressed in the next round of study in this region.

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