

Social Exclusion and Land Administration in Orissa, India

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SUMMARY

This report presents an exploratory, state-level analysis in Orissa of the factors that constrain access to land by the rural poor and other socially excluded groups. It is the first empirical study of its kind, at least in India, which examines access to land from a transaction costs perspective. It is based on an institutional analysis of land administration in policy and practice, and considers the consequences for particular groups of stakeholders. The intention of this pilot study was to field-test an approach that could be replicated in other states of India, with a view to identifying incremental reforms in land administration and policy that could help to improve access to land for the rural poor. The findings should be regarded as preliminary, since the study was intended to scope the broad framework for analysis, rather than to produce systematic results. Nonetheless, the findings do suggest a set of broad policy implications worthy of more detailed consideration, following systematic analysis in other states.

Land distribution: While land reforms legislation has reduced the share of operational area held under large holdings (> 6 ha) in Orissa since the 1950s, the major gains have been in the share of total area accounted for by medium-sized farms. Over half of all households operate small, marginal or sub-marginal land holdings (< 2 ha). The proportion of total agricultural land they operate has remained substantially unchanged since the 1950s, although substantial gains in area accrued to the largest among them during the 1960s, thereby swelling the ranks of farm households with medium-sized holdings by the 1970s. The proportion of households operating no land, whose livelihoods are based principally on agricultural labor, increased substantially following the widespread eviction of tenants from erstwhile landlord estates, and by the early 1960s accounted for a third of all households. Since the 1960s, some have gained access to at least some land, but around a quarter of all households in Orissa still operate no land. Overall, in spite of land reforms, socio-economic and demographic change over the last half century, these trends suggest that formidable obstacles continue to prevent the rural poor from improving their access to private arable land.

Land revenue systems: Historically, different parts of the state inherited different land revenue administration systems from Bengal Province (northern Orissa), Madras Presidency (southern Orissa), Central Provinces (western Orissa), and the former princely states. Some 80 percent of the total area fell under *zamindari* systems, in which many layers of ‘intermediaries’ between the landlord and cultivator were responsible for exacting land revenue. *Ryotwari* (peasant-proprietor) systems prevailed over parts of southern Orissa that had been under Madras Presidency. Some of the complexity of land revenue administration in Orissa today may be attributed to the legacy of these diverse systems, which were brought under a unified legislative structure only following independence. The legacies of these distinct systems also have certain lasting effects on the ground. For example, land records tend to be more complete and accurate in the former *ryotwari* areas in which, unlike in *zamindari* areas, there were village accountants. This not-so-distant historical record can be important in resolving land disputes even today, in establishing the basis for contemporary land claims.

Main provisions in land legislation: Orissa is one of a few states in India that has attempted legally to abolish tenancy (land-leasing), except in the case of persons of disability (the definition of which includes widows, divorcees, and other unmarried women). Land rights may pass to any cultivator who can demonstrate continuous occupation over a period of at least 12 years (‘adverse possession’). While tenancy remains widespread, these restrictions have led to concealed forms (e.g. oral contracts) which give tenants little or no protection in law. A ceiling on individual land holdings also applies, and currently stands at 10 ‘standard acres’ (depending on land quality). In addition to these provisions, which fall under land reforms legislation, three major Acts govern land administration, and respectively provide the basis for land survey and settlement, land consolidation/ prevention of land fragmentation, and prevention of encroachment on government land. The Government of Orissa has recently prepared a draft Revenue Administration Bill, intended to simplify, consolidate and replace these separate laws governing land administration. The clause permitting the liberalization of the land-lease market remains an obstacle to the rapid enactment of this law.

Gender and land rights: As in other parts of South Asia, women may appear to enjoy certain land rights in law, but they rarely translate into effective control over land in practice, owing to embedded, gender-biased social norms and customs. It is suggested that women's access to and effective control over land may be enhanced through joint land titling. This measure is rather limited in scope, since ideally what need to be promoted are women's independent land rights. But while the principle of joint titling is readily accepted at the level of the Government of India, it has yet to be realized in practice in Orissa. In focus group discussions, village women assert that their bargaining power vis à vis their husbands and in-laws would be enhanced considerably by joint title over land. The common objection that this may make it more difficult for women to escape from abusive marriages was for them a second order consideration.

Organization of land administration: Land administration in Orissa is carried out by two, parallel government agencies: the Department of Revenue and Excise, responsible for policy formulation and revenue collection; and the Board of Revenue, responsible for the implementation of land policy and judicial matters. Land revenue has declined as a share of state revenue from over 30 percent to less than 2 percent over the last forty years. As a result, land administration is perceived as a burden on the state, rather than a service which, if made more efficient, could potentially contribute to raising agricultural productivity. Stamp duties and other fees payable upon the registration of land sales, on the other hand, account for up to 6 percent of state revenue. There is little or no coordination between the maintenance of land records, which is the responsibility of revenue inspectors and tehsildars; and land registration, which is the responsibility of sub-registrars. Measures to coordinate these two services and enhance their efficiency through computerization, while at the same time reducing transaction costs to individuals in the land market, could go a long way towards stimulating the land market. Whether or not this would enhance access to land for the rural poor, however, depends on the degree of transparency with which land administration is conducted in practice. Access to information and public awareness of rights seem to be critical factors. A recent initiative of the Revenue Department, Government of Orissa, to disseminate a local-language 'how to' manual on matters of land transfers and access to land records, is a most welcome contribution in this area.

Land survey and settlement operations: Survey and settlement operations evolved historically as a way to establish a record of rights in land, on which to base the assessment of land revenue. Periodic, revisional surveys, conducted every 25-30 years or so, serve as the major means to update land records. Since the process of mutation following an individual land sale-purchase transaction is burdensome, protracted and (for many) prohibitively expensive, many land holders prefer to wait until the next revisional survey to obtain title to their land. In practice, the survey and settlement process provides widespread opportunities for rent-seeking on the part of the government officers involved, and it is not uncommon for poorer and less powerful landholders to 'lose' at least a proportion of their land in the official record. Land-grabbing by more powerful individuals, facilitated by exerting leverage over settlement officers, appears to be commonplace during survey and settlement operations. While the contested amounts of land are usually small, the net effect is systematically to discriminate against the rural poor and the socially excluded.

Four types of land transaction are considered in the main analysis. Land may be purchased, inherited, rented (leased) or, in the case of commons and public land, encroached upon. Each of these types of transaction, and the state's responses through land law and administration, has particular implications for the ability of the rural poor to improve their access to land.

Land sale-purchase transactions: These are estimated to account for around 80 percent of land transactions at village level, although the share of total agricultural land changing hands is typically as low as 5-7 percent per year. Land markets are thin for various reasons. In large part, there are few willing sellers of land, as the price of land does not reflect its full social value. Most sales are therefore distress sales by smaller farmers, and most purchases by larger farmers. High transaction costs in land markets are also a significant obstacle to

land purchases. Uncertainty regarding the true ownership of the land is rarely a serious concern in the case of intra-village transactions. However, many sale-purchase transactions go unrecorded in land records, since the process of mutation (voluntary registration of a sale deed and acquisition of title) is complex, lengthy and expensive. Officially sanctioned transaction costs amount to at least 17 percent of the value of the land transacted, and the 'informal' transaction costs required to expedite the process may amount to as much again, even discounting the opportunity costs of repeated visits to registrar and tehsildar's offices over a period of several years. The computerization of land records may contribute to a reduction in these transaction costs, but only if coordinated with computerized land registration.

Land fragmentation: the fragmentation of land holdings into tiny, scattered plots is a consequence of the custom of partible inheritance, in which each individual plot is subdivided among various heirs. There is thus a lifecycle effect, in which newly formed households acquire very small holdings on the subdivision of formerly joint family holdings. Land fragmentation is widely perceived to operate as a brake on agricultural productivity, and the Government of Orissa has responded by implementing a land consolidation program since 1974. Land consolidation does not contribute directly to improving access to land for the rural poor, since it aims to leave land distribution unchanged. But as in the case of survey and settlement operations, there is some evidence that land consolidation operations result in a certain amount of discrimination against the rural poor and other socially excluded groups. In spite of continuing demographic pressure, the rate of fragmentation actually declined from an average of 6.4 to 5.0 parcels per holding between 1961-62 and 1981-82. Much of this decline took place before the impact of the land consolidation program could be observed, which suggests that a certain amount of individually initiated land consolidation takes place through the voluntary exchange of land plots in the market.

Evidence from the field confirms that land fragmentation persists for two main reasons: the need to spread risk, particularly in unirrigated areas and where soil quality is more variable; and the need to hold land as a liquid asset, which may be sold off in discrete parcels to meet contingencies such as marriage or funeral costs. No data exist in Orissa on the rate of fragmentation by district or region. Findings from the field suggest that land fragmentation is perceived by farmers to be a more serious problem on the coastal plains, where land is more reliably watered and soils are more uniform in quality, than in the hill areas of western Orissa, where there has been considerable resistance to the government's land consolidation program. To the extent that both poorer and better-off farmers wish voluntarily to consolidate their holdings in the interests of raising productivity, the most effective public interventions are likely to be those that reduce transaction costs in the land market.

Encroachment on commons: The rural poor partially compensate for their lack of access to private, arable land through access to public/ common land. Commons account for an estimated 20 percent of the total land area of Orissa, including 'wastelands', grazing lands, and certain types of forest land. Over recent decades, the best quality common land has been encroached upon by both resource-poor and resource-rich farmers, and what remains is frequently too degraded to be of significant value. Legislation exists to prevent encroachment on government-owned 'wastelands', and to transfer a up to an acre of 'unobjectionable' public land to landless families, but is largely ineffective on both counts. There are powerful incentives for revenue inspectors to take bribes from encroachers to permit continued cultivation, rather than to initiate eviction proceedings. More powerful individuals may thereby acquire permanent occupancy rights through 'adverse possession'. While the rural poor also acquire *de facto* but insecure rights over revenue wastelands through encroachment, they are often unable to convert them to the *de jure* rights to which they are legally entitled, since the act of encroachment is regarded as illegal in the first instance. Access to commons is especially important in the livelihoods of the 22 percent of Orissa's total population who live in 'scheduled' tribal areas. In spite of legal restrictions on transfers of land owned by people of scheduled tribes to non-tribal people, land alienation from indebted tribal families remains a persistent problem.

The most promising avenues for protecting rights of access to common land for the rural poor are through efforts to raise public awareness and access to information. Some NGOs in Orissa have been successful in pursuing public interest litigation to defend tribal land rights. Following their lead, the strengthening of local panchayats could make a vital contribution towards promoting the watchdog function of civil society institutions. Only with strong civil society institutions will there be effective demand from below for accountability within the lower levels of land revenue administration, thereby limiting the possibilities for evasion of the legislation designed to prevent encroachment on commons. With such safeguards in place, the computerization of land records at tehsil level would also contribute towards making information on the extent of encroachment more publicly accessible.

Land leasing (tenancy): The Orissa Land Reforms Act prohibits sub-letting of land, regulates rents (to a maximum of one quarter of gross produce), and grants occupancy rights to long-standing tenants. In spite of these restrictions, tenancy remains widely prevalent, under ‘illegal’ contracts which landlords and tenants have a common interest in concealing. This accounts for widespread under-reporting of the area leased-out (and, to a lesser extent, leased-in). The best available estimates suggest that on average, around 20 percent of farm households participate in the land-lease market, and that over 80 percent of leasing activity (both in and out) is by small and marginal farmers.

There is wide inter- and intra-regional variation in both leasing activity and the terms of tenancy contracts. Sharecropping is the predominant form of tenancy contract in Orissa, accounting for perhaps half of the total leased-in area, although it is declining over time in favor of fixed-rent contracts (whether in cash or in kind). Share tenancy remains more prevalent in non-irrigated villages, owing to its greater potential for risk-sharing between tenants and landlords. In irrigated villages, fixed-rent tenancies may now account for three quarters of land-lease contracts. Contract terms vary widely, depending on the respective labor and capital contributions of tenant and landlord, the crops being produced, and extent to which the physical location of the leased-out plots permits close supervision. Regardless of the nature of the contract, rents are invariably higher than the legally stipulated maximum of one quarter of gross production.

The land-lease market is clearly an important means by which the rural poor gain access to land. While there is little evidence of exploitative relations between landlords and tenants, there is some evidence that markets for other factors – particularly labor and, to a lesser extent, credit – are interlinked with the land-lease market. These interlinkages explain why it is also in tenants’ interest to conceal tenancies, and why tenants are reluctant to press claims for lower rents or more secure rights of occupancy. Under these circumstances, liberalization of land-lease markets may well enhance access to land by the rural poor, but will be of most benefit to them if they can also be assured access to institutional credit. The liberalization of the land-lease market, as proposed in the draft Orissa Revenue Administration Bill, and supported by Government of India policy under the Ninth Plan, is therefore cautiously to be welcomed, provided that the right balance can be struck between assuring landlords of their long-term ownership rights, and assuring tenants of their security of tenure and protection under the law for the duration of fixed-term tenancy contracts. Only with documentary evidence of such rights are tenants likely to face the possibility of access to institutional credit.

1 INTRODUCTION

1.1 Background

Access to land is of fundamental importance in rural India. It remains the principal determinant of rural income distribution, although the direction of causality in this relationship is not clear. The weight of international evidence now strongly endorses a strategy for rural economic growth that is based on small yet economically viable, family-run farms. In the Indian context, in which a large and rising share of the rural poor derive livelihoods principally from their own labour, a powerful case can be made in favor of more equitable land distribution on grounds that such a strategy would generate more employment than alternatives. In sum, with the overall objectives in mind of reducing poverty, raising agricultural productivity, and promoting social inclusion, there are strong arguments for seeking ways to improve access to land for the poor and other socially excluded groups in rural India¹.

Conventional approaches to improving access to land for the rural poor, both in India and elsewhere, have focused on land and agrarian reform. Land reform is perceived by some to be rising up the political agenda once again in many states of India. In the Ninth Five-Year Plan (1997-2002) the Department of Rural Development, Government of India, is focusing on land reforms, including new strategies to benefit socially excluded groups such as the selective liberalization of land-lease markets, and the promotion of women's land rights. Although state-imposed, redistributive land reforms are conventionally believed to have been unsuccessful in the Indian context (with notable exceptions), recent evidence suggests that much more has been achieved in implementing Indian land reform legislation than is often supposed. Nevertheless, the prospects for bringing about a meaningful improvement in access to land by the rural poor may be even stronger if attention is turned now to more limited, pragmatic measures, such as the selective deregulation of lease markets; and incremental reforms in land administration to facilitate more rapid, fairer, and cheaper conveyancing procedures. Such institutional reforms would also help to meet some of the preconditions necessary for the successful implementation of land consolidation and/or land redistribution programs where appropriate.

1.2 Scope and objectives of study

In FY98 the South Asia Rural Development Sector Unit of the World Bank initiated an informal study on access to land in rural India. The overall objectives were to contribute to poverty reduction and rural economic growth in selected states of India by: (i) identifying feasible legal and institutional reforms, policy instruments, or other mechanisms to improve access to land, particularly for the rural poor and other socially excluded groups; and (ii) determining the potential role for the Bank (if any) in supporting such reforms, instruments and mechanisms.

During Phase I of the study, an overview policy issues and options paper (Mearns, 1998) was prepared based on literature review and consultations with specialists within and outside the World Bank. The aims and scope of this review were: (i) to examine the broad context of land relations in rural India; (ii) to identify the

¹ Patterns of social exclusion tend to be closely correlated though not synonymous with the incidence of poverty. It is well recognized that people of scheduled tribes and scheduled castes in India are much more likely than other groups to live below the poverty line. Throughout this paper, 'socially excluded groups' refer to people of scheduled tribes and castes, women, and the rural poor. All of these groups are more likely than better-off or more powerful and influential groups to suffer from forms of discrimination at the hands of those government officials with whom they come into contact, and to be more or less excluded from receiving entitlements through administrative procedures.

major constraints on access to land by the rural poor and other socially excluded groups; (iii) to suggest priority areas for legal, policy and institutional reform to help reduce these constraints; and (iv) to identify areas where further work is required in selected states to identify feasible legal, policy and institutional reforms.

The present paper, which should be read in conjunction with the overview paper, constitutes Phase II of the study. It offers a more detailed institutional and stakeholder analysis of constraints on access to land by the rural poor at state level, as presented by the land administration system both in policy and in practice. At the core of this analysis is an attempt to specify the formal and informal transaction costs incurred by individuals in the land market. Based on this analysis, priority areas for legal, policy and institutional reform are identified. The state of Orissa was selected for this pilot study. The intention was to refine and document the approach, research questions, and methodology so as to provide a 'template' for subsequent studies in other states of India. Although land administration is a state subject under India's constitution, matters relating to land reform require concurrence at federal level. The prospects for meaningful reform of land administration at the level of India as a whole will be enhanced through policy dialogue based on comparative information on the diverse ground realities prevailing in a number of states.

1.3 Why Orissa?

Several criteria guided the selection of Orissa for this pilot study:

- there is considerable diversity in agrarian systems and patterns of land tenure throughout the state of Orissa, which offers an opportunity for comparative analysis and suggests a need to tailor recommendations accordingly;
- access to land has already been identified as a priority by the Government of Orissa (GOO), and strong demand voiced by GOO for such a state-level study to be conducted by the Bank. The possibility of deregulating land-lease markets (tenancy), and measures to reduce land fragmentation, were identified by GOO as issues of particular policy concern;
- the study findings and recommendations may be of direct operational relevance in the context of the Orissa Rural Development Project, currently under preparation by GOO for possible Bank support.

1.4 Methodology

So far as we are aware, this is the first empirical study of its kind which examines access to land from a transaction costs perspective. The methods and strategies adopted in the field investigation were necessarily exploratory. The availability, quality, and sources of data were unknown at the outset, and a certain amount of iteration was required between the initial research questions and what could realistically be achieved within the time available. Limited information was available from secondary sources (particularly village studies) for certain, discrete aspects of the research (e.g. tenancy, land fragmentation, or encroachment on commons). However, the overall approach adopted here – namely, to analyze the factors affecting access to land within a holistic framework, including an institutional analysis of land administration in policy and practice, and consideration of the distributional consequences for particular groups – is otherwise untested.

The broad methodology for the pilot study in Orissa included (see Annex for further details of data sources and strategy for field investigation):

- a review of the existing legislative, regulatory, and judicial framework governing access to land in Orissa to identify specific consequences for the rural poor and other socially excluded groups;

- extensive discussions with principal stakeholders involved in policy-making, land revenue administration, and transacting in land to identify the roles and strategies of different actors or stakeholders;
- visits to ongoing survey and settlement and land consolidation camps to understand, at first-hand, the operations and functioning of these aspects of land administration; and
- focus-group discussions in villages (in each of three selected districts) to appreciate the ways in which the actual outcomes of various land administration procedures differ from their intended outcomes, and with what possible consequences for the rural poor and other socially excluded groups.

It is important to be clear about the limitations of this pilot study. In part owing to the short time available, it was not considered desirable to attempt to administer a formal, structured questionnaire within a statistically rigorous sampling frame. Rather, semi-structured interviews were conducted with individual informants and focus groups, based on a checklist of research questions. Participatory diagramming methods were also used on occasion. In order to understand the practical functioning of the land administration system, considerable flexibility and serendipity is required on the part of the interviewer in the pursuit of unexpected leads, which would not be possible with a standardized questionnaire. The data reported are considered to be trustworthy, on the grounds that care was taken to cross-check the information obtained among diverse informants and research methods. Such ‘triangulation’ is one of the principal means of assuring data quality when using participatory learning methods.

We found villagers to be generally willing to discuss their experiences on the ‘receiving end’ of the land administration system. Issues relating to the payment of bribes to lower-level government officers could be openly discussed. We have discounted some of the individual reported figures in several instances, following cross-checks with other informants. By and large, however, the regularities in individual responses across the state gives a measure of confidence in the broad picture that emerges. Rent-seeking was found to be sufficiently pervasive that it was possible to specify the ‘going rate’ in many instances. The principal limitation of the methodology adopted is that in the short time available, it was not always possible to probe variations as systematically as one would have liked, with the attendant risk that an impression of greater uniformity is conveyed than is in fact the case. Based on this pilot study, estimates of the minimum amount time required to complete certain stages of the field investigation are provided in the Annex.

1.5 Analytical framework

Rights in land fall within a hierarchy ranging from the highly restricted to the fully specified. ‘Ownership’ here refers to the most specified form of rights in land that prevail in Orissa, including rights to use exclusively, inherit, bequeath, and transfer by sale or gift. Even with privately owned agricultural land, certain restrictions apply on the uses to which that land may be put. Under ‘adverse possession’, it is also possible that ownership rights may be lost to another party if their continuous possession of the land for a period of at least 12 years duration can be demonstrated. Aside from such restrictions, ownership rights are the most secure form of rights in land and enjoy protection in law.

At the bottom of the hierarchy of rights in land fall usufruct (use) rights, particularly if those use rights are declared illegal and are therefore highly insecure. An example would be customary claims of tribal groups to cultivate on forest department land, which are declared illegal under the 1980 Forest Conservation Act. Rights to use village commons (e.g. for grazing livestock, gathering fuelwood or fodder) are a more secure form of usufruct right, but may be compromised in practice if those commons have been encroached. Occupying an intermediate position in the hierarchy of rights are legal rights which, owing to prevailing social norms and customs, may not actually be realised in practice. Women’s rights to own land independently often fall into this category.

In general, access to land may be enhanced through the extension of an individual's existing rights or claims over a larger land area, or the transfer or acquisition of a new class of rights in land, provided they are actually enjoyed in practice. Security of tenure refers to the degree of confidence an individual has that his or her rights in land will be upheld in practice. Ownership and usufruct rights in land can be transferred or acquired through privately initiated land transactions in four ways:

Land sale, which is the permanent transfer of privately-held ownership and usufruct rights. Land sales are permitted so long as the purchaser's total land ownership holding does not exceed the ceiling limit;

Land inheritance, which normally occurs on the death of a land holder, and results in the partitioning of a privately owned land holding among two or more claimants. All rights are transferred to the claimants. This process also frequently leads to **land fragmentation** which, owing to spatial variation in land quality, generally takes the form of the subdivision among each claimant of each individual plot in the total land holding. Administrative attempts are made to restrict land fragmentation in the interests of increasing or at least maintaining agricultural productivity;

Land encroachment, which refers to the forcible, *de facto* 'privatisation' of common or government land. Although encroachment is illegal, the government also seeks to redistribute ownership rights over some public land ('wastelands') to landless households. This apparent entitlement is treated separately from the question of encroachment, however, so that it is not possible for a landless household to press a claim through a spontaneous act of encroachment; and

Land lease or tenancy, which occurs when usufruct rights over a plot of land are transferred for a specified period and for a share in the output (share-cropping), or against a fixed (cash or kind) rent. Ownership rights remain with the original owner. The leasing of land is prohibited under Orissa law, though widely prevalent in concealed forms (oral contracts).

A principal function of land administration is to maintain an authoritative record of the status and fiscal obligations of cultivators, to protect their rights, and to avoid agrarian disputes. Land records in India were initially established by means of survey and settlement operations. Periodic, revisional surveys are undertaken every 25-30 years or so. All land transfers completed during the intervening period between survey and settlement operations are recorded at the time of the revisional survey and reflected in the updated record-of-rights (RORs) in land. With an increasing volume of land transactions, state governments have had to devise various mechanisms to respond to these transactions. Survey and settlement (section 3) is still undertaken in Orissa without being a response to any specific transaction.

Government's response to individual land transactions is conditioned by the existing legal framework. Thus, land sale transactions (section 4.1) are registered and the ROR updated through the regular process of mutation which, in principle, takes place as and when the transaction occurs. Land fragmentation (section 4.2) is perceived adversely to affect agricultural productivity. In response, the government implements a land consolidation program designed to reverse fragmentation through the redistribution of scattered plots into compact blocks without significantly affecting land distribution among individual land holders. Land records are also updated following a consolidation operation. The government's response to encroachment (section 4.3) is ambiguous as it ostensibly seeks to evict encroachers from common land, but is more lenient with respect to encroachment on revenue wastelands. At the same time, while landowners may be penalised and evicted for encroaching on wastelands, landless households are legally entitled to be settled on (i.e. acquire ownership rights over) that land. Land leasing (section 4.4) is not recognised by the Government of Orissa and, in spite of being widely prevalent, is largely concealed.

This study systematically analyses each type of land transaction and the government's responses to examine how the interplay between the two impinges upon access to land by the rural poor. The analytical framework is depicted in Figure 1.

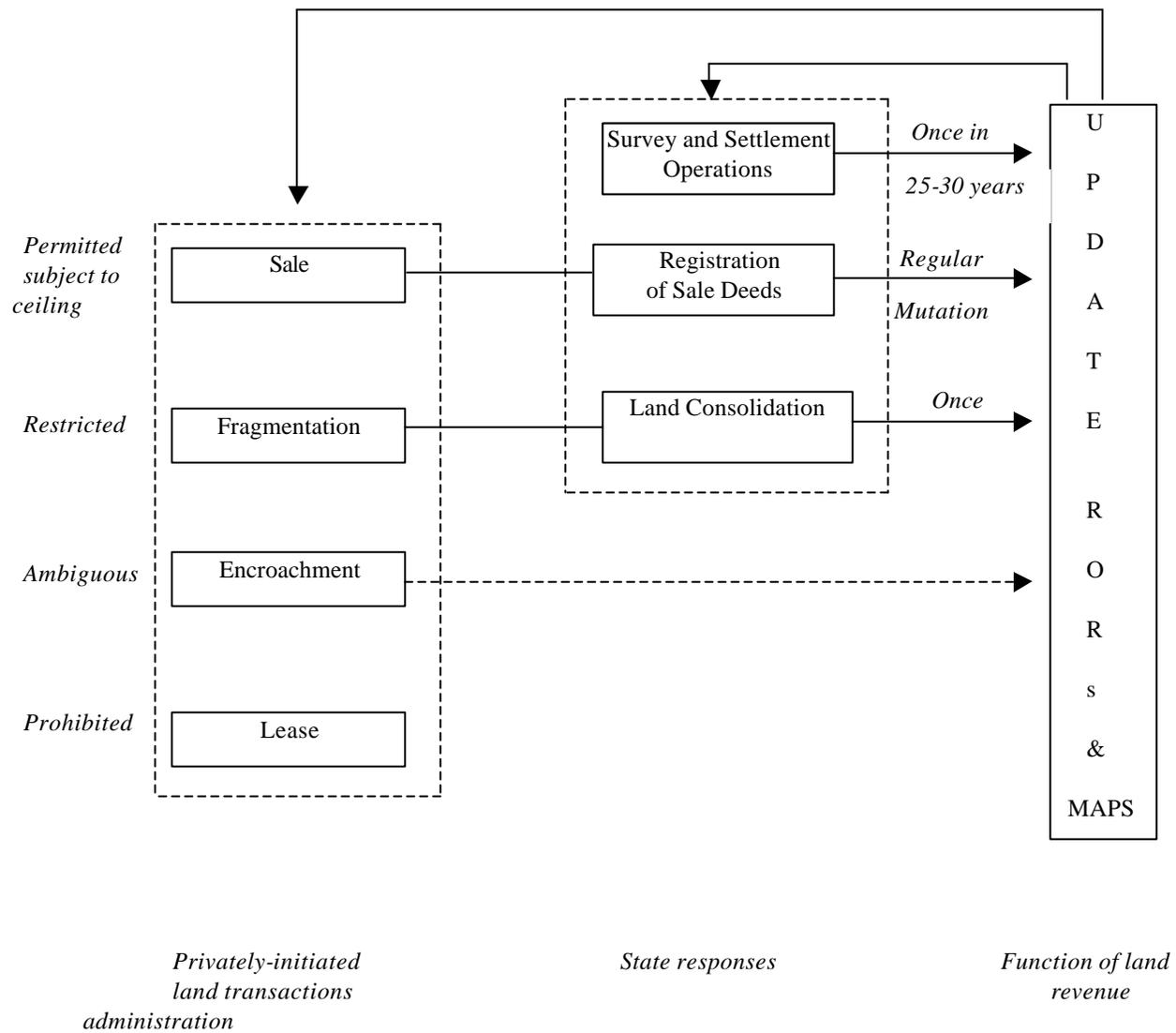


Figure 1 : Framework for Analysing Government's Responses to Land Transactions

1.6 Structure of the report

The rest of the report is organised into four sections. Section 2 provides a brief introduction to the state of Orissa and the three selected study districts, the legal framework (including that governing women's access to land), and the agencies responsible for implementing land revenue legislation. This section provides important background information for the main analysis. Section 3 describes the nature and consequences of land survey and settlement operations, and assesses their continuing relevance.

Section 4 forms the analytical core of the report. Using the framework developed above (Figure 1), this section considers each of the four processes by which land rights can be transferred from one party to another, critically analyses the institutional responses on the part of the state land revenue administration, and assesses the practical consequences for the ability of the rural poor and other socially excluded groups to increase their access to land.

The concluding section identifies potential policy options suggested by the analysis, considers their implications for various stakeholder groups, and outlines suggestions for follow-up, including similar studies in other states.

2 THE BACKDROP

2.1 Orissa and the study districts

On the basis of its physical features and agro-climatic conditions, Orissa can be divided roughly into four zones (see Map):

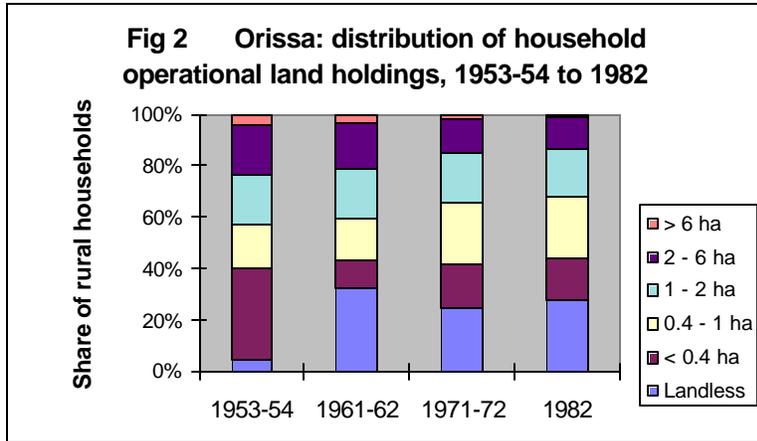
1. the northern plateau covering the districts² of Mayurbhanj, Keonjhar, Sundargarh and part of Dhenkanal district, constitutes 23 percent of the state's total geographical area,
2. the central river basin encompassing Bolangir, Sambalpur and Dhenkanal districts, also covers 23 percent of its landmass,
3. the eastern Ghat region includes the erstwhile Kalahandi, Phulbani, and Ganjam and Koraput districts and is spread over 36 percent, and
4. the coastal plains of Balasore, Cuttack, Puri and a part of Ganjam make up the remaining 18 percent.

The coastal plain region is the most agriculturally advanced in the state as a result of high soil fertility and more widespread availability of irrigation.

Orissa is the second poorest state in India (after Bihar). Some 87 percent of the total population of 32 million (1991 census) live in rural areas, and 50 percent of the rural population (head count index) live below the poverty line (World Bank 1998). While employment in Orissa's rural non-farm sector grew at a rate of 2.8 percent a year over 1981-91 (Samal, 1997), the great majority of the rural population continue to depend upon agriculture and allied sectors.

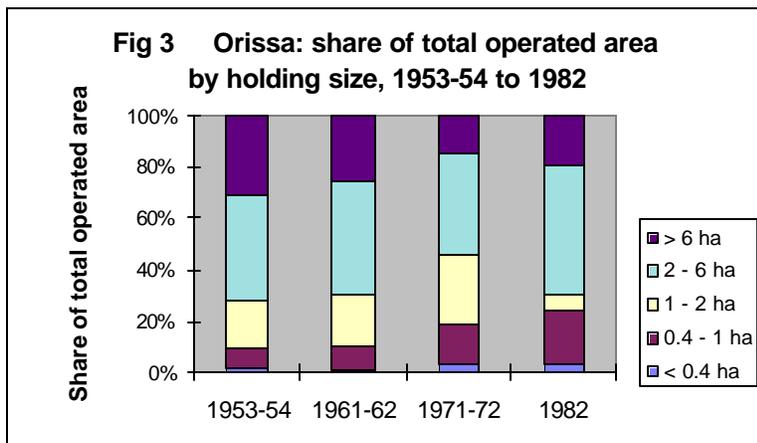
Figure 2 shows the distribution of household operational land holdings by size class. It indicates the change in land distribution brought about by post-Independence land reforms (section 2.3), combined with demographic and socio-economic change. Over the period 1953-54 to 1961-62, the number of households not operating any land increased substantially, following widespread evictions of tenant farmers after the abolition of large landlord estates (sections 2.3 and 4.4). Estates abolition and the enforcement of an upper ceiling on land holding size appear to have been reasonably effective in reducing large (greater than 6 ha) operational holdings from 5 percent to 1 per cent of the total between 1953-54 and 1982. Over the same period, the greatest gains were in marginal (0.4 - 1 ha) holdings, which increased from 17 percent to 24 percent of all land holdings. These are small, but not the smallest land holdings. The share of households operating no land declined over the 1960s, as the number of households acquiring sub-marginal (less than 0.4 ha) and marginal holdings increased, and by 1982 remained at around 25 percent of all households, which is comparable with the all-India average (Mearns 1998).

² The districts mentioned in this section refer to the 13 'undivided' districts. As described in Box 1, there are now 30 districts in the state (see Map).



Source: NSS data, reported in Sharma (1994)

Agricultural land accounts for 59 percent of the total land area of the state. The share of total land area under various forms of agricultural land use is shown in Table 1. The changing proportions of total operated area accounted for by each size class of land holding is shown in Figure 3, for the period 1953-54 to 1982. Land reforms, demographic and socio-economic change together appear to have brought about little net change in the share of the total operated area accounted for by sub-marginal, marginal and small land holdings (i.e. those of 2 ha or less). Within this broad group, marginal land holdings (0.4 – 1 ha) increased their share of total operated area at the expense of small holdings (1-2 ha). Medium sized holdings (2-6 ha) accounted for the greatest proportion of total operated area, having gained at the expense of large (>6 ha) holdings owing to ceilings restrictions and estates abolition.



Source: NSS data, reported in Sharma (1994)

Table 1 : Land use in Orissa

Land use	Share of total area (%)
Agricultural land (gross cropped area), of which:	59
Net area sown	41
Tree crops	6
Grazing land	4
Cultivable wasteland	3
Uncultivable wasteland	3
Fallow land	2
Forest land, of which:	36
Reserved forest area	17
Protected forest area	10
Other (e.g. <i>panchayat</i> land & village forests)	9
Non-agricultural land	5
Total land area (15,540,000 ha)	100

Source: Directorate of Economics & Statistics, Bhubaneswar

Forest land makes up 36 percent of the state land area (Table 1). Over a fifth of the state population are tribal people whose livelihoods are traditionally derived from forest products. For administrative and management purposes, forests in Orissa are divided into three categories: reserve (representing almost half of the total forested area), protected (just over a quarter of forested area), and other (a quarter of the forested area), including village forests. Reserve forests are fully under the control of the Forest Department and are managed under various silvicultural systems. In protected forests, only the forest crop (i.e. trees) is managed by the Forest Department; the land is owned and controlled by the Revenue Department. Rights and privileges of local communities vary by the type of forest - restricted in reserved forests and more liberal in protected forests. Village forests are generally treated as open access lands with no investment from government, and are generally extremely degraded except where community protection has started (Saxena, 1996; Singh, 1995).

There are now 30 districts in Orissa (see Map). The process of district re-organisation is described in Box 1.

Three districts were selected for intensive study. The objective was to capture some of the intra-state variation in land tenure, agricultural and rural livelihood systems. Initially, it was assumed that much of this variation would stem from the historical legacy of the different land revenue systems prevalent in the state at the time of Independence. Consequently, one district was selected from each of: the former Bengal revenue system (Khurda district); Madras revenue system (Ganjam); Central Province system (Sambalpur). Dhenkanal district was also selected to represent the former princely states of Orissa, but had to be dropped from the field investigation owing to time constraints. As the study progressed, it became clear that there were indeed many differences among the three selected districts in the extent and nature of private land transactions, but these differences did not obviously or directly result from the legacies of different land revenue and tenure systems. Rather, they may be attributed to a combination of social, economic, and topographical factors. For instance, there is some evidence that land fragmentation is a serious problem in the coastal plains. At the same time, there are many similarities with respect to land markets. The land sales market is more or less uniformly depressed throughout the state. Tenancy is widely prevalent in spite of being banned throughout the state.

Box 1: District re-organisation in Orissa

Orissa became a separate state in 1936 after its separation from the province of Bihar and Orissa, which was itself separated from the province of Bengal in 1912.

On its formation in 1936, the state of Orissa comprised six districts: Cuttack, Puri, Balasore, Sambalpur, Ganjam and Koraput. By 1949, the 24 princely states were also integrated with the State of Orissa, which then comprised 13 districts: Cuttack, Puri, Balasore, Ganjam, Koraput, Sambalpur, Dhenkanal, Sundargarh, Keonjhar, Balangirpatna, Boudh-Khonmandal, Mayurbhanj, and Kalahandi. These 13 districts are now commonly referred to as the 'undivided districts'.

In 1973, a Committee was established to consider the question of district/subdivision re-organisation in Orissa. No decision was taken on the recommendations of the Committee until 1990, apart from the renaming of Boudh-Khondmals district as Phulbani in 1986. In 1992, four new districts were declared (Gajapati, Malkangiri, Nowrangpur, Rayagada), followed by 10 more in 1993 (Khurda, Nayagarh, Sonepur, Bargarh, Kendrapara, Jagatsinghpur, Jajpur, Nuapara, Angul, and Bhadrak), and a further three in 1994 (Jharsuguda, Deogarh, and Boudh), bringing the total number of districts in Orissa to 30. The new district boundaries are shown in the Map together with those of the former, undivided districts.

The selected districts are:

Sambalpur, originally belonging to the Central Provinces land revenue system. Located on the border with Madhya Pradesh in the north-west, it consists of a wide expanse of fairly open country, fringed by forest-clad hills and a series of low hill ranges of irregular shape (Sarap, 1991). Over half the total area of the district is classified as forest land, compared with the state average of around a third of total land area. Sambalpur district has a total population of just over 800,000 (1991 census) of which nearly 75 percent live in the rural areas. The scheduled caste (17 percent) and scheduled tribe (35 percent) population together constitute more than half of the district's total population. The terrain is generally rocky and undulating, which makes it difficult to regulate the flow of water. Only 52 percent of the net sown area in the district is irrigated. Soils are generally deficient in nitrogen and phosphate which limits crop productivity.

Khurda, lying in the coastal plains region of Eastern Orissa, was carved out of Cuttack district in 1993. According to the 1991 census, its total population was just over 1.5 million. More than one-third of the people live in urban areas including the state capital Bhubaneswar. The scheduled caste and scheduled tribe population together make up less than 19 percent of the district's population. The Bengal tenurial system was prevalent in Khurda. Only 21 percent of the district land area is classified as forest land. Soils are fertile loams, and a high proportion (84 percent) of the net sown area is irrigated by canals.

Ganjam is the largest district in Orissa, with a total population of 2.7 million. Only 15 percent of the total population reside in urban areas. Ganjam formerly fell under Madras Presidency. Scheduled castes (18 percent) and scheduled tribes (3 percent) constitute 21 percent of the district's population. The forested area of Ganjam district is the same as the state average (36 percent), and the share of net sown area that is irrigated is high (94 percent).

2.2 Land revenue systems of Orissa

As more areas came under British control from the late 18th century onwards, a number of different land revenue assessment systems evolved according to the status of the individual of whom land revenue was actually demanded³. *Zamindari* and the *ryotwari* systems were the most common and their main elements are described in Box 2. The *zamindari* system existed in five districts in Orissa, the *ryotwari* system in a part of a district, and the so-called Subsidiary Alliance in the 24 princely states covered the remaining seven districts. More than 80 percent of privately owned land fell under the *zamindari* system (Pathy, 1981).

A number of different revenue and tenancy laws also prevailed in the state. This was because parts of Orissa fell within different administrative units belonging to Bengal (later with Bihar after its separation from Bengal in 1912), Central Provinces, and Madras. The 24 princely states were controlled by the British through a Subsidiary Alliance by which the princes had freedom in their internal administration so long as they paid regular tributes to the colonial authority. The former extent of each legislative jurisdiction is described in Box 3.

Box 2: Main systems of land revenue assessment in Orissa prior to Independence

Zamindari (or landlord) tenure: land was held as an independent property and revenue was assessed on an individual, or a community, owning an estate as a landlord. Proprietors were required to deposit land revenue at the district treasury. One sub-divisional officer, assisted by one or more tehsildars, was in charge of revenue collection. There was no revenue administration below the district level, and the *zamindars* organised their own revenue collection agencies, often involving many more layers of intermediaries.

Ryotwari (or peasant proprietary) tenure: land belonged to the Crown and was held in a right of occupancy (which was both heritable and transferable) by individuals. Revenue was assessed on individuals who were the actual occupants of smaller holdings. It was collected through the village headman whose office was hereditary. He was paid a commission (10 percent) and sometimes received some *jagir* lands. In addition to collection of land revenue, he was also required to keep the records-of-rights up-to-date by carrying out mutations.

Under either system, there were numerous rent-paying sub-tenants.

What, if any, is the impact of the different revenue systems prevalent in the state until half a century ago? While there may be little practical difference, rights over commons, which are determined by traditional norms and customs, do vary across the state, and especially between the erstwhile *ryotwari* and *zamindari* areas. There was also considerable variation in the quality of land records management since there was a village accountant in *ryotwari* areas, but no such position in *zamindari* areas. As a result, land records were better maintained in the former and almost non-existent in the latter. These differences can create problems during land litigation since there may be no historical records on which to establish the bases of competing claims.

³ The systems had evolved according to the varying degrees in which, in different parts of the country, tribal occupation of territory had superseded the rights of the ruler, or full proprietary rights had been granted to the individual.

Box 3: Extent of land revenue systems in Orissa at Independence

Bengal revenue system: covered northern part of the state, comprising the undivided districts of Cuttack, Puri, and Baleswar (but *excluding* the princely states merged in these districts). In these areas, the Bengal Rent Act 1859 was the first legislative attempt to regulate tenancy, replaced by Bengal Tenancy Act 1885. After 1913, the Orissa Tenancy Act was modelled more or less on the Bengal Tenancy Act. Many intermediary forms of tenure subsequently developed in these *zamindari* areas, and an increase in share-cropping is suggested to date from this period.

Madras revenue system: extended over southern part of the state, comprising the undivided districts of Ganjam, Koraput, and Baliguda sub-division of Boudhkhondmal (now Phulbani) district (i.e. Oriya-speaking areas of the Madras Presidency). Here the first attempt at tenancy legislation was the Madras Estates Land Act 1908, which applied to the *zamindari* areas of Madras Presidency. There were also *ryotwari* areas under the state government where the rights of landholders were governed not by law but by executive instructions contained in the Board's Standing Orders which had the force of law. As in *zamindari* areas, landholders (*ryots*) could freely sublet to tenants who had no protection under the law.

Central Province system: prevailed across western part of state, comprising the undivided districts of Sambalpur and Nawapada (i.e. the Oriya-speaking areas of former Central Provinces). In these areas the Central Province Land Revenue Acts 1881 and 1917 and the Central Province Tenancy Acts 1898 and 1920 governed land revenue and tenancy.

Princely states: these partially excluded areas had separate land settlement/ revenue regulations under the Government of India Act 1935. There were no written laws designed to protect the interests of tenants in most of the princely states. The Orissa States Order 1948 conferred occupancy rights on tenants, but no rights were recognized for any tenants below occupancy tenants in the hierarchy of rights in land.

Source: Behuria (1997)

2.3 Review of existing legislation governing access to land in Orissa

Land legislation in India in the years immediately following Independence sought to reform the exploitative and iniquitous system inherited from the British, and was motivated by the central concern to provide 'land to the tiller'. To **confer ownership right on tenants** it was necessary first to **abolish intermediaries** and **provide security of tenure**. These measures alone would have been insufficient to realize effective ownership rights and so it was important also to **regulate rent**. These provisions were to be accompanied by the **fixation of a ceiling on land holdings** to prevent excessive concentration of land. While there was a national consensus on these objectives, land was classified as a state subject in the Constitution and the federal states were free to legislate to account for local specificity. During the last 50 years a number of laws have been enacted in Orissa in order to establish the legal framework for land reforms (e.g. Estate Abolition Act 1952, Land Reforms Act 1960, and Survey and Settlement Act 1958) and land administration. The latter includes: the Orissa Consolidation of Holdings and Prevention of Fragmentation of Land (OCH&PFL) Act 1972, and the Orissa Prevention of Land Encroachment (OPLE) Act 1972 (to prevent unauthorised occupation of government land). The main provisions and resulting impacts of the key pieces of land legislation are summarised in Table 2.

On the whole, land reform legislation has had only limited success in Orissa. Weak land revenue administration and lack of up-to-date land records were important contributory factors. At the same time, various provisions of different Acts were challenged in the Courts because of a number of shortcomings in the law. Often this required amendments to the original Acts and further delayed their implementation.

Abolition of intermediaries, which was achieved relatively easily in other states, was not completed in Orissa until 1974 owing to the absence of reliable records. Finally, a 'blanket notification' had to be issued by administrative fiat. More than 6000 cases relating to abolition of intermediaries are still pending in the Orissa High Court⁴.

The initial ceiling on land ownership, fixed at 33 standard acres⁵, was set at a high level and enabled intermediaries to evict tenants. By the time it was reduced to 10 standard acres in 1972, large landowners had had sufficient opportunity to escape the ceiling limit by 'transferring' the surplus land in the name of relatives even while they maintained *de facto* control.

As in other states, the implementation of tenancy reforms has generally been weak, non-existent or counterproductive, resulting in the eviction of tenants, their rotation among landlords' plots to prevent them acquiring occupancy rights, and a general worsening of their tenure security (Appu 1997). Even though the Orissa Land Reforms (Amendment) Act, 1965 and its subsequent amendments in 1973 and 1974 conferred full ownership rights to tenants on land in their possession, tenants do not enjoy security of tenure as it is difficult in practice for them to establish their ownership rights. This is in spite of the strict provisions under the Orissa Survey and Settlement Act, 1958 to record names of tenants who are the actual cultivators.

The legislative ban on leasing has led to concealed tenancy arrangements that have tended to be even more informal, shorter (increasingly seasonal), and less secure than they had been prior to reform. The provision of the maximum rent is easily flouted, and various government reports and village studies have recorded the rent paid by tenants across the state to be twice the stipulated amount. Issues relating to tenancy are analysed in Section 4.4.

Even the relatively minor pieces of legislation designed to ensure effective revenue administration have not been very successful. In the face of customary inheritance laws, thin land markets, and widespread variation in land quality, the OCH&PFL Act has failed to achieve both its objectives of consolidating holdings and preventing fragmentation (Section 4.2). At the same time, increasing pressure on land combined with distorted incentives has served to undermine the basic provisions of the OPLE Act (Section 4.3).

The Government of Orissa has recently prepared a draft Revenue Administration Bill, intended to simplify, consolidate and replace these separate laws governing land administration. The proposed provisions permitting

⁴ Member, Board of Revenue, personal comm.

⁵ A standard acre is defined as 1 acre of Class I land, 1.5 acres of Class II land, 3 acres of Class III land, and 4.5 acres of Class IV land. Class I land has perennial irrigation on which two or more crops can be grown, whereas Class II land is also irrigated but cannot yield more than a single crop in a year. Class III land is unirrigated but on which paddy can be grown, and Class IV land is any other land.

Table 2: Main Provisions and Impacts of Land Legislation in Orissa

Name of legislation	Year of promulgation	Main provisions	Impact
Orissa Estate Abolition - OEA - Act	1952	<ul style="list-style-type: none"> • Abolition of intermediaries; • Vesting of all land rights in the state; • Agricultural land less than 33 acres to remain with intermediary for personal cultivation 	<ul style="list-style-type: none"> • The Act aimed at abolishing intermediaries but did not contain any provision of protecting the tenant. • Large-scale eviction of tenants as <i>zamindar</i> allowed to resume land less than 33 acres for personal cultivation • Owing to the absence of reliable records, abolition of intermediaries not completed until 1974.
Orissa Land Reforms Act – OLRA (Amended in 1965, 1973 and 1974)	1960	<ul style="list-style-type: none"> • Permanent, heritable and transferable rights in land for the tiller; • Ban on leasing of land except under special conditions (in 1972); • Under adverse possession, land in continuous cultivation for 12 years or more by a person other than its owner shall pass to the cultivator • Rent not to exceed one-fourth of the gross produce; • Ceiling on individual holdings at 33 standard acres - later reduced to 20 (in 1965), and to 10 standard acres (in 1972). 	<ul style="list-style-type: none"> • Delay in the enactment and actual implementation of the Act provided sufficient opportunities for large landowners to escape ceiling restrictions. • By explicitly banning tenancy, the law has swept the problem of share-cropping under the carpet. No provision made to record concealed tenancies.
Orissa Survey and Settlement Act	1958	<ul style="list-style-type: none"> • Different laws relating to survey, record-of-rights and settlement amended and consolidated into one uniform law 	<ul style="list-style-type: none"> • Establishment of uniform though defective systems - rights of tenants not recorded during settlement operations
Orissa Consolidation of Holdings and Prevention of Fragmentation of Land - OCH&PFL - Act	1972	<ul style="list-style-type: none"> • Fragmentation of land declared illegal • First choice of transfer to adjacent farmer 	<ul style="list-style-type: none"> • Little impact on land fragmentation. • Occasional land sales but rarely to adjacent farmer • Consolidation of landholdings ignored by farmers in western Orissa because of undulating terrain
Orissa Prevention of Land Encroachment - OPLE – Act (Amended in 1982)	1972	<ul style="list-style-type: none"> • Unauthorised occupation of government land prohibited. • Penalties on encroachers to be followed by eviction. • 1982 amendment for settlement of two (later amended to one) standard acres of ‘unobjectionable’ land (i.e. government wasteland) with ‘eligible’ beneficiaries (e.g. landless) 	<ul style="list-style-type: none"> • Flagrant disregard of the Act - widespread encroachment on both government and common lands, often by powerful groups. Penalties too low to act as a disincentive to encroachers • The 1982 amendment not a ‘proactive’ right - encroacher cannot ‘apply’ to be regularised as act of encroachment is regarded as illegal in the first place. Only RI can initiate regularisation of rights • Considerable scope for rent-seeking by revenue officials

Source: Compiled from Behuria (1997), Orissa Land Reforms Manual (1997), Patnaik (1980), Tripathy (1992), and field notes.

the liberalization of the land-lease market remains an obstacle to the rapid enactment of this law. The initiative behind this unified land administration law is most welcome, since the complexity of the existing legislative framework, inherited as it is from diverse pieces of legislation designed to bring together quite different revenue systems, accounts for much of the wide scope for evasion of the law in practice.

2.4 Women's access to land

The survey of the legislative framework in Orissa confirms that 'land reform policies have been based on the principle of redistributive justice and on arguments regarding efficiency (land to the tiller, fixation of ceilings, prevention of fragmentation, etc.); but on neither count are gender inequalities taken into account' (Agarwal, 1994: 216). No law has dealt specifically with increasing women's access to land. Rights to land for Hindu women are according to the Hindu Succession Act 1956 which provides for daughters, widow and mother of a Hindu man dying intestate to inherit property equally with his sons. In practice, however, significant and persistent gaps exist between women's legal rights and their actual ownership of land, and between the limited ownership rights women do enjoy and their effective control over land (Agarwal 1994).

For example, the Orissa Land Reforms Act 1960 does not mention the order of devolution at all. So whether the devolution of tenancy land will be according to personal law, or would follow a different order of devolution, is open to interpretation. Gender inequalities in OLRA have also arisen from enactments relating to the fixation of ceilings⁶ on two counts, namely:

- **the definition of 'family'**: Article 37 of the Act defines a family as the individual and his/her spouse and their children, whether major or minor. Later the law was amended to include married daughters whereas a childless widow is not considered to be a member of her deceased husband's family (Orissa Land Reforms Manual, 1997: A67-A69).
- **recognising only men's and not women's independent land rights**: Women's rights to land are most often subsumed under those of her husband. A woman does not count as an owner in her own right, which leaves her disproportionately vulnerable to losing her land (See Box 4).

Box 4: Constraints on women's access to land

In a 1986 court case in Sambalpur, the government Revenue Officer, in assessing ceiling surplus land, aggregated the land of both spouses as 'family land', including land separately registered in the wife's name and inherited from her father. But the Revenue Officer gave notice only to the husband as the 'person interested'. The two men settled the matter between them, and the wife's land was declared surplus. The wife appealed the order to the High Court, asking that her separate land be excluded from the ceiling surplus, on the ground that since the land concerned was her separate property she was the 'person interested' to whom prior notice should have been given. This, she argued, would have given her a chance to ask the Revenue Officer to let her retain her land and instead declare some part of her husband's land as surplus. Her appeal was accepted by the High Court under the constitutional principle of 'natural justice.'

Source: All India Reporter (1986), 'Kunjolata Purohit v. Tahsildar, Sambalpur and others', Orissa 115, quoted in Agarwal (1994)

⁶ A ceiling is fixed in relation to a family unit consisting of up to five members. Additional land is allowed to be held by families of over five members, subject to a specified maximum. OLRA, as amended in 1974, has fixed a ceiling of 10 standard acres for a family of five which can increase by two standard acres for each member in excess of five, up to a maximum of 18 standard acres.

There is, however, a deeper issue of the perceptions of women's role in agriculture. This is reflected in Section 2 (21) of the OLRA by which 'persons under disability' refers to, *inter alia*, 'a widow, or an unmarried woman or a woman, who is divorced or separated from her husband ...'. On the face of it, this provision is a special consideration for female heads of households to lease out their lands for cultivation when leasing is otherwise prohibited. But it masks two important underlying presumptions: (i) that women are perceived to be in need of protection from the rigours of cultivation and so should be allowed to lease out their land; and (ii) that only female heads of households should have control over land, while for other married women living with their husbands control over land is subsumed under the 'family'. The first presumption ignores the fact that bulk of the agricultural tasks (especially labour-intensive tasks such as rice transplanting, weeding and harvesting) are, in any case, performed by women.

In some respects, the OLRA is quite progressive in that it allows land gifted to a daughter on the occasion of her marriage to be excluded from the ceiling area of the father. Ostensibly, this is to encourage land transfers to daughters, but it rarely happens in practice. Generally, women do not have RORs in their own names. In a family, the ROR is recorded in the name of the husband. Extensive discussions with women in Laderpally (Sambalpur district) and Badaverna (Khurda district) villages reveals that women have RORs in their names only under special circumstances as described in Box 5. Women would very much like to hold the *patta* in joint names with their husbands to prevent indiscriminate land sale by husbands without their consultation⁷. Besides, in the event of a divorce, the wife would be able to claim a share of the joint property.

There was less unanimity, in both villages, on the issue of equal rights for sons and daughters. Women in Laderpally pointed out that equal rights for daughters will have a positive impact on the dowry problem. Very often parents have to sell off a piece of land to arrange for a dowry for the daughter. But even if the demand for dowry is met, there is no guarantee that the daughter will be able 'to live happily after marriage'. In the event that she is sent back to her parents on some trivial ground or other, the dowry would remain with her in-laws. Our respondents recounted the case of one family in Laderpally village that had sold half an acre of good quality land for their daughter's dowry. Six months later, the daughter was sent back to her parents. Apparently, her husband and his parents did not like her. All the items given as dowry remain with the husband. "If we had given her a piece of land instead, my daughter would still have had it with her", lamented the mother.

⁷ According to the ADM Sambalpur, joint pattas have begun to be issued in the joint names of husbands and wives in two tehsils in the district on an experimental basis.

Box 5: When can women have lands registered in their own names?

- After the death of husband, wife becomes a joint share holder of the deceased's land, along with her children.
- If a family has more land than the ceiling set by the government, the surplus land is recorded in the name of the wife/daughter to avoid ceiling restrictions.
- When there is no male heir in the family, daughters get the ROR transferred to their names.
- Unmarried women (those who could not marry and are living with their parents/brothers) get some land in their name. This does not come automatically, however, and often has to be contested.
- There are cases in which a woman's in-laws transfer the ROR in their daughter-in-law's name, such as in the event that an alcoholic man's parents believe that their son will sell off all their land.
- In some cases, when a woman marries a widower or divorced man, her parents generally insist that the man transfer some land in his new wife's name. This is done to ensure some economic security for the second wife in case the man marries for a third time while the second wife is alive. Another reason is that any children the man may have by his first wife may might claim the entire property of the father leaving the second wife with no legal claim.

Women's legal rights in land conflict with deep-seated social norms and customs, and are rarely recognized socially to be legitimate. Thus, men are considered the *de facto* land owners even when the ROR is in the wife's name. For example, Janaki Panda of Badaverna village (Khurda district) is the only daughter of her parents. She lives in her parent's house with her husband. After her father's death, her husband was considered to be the household head even though she was the legal heir to her parental land. All major decisions are taken by her husband.

While women would like to have an equal share in their parental land, they are aware of the cultural constraints that are difficult to overcome. For instance, if a woman demands a share of her deceased father's land, she often has to sever all relations with her brothers. There is usually a strong disincentive for many women not to press claims on parental property. This is because culturally a woman is not expected to claim any property from her parents/brothers. If she is unmarried and/or is in a financially tight situation, she might get some land if the brothers are sympathetic and willing to share. Thus, there are strong pressures on women to cede their legal rights to their brothers, reinforced by social stigma, seclusion practices, and other sanctions. Given the lack of alternatives, women tend to be dependent on their brothers for economic and social support in the event of widowhood or marital break-up.

Sections 2.3 and 2.4 have highlighted the consequences of the existing legal framework governing access to land for socially excluded groups. Various factors have combined to frustrate the stated intentions of land reform legislation in Orissa. However, legal restrictions are only one part of the story. The other part relates to the many formidable obstacles that constrain the poor (including women) from exercising even the limited rights they currently have. Part of the explanation for this lies in the organisational structure and operational procedures of the state's land revenue department, which combine to create high transaction costs in land markets. The next section describes the structure of the land administration system in Orissa.

2.5 Structure of land revenue administration in Orissa

The central purposes of land administration are to collect land revenue and to protect the rights of cultivators. This dual role is reflected in the division of roles and responsibilities between the administrative section responsible for policy formulation and the collection of revenue (Revenue Department) and the Board of Revenue which is concerned with judicial matters and policy implementation.

The Department of Revenue and Excise (DRE) of the Government of Orissa (GOO) functions under the Ministry of Revenue and Transport through Principal Secretary, Revenue and Excise as head of the Department. The major activity of the DRE relates to policy formulation in revenue administration in the entire state. Policies are implemented by the Board of Revenue (BOR) headed by the Member, BOR. It is the apex authority in the matter of revenue administration and revenue policy implementation. It also has judicial authority. Coordination of land reforms and maintenance of land records are undertaken by the BOR. The DRE, on the other hand, is the policy-making body with respect to these areas. As is apparent from Figures 4 and 5, which show the organisational structures of the BOR and DRE respectively, there is considerable duplication of roles between the DRE and the BOR, which contributes to a lack of coordination between the two agencies and reduces efficiency. The BOR has been described by senior revenue officials in Orissa as an older, colonial-inherited institution that is declining in importance as government responsibilities increase⁸.

The Member, BOR, is the Chief Controlling Revenue Authority, whose judicial authority is delegated to the Revenue Development Commissioners (RDCs). There are three RDCs in Orissa, one for each of the North, Central, and South Zones⁹. District Collectors report to the RDC of their respective zones on revenue matters. Each district is sub-divided into one or several sub-divisions headed by the Sub-Collectors. The next lower administrative unit is the tehsil which functions under the Tehsildar.

The BOR functions through several divisions in correspondence with different wings of the revenue administration (Figure 4). The Commissioner, Land Records and Settlement (CLRS), the Land Reforms Commissioner (LRC), and the Consolidation Commissioner (CC) are mostly concerned with disposal of settlement and consolidation cases. The Special Relief Commissioner (SRC) is responsible for all relief-related works generally performed through respective District Collectors and Block Development Officers (BDOs). The other three divisions within the BOR have more direct, day-to-day responsibility for the implementation of various land-related provisions, and organise the state's responses to privately-initiated land transactions as depicted in Figure 1.

⁸ Other states have recognised the limited advantage of maintaining two parallel bodies in land administration. For example, there is no longer a Board of Revenue in Andhra Pradesh.

⁹ RDC (North Zone) is located in Sambalpur and covers the undivided districts of Sundargarh, Sambalpur, Bolangir and Keonjhar. The RDC (Central Zone) is located in Cuttack and extends over Cuttack, Puri, Balasore, Mayurbhanj and Dhenkanal districts. The RDC (South Zone) is located in Ganjam and covers undivided Kalahandi, Koraput, Ganjam, and Phulbani districts.

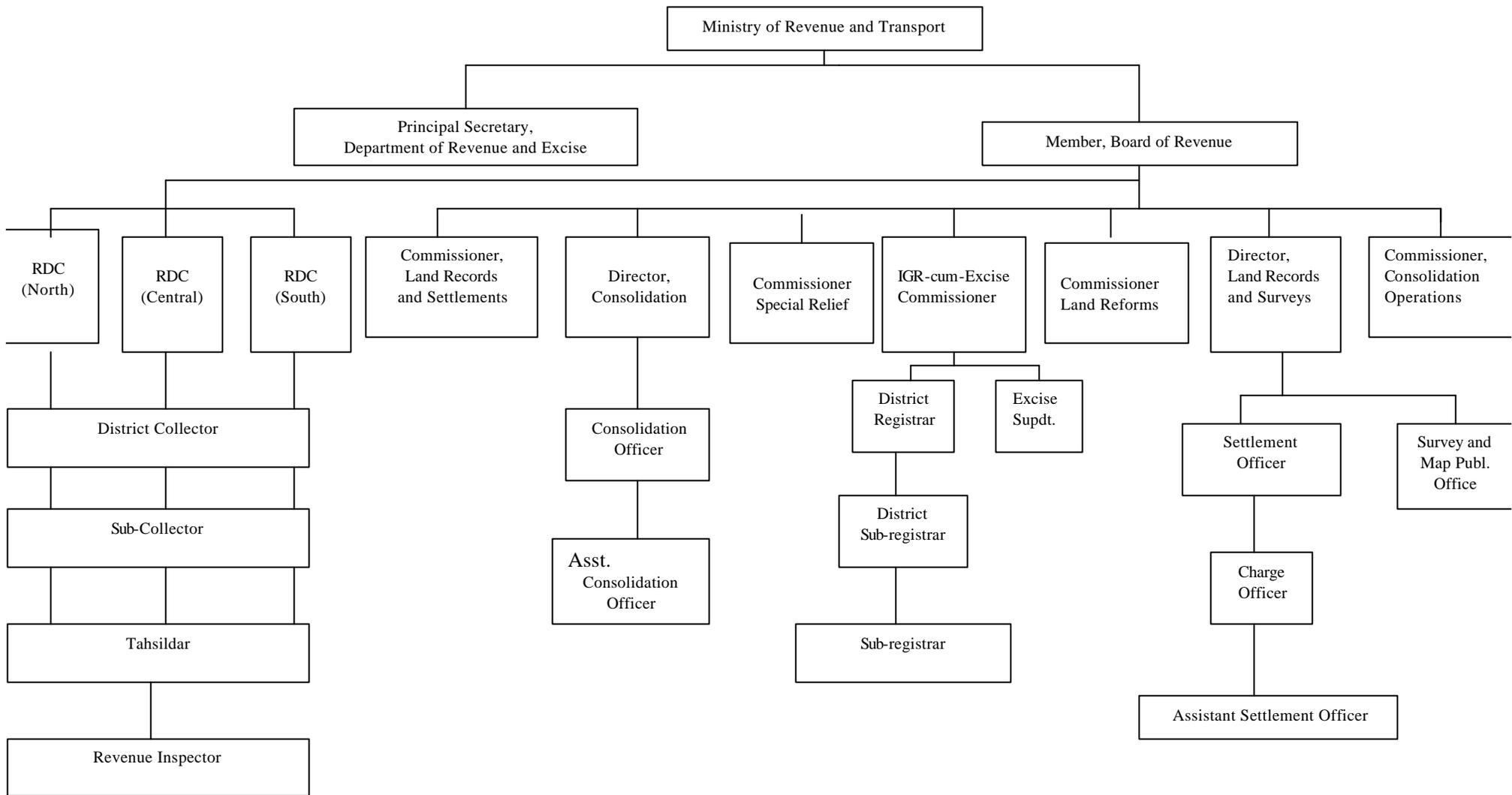


Figure 4 : Organizational Chart of Revenue Administration in Orissa

Survey and settlement: Rather than responding to any specific land transaction, the survey and settlement process recognises all land transfers that have occurred since the previous revisional survey but remain unrecorded for various reasons. The Director, Land Records and Survey (DLRS) is the nodal officer responsible monitoring the survey and settlement operations and preparation of an up-to-date Record of Rights (ROR). Survey and settlement operations are organised through Settlement Officers in charge of respective settlement zones (with each zone covering several districts), and Charge Officers covering a 'range' or 'circle' across more than one district.

Land registration: The government's response to current land transfers¹⁰ is organised by the Inspector General of Registration-cum-Excise Commissioner (IGR) who deals with registration and excise matters through District Registrars/Sub-Registrars and Excise Superintendents. All policy matters relating to registration administration and stamp duty are submitted by the IGR to the Government. Under section 69 of the Registration Act, the IGR is responsible for general supervision over all registration offices in the state and shall have the power from time to time to make rules consistent with the Act. Three Deputy IGRs are in charge of the ranges: Northern Range at Sambalpur, Central Range at Cuttack, and Southern Range at Berhampur. They have the power to inspect all registration offices falling within their ranges. At the district level, the District Registrar is empowered under section 68 of the Registration Act to supervise the sub-registrars under him. The ADM (General) usually functions as the District Registrar with the support of a District Sub-Registrar. There are 144 sub-registration offices in Orissa. The Sub-Registrars, District Sub-Registrars and Deputy IGRs have been deemed to act in place of the Collector for the disposal of under-valuation cases under section 2(9) of the Stamp Act.

Land consolidation: The Director, Consolidation controls and monitors land consolidation operations in the state. The field units of the consolidation division are organised in a similar manner to the settlement division with Consolidation Officer (for a zone) and Assistant Consolidation Officers (for ranges within a zone).

In the field, the District Collector (DC) is the superior authority for revenue administration in the district, and the district-level officers of different divisions of the BOR (e.g. the Assistant Settlement Officer, Assistant Consolidation Officer and the District Registrar) report to the DC on administrative issues. However, the BOR also has a judicial role which is exercised through these field officers. Thus, the latter report to the RDC of their respective zones on judicial matters. The District Collector supervises the Sub-collectors (at the block-level), Tehsildars (in charge of a tehsil) and the Revenue Inspectors (RIs, or *patwaris*) who cover a number of villages within the revenue circle.

¹⁰ For present purposes, land transfers refer to transfers through sale, gift, and inheritance.

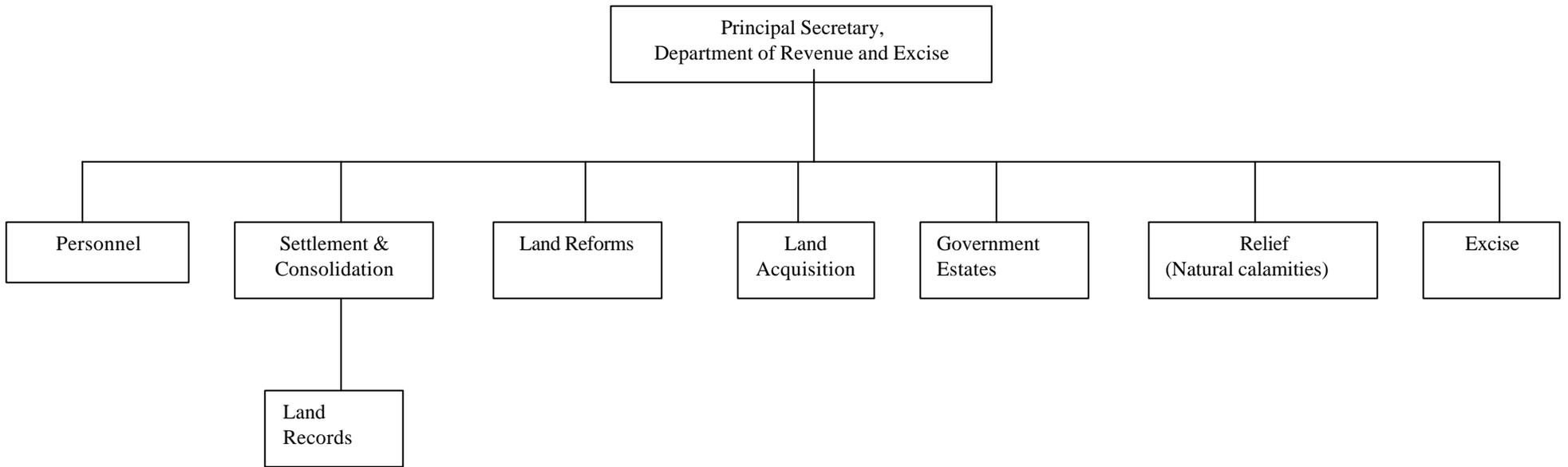


Figure 5: Organizational Structure of Department of Revenue and Excise

2.6 Contribution of land revenue to state income

After independence, land revenue in its true sense was more or less phased out in a populist political gesture to mark a break with the colonial past. As a consequence, there has been a sharp decline in the contribution of land 'revenue' to the state's gross income. As is evident from Table 3, land revenue contributed almost one-third of Orissa's tax revenue in 1958-59. A decade later its share had fallen to seven percent, and by 1988-89 it contributed less than two percent of total revenue. In absolute terms, land revenue increased by less than one percent per year compared with an annual increase of more than nine percent in total tax revenue over the period 1958-1988. Land revenue now amounts to a cess rather than a land tax and covers only a fraction of the actual costs of land administration. In Ganjam district, for instance, land revenue amounts to around Rs.10 million a year while the annual salaries of district revenue officials alone exceeds Rs.100 million¹¹.

Stamp duty, payable on registration of land transfers, has also declined somewhat as a share of total state income over recent decades, but remains a significant source of revenue. The significance of stamp duty among the various transaction costs incurred by individuals in acquiring land through land transfer is assessed in section 4.1.2 below.

Table 3: Changing share of state revenue from different sources (%)

	1958-59	1963-64	1968-69	1973-74	1978-79	1983-84	1988-89
Land Revenue	31.6	21.4	6.9	6.2	6.5	5.1	1.5
Stamp Duty/ Registration	10.2	9.9	9.8	9.5	8.0	7.1	6.3
Sales Tax	27.3	32.8	40.4	45.4	47.5	50.9	56.5
Excise Duty	17.6	13.9	19.3	13.8	8.7	8.7	7.7
Motor Vehicles Tax	11.2	10.8	11.9	9.8	8.7	8.4	9.5
Electricity Duty	0.2	5.7	9.6	8.9	14.5	15.4	17.0
Entertainment Tax	1.5	1.7	1.8	1.9	2.6	2.2	1.4
Other Taxes*	0.4	1.9	1.0	4.4	3.4	2.1	0.04
Total Tax Revenue	100	100	100	100	100	100	100

Notes: Totals may not add up to 100 because of rounding.

* Other taxes include agricultural income tax, goods and passenger tax and estate duty on agricultural properties.

Source: Meher, 1993.

¹¹ S.K. Satapathy, District Collector, Ganjam, personal comm.

3. LAND SURVEY AND SETTLEMENT OPERATIONS

Land revenue is a rent fixed on land on the basis of its productivity and income. Land ‘settlement’ in Indian revenue parlance refers to the assessment of the land revenue demand from each parcel (plot) of land. It is preceded by:

- cadastral survey: a comprehensive survey of plot boundaries conducted upon both the initial formation of the plot (e.g. through partitioning) and any subsequent boundary changes; and
- preparation of Records-of-Rights (ROR): the ROR makes clear all interests in the land. The ROR does not alter existing rights or create new ones, but merely ascertains existing rights in a particular land parcel, and by whom they are exercised.

The survey and the ROR are together used to assess the land revenue.

Prior to Independence in 1947, different principles of rent settlement were followed in different parts of Orissa. The Survey and Settlement Act, 1958 (followed by the Survey and Settlement Rules, 1962) introduced uniform procedures for survey, preparation of RORs and settlement of rent. The term ‘settlement’ will be used here to refer collectively to these three processes. Settlement is initiated by government in order to update the RORs before determining the land revenue demand. It usually takes place once every 20-25 years although in some places the frequency has been much lower. The settlement operation is organised through field camps¹² at which officers from the settlement section camp are physically based for much of the duration of the survey and settlement operation. Each camp covers a number of villages within the jurisdiction of a particular police station. The notification for a camp is issued by the beat of drum and by posting a copy to the gram panchayat and the RI. A minimum notice of 2-3 months is given prior to setting up the camp at a prominent place in the village. For instance, the settlement camp in Badaverna village in Khurda district, one of the 7 camps operating simultaneously in Begunia Police Station at the time of our field study, covered 19 villages in Begunia RI circle, and had hired out part of the gram panchayat building.

The survey and settlement operation consists of three main stages: cadastral survey, preparation or updating of land records, and assessment of revenue demand. Each of these is considered in turn.

3.1 Cadastral Survey

An essential preliminary step to settlement of land revenue is the preparation of a cadastral map of the village. First, trijunctions of survey fields are demarcated with stones and used for theodolite traverses. The owners are notified and ordered to demonstrate their claims on the land to the *amin* by indicating where boundaries have changed through mutation. In the event of a boundary dispute (e.g. by encroachment), the disputed portion of the plot is shown as representing a new, discrete plot, and remains legally registered in name of the original owner¹³.

¹² Technically, the settlement camp is known as the Attestation, Draft Publication and Objection Hearing (ADP & OH) camp.

¹³ To do otherwise would favor the encroacher and therefore give rise to considerable litigation. In practice such instances of encroachment do not come to the attention of the revenue authorities since they are referred to the civil court, which is prohibitively expensive for most people. In this process, weaker and disadvantaged land holders often lose effective control over land which remains legally registered as theirs.

Fields are then measured by means of chaining and orthogonal offsetting. A separate sketch is made for each survey field. Plot boundaries within the survey field are also surveyed¹⁴. After the map has been completed, the survey fields are numbered and the individual plots given sub-numbers. In the past, alleged changes in plot boundaries were physically marked on the ground, but this practice gave rise to so much litigation that plot areas and boundaries are now simply compared with those shown on the previous map. This is also possible because most areas have been surveyed at least once and so previous maps exist.

Amins are responsible for plot-to-plot mapping. They follow 'The Technical Rules of the Settlement Department of Bihar and Orissa', 1927. The rules specify the instruments to be used and procedures to be followed in the field. Survey instruments and procedures have changed little over the last 70 years, and are in fact based on those developed by Todormal (Emperor Akbar's Finance Minister during the mid-16th century).

In recent years, the use of aerial survey methods has become more widespread in India¹⁵. In Orissa, however, the scheme for conducting aerial surveys is at a preliminary stage. A pilot project has been initiated in Angul district, in collaboration with the Research and Development Wing of the Survey of India, but progress has reportedly been slow due to the lack of efficient plotter equipment.

3.2 Preparation of the RORs

After the village survey, the actual boundary of each individual plot is determined (*kistwar*), and plot-wise information¹⁶ provided in the prescribed format (*khanapuri*). The preliminary ROR (*yaddast*) is verified and validated in consultation with the landowner(s) (*bhujarat and attestation*). Draft *khatiyans* (the individual RORs) are then prepared and objections are invited (within a maximum of 60 working days) from concerned people for necessary amendments to the records (*draft publication and objection hearing*). In case of objections, the *amin* makes enquiries. On receipt of the *amin*'s report, the Assistant Settlement Officer fixes a suitable hearing date. The records are amended after the objections have been settled. Box 6 provides a brief description of the nature of objections at a typical settlement camp.

3.3 Settlement of rent

The amended records are brought to the Settlement Office for rent assessment according to the government's rent policy (*rent fixation*). This is followed by the preparation of the final ROR for the village, including relevant details from each landholder's final *khatiyan*. Four copies of the *khatiyan* are produced for

¹⁴ Broadly, two types of survey methods are used: the 'plane table survey' conducted by the Settlement Office for plane surfaces/ level ground, and the 'traverse survey' conducted by the Survey and Map Publication Office for hilly areas, rivers and forests. Survey and Map Publication Office is a constituent part of the Directorate of Land Records and Surveys (see Figure 4).

¹⁵ The usefulness of aerial survey methods depends upon topography, vegetation cover and the types of plot boundaries. Hilly areas may require more sophisticated and expensive photogrammetric methods that eliminate errors due to altitude differences. Heavy vegetation cover may make certain boundaries invisible, making it necessary to at least supplement the aerial photography with a ground survey. In general, the use of aerial survey is most advantageous in open country with small, irregular fields having physical boundaries. Aerial survey is most feasible in rural areas with large, regular fields having physical boundaries (Hanstad, 1996).

¹⁶ Such as land owner(s), forms of land rights, land use types, actual area of each plot belonging to the land owner, lease/mutation/encroachment details, and other relevant details. This is primarily a fiscal record to show from whom the assessment of each holding is to be realised, and the amount.

distribution to the landholder(s), tehsil office (to regularly update any changes and record through subsequent mutations following land transfers), Collector's office, and the Revenue Inspector (*final publication and patta distribution*). After the final publication of the RORs, the field maps are prepared at the Settlement Office to indicate the exact shape of individual plots within the village.

Box 6: Nature of objections at a settlement camp

At the camp in Badaverna village, Khurda district, more than 70 percent of objections related to non-recording of mutations for transfer deeds (sales and partition). About 20 percent arose out of errors during demarcation. Inheritance (3 percent), change of land title (3 percent) and land classification (1 percent) made up the rest of the objections. About 15 percent of objections relating to inheritance were brought by married women who had been denied a share in their deceased father's property by their brothers.

Nearly one-third of the total number of objections were disallowed. This is a special category which relates to encroachment on government land. The encroaching parties have no *patta* (documentary evidence of land rights, i.e. sale deed or title) and the objection is thrown out. An Encroachment Register is prepared by the settlement staff which records encroachment on cultivable or non-cultivable government land (grazing land, burial grounds, etc.). It is handed over to the tehsildar to pursue under OPLE.

The disallowed category also includes cases in which, after filing the initial objection, the concerned party fails to pursue their claim. Such cases arise most often over jointly-held property where the opposing claimants are brothers who later resolve the dispute by agreement. However, once an objection is filed, it cannot be withdrawn. It has to be investigated by the *amin* by interviewing witnesses near the plot. Women are rarely interviewed as witnesses.

Settlement officials claim that objections usually arise out of oversight on about 10-11 percent of the cases handled by the settlement camp. Focus-group discussions with villagers in Badaverna village reveals an altogether different picture. Their perceptions are summarised in Box 7.

At any given time, settlement operation take place in about 4,000 of the approximately 55,000 villages in Orissa. Revisional surveys may be thought of as a stock-taking exercise. In a single operation spanning over 5-7 years, the area is re-surveyed, all land records updated, and land revenue reassessed for a number of villages within the circle of a police station. Settlement department officials perceive their role as providing a 'door-step service free of charge' to the villagers as the latter are spared the effort of going to the sub-registrar's office, paying stamp duty and all other, unofficial transaction costs required to register the sale deed, and can have their rights recorded immediately in ROR on presentation of the sale deed without having to apply for mutation. That is, settlement combines the *registration of deeds* (discussed in section 4.1.1) with the *issuing of land title (mutation)* (discussed in section 4.1.2). Consequently, many land purchasers prefer to wait for the settlement operation to register the transaction.

At the same time, the settlement operation:

- is **inefficient and slow** - takes 5-7 years to complete settlement in 15-20 villages, and may not be revised for a further 30 years. In Digpandhi, Ganjam district, one recently completed settlement operation was conducted some 50 years after the previous settlement operation;

- provides an *opportunity for rent-seeking* - by government officials who perceive themselves as providing a service which commands a price;
- is prone to *manipulation by powerful interests* - it is common for people to encroach on private (or common) land during settlement camps in order to have a larger area recorded in their names; or to attempt to influence settlement officers to show a larger area on the village map. Settlement operations often result in increasing landlessness for the poor since it is easy for the more powerful to buy off settlement officers in their favour, leading to dispossession of poorer and weaker groups; and
- is likely to become *irrelevant with computerisation* – settlement operations will become unnecessary if the mutation system is improved to as to permit regular and more rapid updating of land records (section 4.1.3).

These shortcomings raise serious doubts as to the need to persist with settlement operations which might have outlived their utility. Some of these shortcomings and their distributional impacts are highlighted in a case study of farmers' experiences in Khurda and Ganjam districts in Box 7.

3.4 Conclusion

Land settlement is a carry-over from the British period when its main purpose was revenue assessment at what were then lucrative levels for the colonial administration. Under *zamindari* tenure, in which single proprietors possessed large estates, the State revenue was assessed on the ascertained or assumed rental value. The revenue, though fixed with reference to acreage rates on the land actually cultivated, was assessed on, and payable by, the estate as a whole. The assessment remained unchanged for the period of the settlement. The proprietor could bring as much of the wasteland under cultivation as desired, and it was only on re-assessment at the end of the term of the settlement that the state could obtain any increase of revenue on account of the extensions of cultivation during the settlement period. The regular practice of revenue assessment, updating and maintenance of land records were absent in the *zamindari* tracts since the tenants and sub-tenants were 'tenants-at-will' and as such had no heritable or transferable rights in land. By contrast, land revenue administration systems in *khasmahal* and *ryotwari* tracts were in much better shape.

Periodic settlement operations were the most cost-effective way of settling a large area in a short time. There was little need for sporadic settlements because land was rarely transferred or partitioned¹⁷. Moreover, settlement made sense when new lands were being brought under cultivation, i.e. without any transfer of ownership. The survey and settlement process may have outlived its utility if the same work can be done more efficiently by a smoothly functioning registration and mutation process. The system of deeds registration is examined in the next section.

¹⁷ This is not to suggest that land sales markets were absent during the late 19th and early 20th centuries. There were several classes of tenancies in *zamindari* areas (especially privileged tenancies based on service) that were heritable. Rent-collection contracts were also bought and sold (K.C. Shivaramkrishnan, personal comm.).

Box 7: ‘They knock on your door to collect bribes’

Farmers’ main problems during survey and settlement operations relate to the rampant rent-seeking by government officers and the manipulation of the process by the large landowners to their own advantage. Objections are invited to correct any mistakes that might have occurred during the preparation of the *yaddast* and the draft *khatiyans*. This is the primary stage of rent-seeking by officials at the settlement camp. The two common types of errors are that the land is shown in somebody else’s name, and that the area recorded (e.g. 0.75 acre) is smaller than the actual area owned (e.g. 1 acre).

A sum of around Rs. 500-1,000 is usually demanded to correct the mistakes. Landowners are convinced that mistakes are made on purpose. For, “if these are genuine mistakes, why do they demand money to correct them?”

Manipulation of the process by the large landowners emerged as a major issue in focus group discussions with landowners in Digpandhi tehsil, Ganjam district. Numerous instances were reported of alterations being made during the preparation of the preliminary RORs owing to the influence of large (and perhaps literate) farmers over settlement officers.

In spite of these problems, landowners still prefer the settlement operation to mutation through the tehsil office since they find settlement procedures to be less cumbersome. They report that with settlement, at least ‘*there is a single-window for bribes*’; ‘*you don’t have to make repeated trips to the tehsil office*’; ‘*you save on transport costs and don’t lose the daily wage*’.

It is widely acknowledged that government services were generally not performed without paying a bit extra. An elderly landowner in Badaverna village, Khurda district, explained the difference between settlement and regular mutation as follows: ‘during a settlement operation they come to your door to collect bribes, whereas for ... mutation you have to go to the tehsil office to pay bribes.. and.. at the end of the settlement process (5-7 years) you can be sure that your work will be done if you have paid the money.’ He cited the case of one farmer who has been unsuccessful in getting *patta* to a plot of land he bought 12 years ago even though he had made repeated trips to the tehsil office. It seems the previous RI was not sufficiently ‘happy’ and so some of the papers have now gone missing.

Ideally, people would prefer to get the ROR at the time of registration of the sale deed.

4. LAND TRANSACTIONS AND STATE RESPONSES

4.1 Land sale transactions

Land can be transferred from one party to another through sale/purchase, gift, inheritance, mortgage and tenancy. The last two are of a temporary nature and are excluded from discussion in this section. Data are not available from which to assess the relative volume of each type of transaction in Orissa. Discussions with revenue inspectors suggest that sale/purchase transactions constitute nearly 80 percent of all annual land-related transactions in a village, while gifts comprise 10 percent, and inheritance the remaining 10 percent (around a half of which result in partitioning of a land holding).

Throughout rural India, land markets are incomplete, imperfect and often (though decreasingly) interlinked, resulting among other things in the persistence of marginal and sub-marginal operational holdings which can neither be easily added to nor disposed of (Mearns, 1998). The situation in Orissa is consistent with this trend. A recent study reported that only about seven percent of farm land changed hands (through 88 sale/purchase transactions) over the period 1955-95 in a village in Sambalpur district (Sarap, 1998). There were wide fluctuations but the maximum area sold in any year was three acres. Based on a longitudinal survey of two villages in Cuttack and Dhenkanal districts over the period 1965-95, Swain (1998) also reported that around 5-7 percent of village land was bought and sold. Thus, in general, the land market in Orissa is thin, with wide fluctuations in levels of activity.

A land sale has first to be registered before mutation of the RORs of the transacting parties can be effected. This section analyses the various processes in executing land sale transactions to identify the limiting constraints on land transfers, and specifies and attempts to quantify the transaction costs involved. The section also examines, in light of recent research, whether removal of these constraints or reduction of transaction costs would indeed help to facilitate land sales and increase access to land by the rural poor.

4.1.1 Registration

The prevailing system of land registration in India, developed under the British colonial administration, is governed by the Indian Registration Act, 1908, which provides for the registration of deeds in the case of transfers of immovable property including land. Subsequently, various regulations were passed at different times to suit local needs and facilitate registration of documents. The registration system aims to provide a public record of land ownership to protect individuals from being deceived by entering into transactions relating to properties previously disposed of, and to provide notice of the existence of certain continuing interests, encumbrances, and claims.

Sales of immovable property¹⁸ are first executed on a non-judicial stamp paper of the prescribed amount¹⁹. This constitutes the 'sale deed' and is necessary to make the transaction effective under the law. The value of the stamp paper is also known as the stamp duty. Stamp duty is fixed as a proportion (currently at 4.2 percent) of the total value of the transaction. In addition, a stamp duty surcharge is levied at varying rates as shown in Table 4. The stamp duty is payable by either the purchaser or the seller, subject to agreement between them.

¹⁸ Along with wills, power of attorney, movable assets, etc.

¹⁹ Stamp papers are a monopoly of private vendors. Recently, a shortage of stamp papers has led to charging of illegal premiums by the vendors and widespread attempts to undervalue the transaction. In order to reduce such transaction costs, a proposal to introduce franking machines for supply of non-judicial stamps in Orissa has recently been approved by the Cabinet (J.K. Mohapatra, Revenue Secretary, GOO, personal comm.).

The original sale deed and a photocopy are produced before the district sub-registrar at the district-level, and the sub-registrar at the tehsil level, for registration. The clerk compares the photocopy with the original and attaches a certificate. The purchaser then deposits the registration fee (2 percent of the value of the transaction) and is expected to collect the registered document at a later date. However, such registration is voluntary and the validity of the sale deed is not the concern of the registering officer. It is estimated that about 10 percent of all registrations are illegal, in which government land or land belonging to someone other than the vendor is sold to unsuspecting purchasers. Such cases tend to be in urban areas where information asymmetries are high. In the rural areas, land is almost always invariably bought and sold within a village in which people know each other²⁰.

The value of the property sold/purchased is verified (from a valuation register) at the time of registration to ascertain that it is not below the current market price. The highest value at which a particular type of property in a particular area is registered in the last three years constitutes the present market value of that property. This verification is necessary to prevent under-valuation, and thereby depresses the future 'market' rate²¹.

Other activities of the sub-registrar's office include:

Preservation of document copies: Four types of registers are maintained at the registration offices: Book 1 contains the certified photocopies of documents relating to immovable property. Book 3 is concerned with wills. Book 4 consists of documents dealing with the power of attorney, adoption of movable assets, etc. Book 2 records all transactions that are disallowed by the registrar's office, for example, in the event that one of the parties is a minor, stamp duties and registration fees have not been paid, or the transaction falls outside the jurisdiction of the Indian Stamp Act, 1899.

Issue of encumbrance certificates: Persons keen to know encumbrances on a property over a given period of time provide details of the property and the period for which information is required, and deposit the fee for the search and preparation of the certificate. On receiving the request, the clerk searches the Index II register of the village in which the property is located for the required period.

Issue of certified copies: Persons requiring a certified copy of a document have to deposit search, inspection and copying fees. Search is done on the Index register from which the preserved photocopy of the document is located and copied manually onto stamp paper.

Back office activities: These include preparation of: (i) Indexes I and II to help search for the information for issuing encumbrance certificates and certified copies, (ii) valuation register which records information, for every village, on date of registration, area and type of land, and its value, (iii) fee book which maintains records of different types of fees collected such as registration fee, search fee, inspection fee, copying fee, and miscellaneous fee like marriage fee and petition fee, and (iv) the monthly receipt and expenditure statement.

Stamp duty and registration fees are important sources of revenue for the state government. In 1988-89 (the last year for which comparative data are available), income from stamp duty and registration fees together constituted 6 percent of the state's revenue (Table 3). While its relative contribution to total state income has

²⁰ It is customary for the purchaser to invite the seller for a meal which can typically cost Rs. 500.

²¹ Gift transfers avoid stamp duty. So if land is being transferred between brothers, they would prefer to show it as a gift rather than as a sale to evade stamp duty. No stamp duty is payable in inheritance cases.

declined from 10 percent in 1958-59, in absolute terms stamp duty and registration fees contributed nearly Rs.600 million to state income from various sources in 1997-98 (Table 5). This figure, however, does not

Table 4: Description of charges relating to registration of land transactions

Type of charge	Rate			Details
Stamp duty	4.2%			Prescribed in Schedule 1A of the Indian Stamp Act, 1899 - frequently revised. Present rate fixed since 1985.
Stamp duty surcharge	<u>Value</u> Upto Rs. 2,000 Rs. 2,001- Rs. 5,000 Rs. 5,001- Rs. 10,000 Rs. 10,001- Rs.25,000 Above Rs. 25,000	<u>Rural</u> 6.2% 7.7% 8.7% 9.7% 10.7%	<u>Urban</u> 7.2% 9.2% 11.2% 12.7% 14.7%	Surcharge levied for sale, gift, settlement, mortgage and lease transactions vide Additional Stamp Duty Act, 1986
Registration fee	2%			Payable under the Indian Registration Act, 1908
Mutation fee	Rs. 8			For transfer of Form No. 3 from the sub-registrar's office to the tehsil office for initiating mutation. Also the fee paid in inheritance cases to initiate mutation at the tehsil.
Writing of the sale deed	Rs. 40-50			Paid to private, licensed scribes (<i>mohoris</i>)
Demarcation fee, if part of a plot	Rs. 4 per plot			Penalty for not purchasing whole plot. Paid to the tehsil office for it to undertake demarcation of the new plot
Search fee	Rs. 17			To check last 12 years' records - mostly in urban areas
Endorsement fee	Rs. 5			
Incidental fee	Rs. 2			As witness fee if paying money
Consenting fee, if joint property	Rs. 40 per person			To get permission of joint holders of the property

Note: Figures in percentage are as percent of the value of the transaction.

Source: Inspector-General of Registration, Board of Revenue, Cuttack, 1998.

reflect the true volume or value of land transactions owing to the widespread practice of under-valuing property in order to reduce stamp duty and registration fees payable (Box 8)²². The latter are fixed as a

²² The RI, Begunia circle was not sure of the incentive to undervalue property since using the land as collateral a land purchaser is able to obtain bank loans for 10 times the face value of the land shown in the sale deed. He estimated that increasing access to formal credit is the primary motivation for around a quarter of all land purchases in the region.

proportion of the value of property being bought or sold, and usually amount to 17 percent of the registered value of the land transferred. Even taking under-valuation into account, this represents a highly significant transaction cost. Issues relating to rationalisation of the stamp duty to prevent evasion are discussed in Box 8.

Table 5: State income from land registration (Rs. million, at current prices)

Head of Account	1994-95		1995-96		1996-97		1997-98	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Stamp duties	503.50	401.80	763.80	500.60	687.50	566.30	855.10	488.30
Registration Fees	118.40	8150	132.60	89.50	112.40	112.20	174.80	110.30
Total	621.90	483.30	896.40	590.10	799.90	678.50	1029.90	598.60

Source: Inspector-General of Registration, Board of Revenue, Cuttack

4.1.2 Mutation

Registration of deeds is followed by mutation, which is to register a change in the record-of-rights in land. Sale deeds carry no guarantee of validity, and therefore offer no conclusive evidence of rights in land. Once mutation has been effected, the government, through the tehsil office, provides the landowner with documentary evidence of rights in land, locally called a *patta*²³, which amounts to evidence of land title. A legal interest in land is not created or transferred until mutation takes place. However, as we describe below, this process is both lengthy and costly, and many landowners do not bother to embark upon it, preferring instead to use their sale deed as evidence of their land rights, and to wait until the next survey and settlement operation during which they expect to be issued with a *patta* after the land records have been updated.

Registration of transfer deeds of any property is intimated by the sub-registrar to the concerned tehsildar in a prescribed format (on Form No.3). This information is used by the tehsildar to effect the mutation in the ROR²⁴. Mutation refers to the amendment of state records to reflect a change in ownership or other rights in land through sale/purchase, gift, inheritance or mortgage²⁵.

Before making any change in the ROR, the Tehsildar²⁶ calls for objections to the transaction within a stipulated period. Any objections to the transaction are dealt with by the tehsil court. Sometimes, the matter may be referred to the next higher court of the Sub-Collector or above. Once the mutation is allowed, the Tehsildar issues a notification to update the RORs of the land transferor(s)/ transferee(s). After mutation and

²³ *Patta* locally means a card, and is probably derived from the English system which used loose cards prior to computerisation.

²⁴ The Form includes information on village, *thana*, *khata* number, plot number(s) and respective area(s), amount of rent, type of transfer (sale/gift/partition), name of the registration office, registration number, and the names and addresses of the vendor(s) and vendee(s).

²⁵ Mutations arising from inheritance do not have to be registered and are initiated at the tehsil office (without submission of Form No. 3).

²⁶ However, the tehsildar is not empowered to mutate cases during settlement operations. At such times, mutation is carried out by the Settlement Officer.

correction of RORs, a 45-day appeal period is allowed for challenging the mutation. This is particularly relevant in the case of multiple brothers with potential claims on a parcel of land, one of whom may challenge the transaction. Finally, certified copies reflecting the latest status of land ownership are issued to the seller(s) and purchaser(s), the copy of the original record maintained at the Tehsil office is up-dated, and necessary corrections are made in the village map to reflect the most recent plot boundaries.

The process of acquiring a *patta* after a land sale/purchase can take a minimum of 3 months if there are no objections at any stage (Table 7). Typically, it takes 3-5 years and entails numerous trips to the tehsil office by the purchaser. If for some reason the RI is not kept 'happy' by the purchaser it may take as long as 12 years (Box 8). Often the size of land parcel for which the *patta* is issued is less than the size of land parcel actually purchased. For instance, two brothers Ishwar and Ulla Gowda of Gopalpur, Ganjam district, purchased 2.12 acres from Chanchala Pradhan. The *patta* records 2.06 acres even though they cultivate the full extent of the 2.12 acre plot. Ishwar and Ulla Gowda fear that problems are likely to arise when they decide to sell the plot. The new purchaser would negotiate on the basis of the existing *patta* and pay for only 2.06 acres while actually acquiring the full 2.12 acres.

Delays in processing, discrepancies, and rent-seeking seem to go hand in hand. It is argued by revenue department officials that these are a consequence of the excessive work burden of the revenue inspectors and registration clerks. This is discussed in the following section.

4.1.3 *Land records management*

Following land settlement and registration, the RORs and copy of the maps are supplied to the Tehsildar who is expected to maintain and regularly update them. However, it is commonly observed that the RI rarely corrects the RORs on time, and mutation cases remain pending for many years, thereby severely compromising the rights and interests of individual land holders.

Often inefficiencies arising from poor maintenance of RORs and the field maps increase transaction costs. It is argued that high transaction costs in sale and purchase of land place a disproportionately high burden on the rural poor, and are likely further to depress the land sale market thereby reducing their access to private, arable land. This section examines whether rationalising the responsibilities of the RI and the tehsildar in the course of the computerisation of land records and land registration would be likely to have a positive impact on the efficiency of land administration.

While the present system of land record management owes its origin to Todarmal, it was mainly developed under British rule in the 19th century. The colonial administration relied almost entirely on revenue from land and so an efficient land records system was essential to its survival. However, regular updating of land records was rare. In *zamindari* areas, the intermediaries were only interested in collecting rent. For this part-time rent-collectors (e.g. *guntia* in Orissa) were hired and there was no systematic system for land records management. Most of the updating occurred during periodic settlement operations. A large proportion of Orissa's land area fell under *zamindari* tenure and so for all practical purposes, Orissa was a 'non-land record state'.

The need to improve and strengthen land revenue administration has long been recognised. As early as 1958, the poor state of land records was identified as one of the important causes of the failure of land reforms (GOI, 1958). Thirty-five years later, the then Prime Minister remarked:

Many Chief Ministers have told me that even if they do not expect any money out of land revenue, they would like to see someone to keep the land records because it is a record of rights. If nobody has a record of rights, might becomes right....Whether any land revenue is paid, whether that amount

is considerable or not, whether that needs to be collected still or does not need to be collected, ... the maintenance of land records is a must and that has to be done. (Rao, 1992: 6-7)

However, constant reiteration in successive Five Year Plans of the need to improve and strengthen land revenue administration and update land records has done little or nothing to arrest their neglect on the ground:

Box 8: Would a reduction in stamp duty increase state revenue?

Under-valuation of property is as widespread as it is illegal. Section 47A of the Indian Stamp Act (Orissa Amendment) 1962, and its recent amendment of 1987, prohibits under-valuation of documents for evasion of stamp duty. Clear procedures have been prescribed for determination of market value which is the highest price of a particular type (*kisam*) of land of the village transacted during the last three years. The value of the property being sold or bought cannot be less than the government-determined market value. While the degree of undervaluation is difficult to estimate, revenue officials suggest that fewer than five percent of the documents are undervalued. Villagers in different parts of Orissa are convinced that only about five percent of the cases may be genuinely valued.

The main reason for under-valuation is to evade payment of stamp duty which is prescribed as a percentage of the value of the property. Transactors agree to transfer the property at the market price but register a price that is only just higher than the government-determined value of the land. How do they get to know of the government's value of the property? In this, the transactors are assisted by an army of clerks, stamp vendors, and touts hanging around the sub-registrar's office, who have an exact idea of the existing rate for a particular type of land in a particular village. Quite clearly, the information is leaked from inside the sub-registrar's office to enable the transactors to keep the value of the land down, but just above the government's valuation of the property. The prevailing market rate appears to be in the order of 25-50 percent higher than the government's assessment. Table 6 presents two case studies that indicate the extent of revenue loss through under-valuation of property. It is difficult to generalise from limited evidence but it seems that the state is losing at least 25-50 percent of potential revenue from stamp duty and registration fees.

Do the transactors benefit by saving the money which would have been spent on paying the stamp duty? Obviously not. The information comes at a price. Table 7 shows the additional, informal costs incurred at various stages of a land sale transaction. These additional costs are approximately equal to the estimated loss of revenue to the state in both cases (Table 6).

In July 1997, a Committee of State Finance Ministers recommended rationalisation of rates of stamp duty to reduce hardships and harassment of people. It has been suggested that the rate of stamp duty be fixed within a band of 10.5 percent to be gradually narrowed to 8.5 percent of the value of the land transacted. The Committee recommended that the rate of stamp duty be coupled with proper valuation of property to reduce loss of revenue to the state. GOO has accepted the recommendation of the Committee to set up a Central Valuation Cell under the Inspector-General of Registration to lay down guidelines for proper valuation and assess the value of land in different areas from time to time.

However, the extent of corrupt practices surrounding land registration and mutation seemed to have become institutionalised and do not appear to be perceived as 'corrupt' by land transactors. They recognise that the transaction will entail additional costs of about Rs.1,000-2,000 for the purchaser and try to negotiate the price beforehand. Without under-valuation the additional costs to the purchaser would not have exceeded this amount, but at least would have gone to the state exchequer. So why do transactors allow officials to siphon-off money? The main purpose of paying extra for services is to reduce the time spent for each activity. It seems unlikely that rationalisation of rates of stamp duty alone would reduce the extent of undervaluation, and of stamp duty evasion. This is because there are a number of stages where transactors can be at the mercy of officials (Table 7). It is better to 'keep them in good humour' by paying the 'going rate' rather than delaying the process. However, two things might

help. One, stamp duty could be levied per area for the particular type of land bought or sold since plot area is more difficult to disguise. Alternatively, a flat rate per transaction may be considered. The latter, of course, has the disadvantage of placing a disproportionate burden on small transactors. Two, extensive computerisation of the registration administration and its link-up with the tehsil computer will reduce the time taken during some stages (shaded areas in Table 7) and thereby, obviate the need to pay 'speed money'. Both options taken together, rather than the rationalisation of stamp duty alone, are likely to increase the state's revenue and reduce the additional costs incurred by the purchaser.

Table 6: Loss of state revenue through under-valuation of property

Case I: Laderpally village, Sambalpur district

0.6 acre of land transacted @ Rs. 60,000 per acre

Sale price negotiated between transactors (P1): Rs. 36,000

Price disclosed for deed registration (P2): Rs. 27,000

(Rs.)

Item	Expenditure under		Loss to the state
	P1	P2	
Stamp duty @4.2%	1,512	1,134	378
Stamp duty surcharge @10.7%	3,852	2,889	963
Registration fee @2%	720	540	180
Mutation fee	8	8	-
Writing of sale deed	50	50	-
Endorsement fee	5	5	-
Incidental expenses	2	2	-
TOTAL	6,149	4,628	1,521 (25%)

Note: * The figure in parenthesis is the percentage loss of revenue to the state.

Case II: Badaverna village, Khurda district

0.65 acre of land transacted @ Rs. 40,000 per acre

Sale price negotiated between transactors (P1): Rs. 26,000

Price disclosed for deed registration (P2): Rs. 19,500

(Rs.)

Item	Expenditure		Loss to the state
	Actual	Shown	
Stamp duty @4.2%	1,092	819	273
Stamp duty surcharge*	2,782	1,892	890
Registration fee @2%	520	390	130
Mutation fee	8	8	-
Writing of sale deed	50	50	-
Endorsement fee	5	5	-
Incidental expenses	2	2	-
TOTAL	4,459	3,166	1,293 (29%)**

Note: * Stamp duty surcharge, in rural areas, on land value more than Rs. 25,000 is 10.7% and for less than Rs. 25,000 it is 9.7%

** The figure in parenthesis is the percentage loss of revenue to the state.

Table 7: Additional transaction costs in the land market

Stage	Step	Person involved	Approx. time taken	Additional costs	
				Approx. amount	Purpose
PRE-REGISTRATION	Get 'no encumbrance' certificate to ensure that the plot to be transacted is not under dispute	Revenue Inspector	4 weeks	Upto Rs. 1000 per acre	To reduce time taken
REGISTRATION	Execute transaction on stamp paper	Licensed Vendor	Neg.	Rs. 50	To undervalue the price of land and bring it in line with the prevailing government rate
	Register the sale deed	Sub-registrar	1-2 weeks	Rs. 400-500	To ensure that Form No. 3 moves speedily from the registrar's office to the tehsil office for mutation
MUTATION	Tehsildar invites objections to the sale on receipt of Form No. 3 from the registrar's office	Tehsildar	2 weeks	-	-
	- Patta issued if no objections	Revenue inspector	4 weeks	Rs. 400-500	For speedy issuance of the patta
	- If objections	Tehsildar	5 years*	-	-

* If there are objections from, say, joint owners, a case is registered in the tehsildar's revenue court, in the first instance, for hearing and disposal.

Shaded rows indicate activities where computerisation might benefit the transacting agents by reducing their transaction costs.

Source: Compiled from field notes.

In states like.. Orissa.. there is no system of the annual revision of the record of rights. ..The records are usually brought up-to-date only during re-survey and settlement. As these operations are usually done at very long intervals the records remain out of date most of the times (Appu, 1997: 102-3).

Poor land records often lead to:

- **Difficulty in protecting land rights:** Land records specify the rights of individuals and the state with respect to a particular parcel of land. It is difficult to uphold rights if they are not recorded or updated regularly.
- **Difficulty in targeting development initiatives:** An inefficient land records system makes it difficult to retrieve timely information for purposes of policy formulation and targeting of state benefits.
- **Increase in rent-seeking:** Lack of records restricts the flow of information and gives rise to economic rents that may be captured by government officials.
- **Increase in rural/agrarian violence:** While poor land records do not directly lead to agrarian violence, they contribute by making it difficult to enforce rights and target benefits to the poor.
- **Encroachment of government land:** Poor or partial maintenance of land records has led to the steady encroachment of government land.
- **Uncertainty in conveyancing:** An imperfectly maintained land records system increases the costs of all land transactions and prevents the development of a freely functioning land market.
- **Inability of landowners to access credit:** Poor land records make it difficult to use land as a collateral to raise credit in both institutional and informal markets.

Various plan documents have recognised these factors, and a conference of revenue ministers on land reforms in 1985 reached a consensus that ‘computerisation of land and crop-based statistics should be taken up on pilot basis at tehsil/revenue-circle level’ (GOI, 1985:54). Computerisation of land records (COLR) is now being implemented to redress this shortcoming. It is hoped that it will:

- facilitate easy maintenance and updating of changes that occur in the land data base (e.g. changes due to availability of irrigation, natural calamities, consolidation or on account of land transactions);
- make land records tamper-proof and indirectly reduce litigation and social conflicts over land;
- facilitate implementation of development programmes for which data about distribution of landholding is vital;
- assist in planning for infrastructural and environmental development;
- produce accurate records for land revenue purposes;
- facilitate speedy retrieval of land-related data;
- provide a database for the quinquennial agricultural census; and
- issue updated copy of RORs to landholders quickly and more cheaply.

COLR is a central-sector scheme with full financial assistance from Government of India (GOI). Orissa is the only state in the country in which the scheme is being implemented in all districts. A sum of around Rs. 300 million has been made available by the GOI for three years to cover data entry in the local language (Oriya), civil construction, purchase of hardware, and operational costs during that period. GOO will take over full responsibility for the operation at the end of the three-year period.

The scheme is to be executed on a district-wise project basis through the Revenue department. Private firms have been contracted to enter the records in 10 districts²⁷ in the first instance. The target for data entry is 90

²⁷ The districts are: Ganjam, Cuttack, Kendrapada, Jagatsinghpur, Bhadrak, Khurda, Bargarh, Dhenkanal, Angul, and Nayagarh.

days per tehsil and work will be carried out simultaneously in all tehsils. Validation of information will be undertaken by the Board of Revenue staff while the data is being entered. But only data entry is to be checked, not the RORs themselves. Training of tehsildars will take place in a phased manner. A computerised land pass book will be provided to each individual landowner to maintain a proper account of land transactions. This will also serve as documentary evidence of rights in land for such purposes as raising institutional credit.

Since the project has only recently begun in Orissa it is too early to assess its possible impact. However, COLR was originally mooted during the Seventh Five-Year Plan and some projects were taken up in a few states as pilot projects during 1988-89 to 1991-92. Morena district in Madhya Pradesh was the first to be completed as a pilot project in 1992. In spite of methodological limitations, a recent evaluation report of COLR in Morena (Sinha, 1998) concludes that the programme has:

- increased flow of information to the public through improved access to records and an increased awareness of their rights, although this benefit has accrued more to those situated near district or tehsil headquarters;
- led to the emergence of the data-entry operator as a new rent-seeking agent;
- been responsible for only a marginal reduction in the workload of the *patwaris* (revenue inspectors);
- failed to reduce the rent-seeking behaviour of *patwaris* because they perform numerous functions besides providing copies of the ROR that are unaffected by computerisation of land records, and because people are loathe to deny the RI (for possible favours in the future) what has now come to be regarded as his due share;
- not resulted in better implementation of land reforms;
- not led to any significant improvements in land record management;
- so far failed to facilitate land transfers; and
- not led to any appreciable reduction in land disputes.

It should not be concluded from these findings that the computerisation of land records is ultimately likely to prove unsuccessful. Programme acceptance by all levels of the administration through increased utilisation of the database could increase its uptake in the future and increase effectiveness. The evaluation also suggests that the supply of computerised land records should be accompanied by a demand for the records from the farmers.

This is likely to happen only when members of the public are aware of their rights, know how to access information, and know how to press their claims. Under an initiative of the current Revenue Secretary, a 'User's Manual on Revenue Laws and Rights in Land' has been prepared in Oriya language in order to raise such awareness among land users. It is designed to be user-friendly and to provide simple information in a 'Frequently Asked Questions' (FAQ) format, and will be distributed at a low price (about Rs. 10 per copy) through revenue offices, local panchayats, etc. About 25,000 copies are likely to be produced in the first instance.

Inefficiencies in land records management stem from a combination of factors, only some of which computerisation is likely to help address. For example, it cannot reduce inaccuracies in the initial recording of interests in land. The now almost negligible contribution of land revenue to the state budget seems to have contributed to the perception that it is not important to maintain accurate land records. While revenue inspectors continue to collect primary data and to represent the cutting edge of land administration, there has been no addition to the local revenue staff (revenue inspectors, clerks, etc.) to cope with the increase in the volume of work arising from the natural increases in population and land transactions, and no new investment in infrastructure or staff training. Recent years have also witnessed a rapid increase in development work (such as digging bore-wells, installing bio-gas plants, meeting adult literacy targets, etc.) which is often

handled by the revenue staff. Taken together, these factors combine to over-burden the lower levels of the revenue administration and results in an inefficient land record management system fraught by excessive delays and high potential for rent-seeking. It is therefore important to examine the working conditions and workload of RIs to identify areas for improved effectiveness.

Over the years the scope of RIs' operations has increased both in terms of the area covered and the number of tasks performed. On average, an RI circle in Orissa now covers 20-30 villages²⁸ with an annual revenue demand of about Rs. 200,000. This is nearly 10 times the figure prescribed in the 1961 'Manual of Tehsil Accounts' in which an RI circle was envisaged to have a revenue demand of Rs. 20-25,000 and a tehsil was to cover an area with revenue demand of Rs. 300,000 (Tripathy, 1992). The conference of state revenue secretaries in 1985 agreed that 'the areal jurisdiction of the [RI] should be brought down to a manageable level such as four villages or 3000 *khatiyans* per [RI]' (GOI, 1985: 53). At the same conference, the revenue minister of Orissa acknowledged that 'revenue administration [in the state] is weak' (p. 15) and needs to be revamped.

The RI's primary function is collection of land revenue and maintaining land records. But he is also responsible for a variety of other tasks. These tasks are grouped into four broad categories in Table 8, which also indicates the proportion of the RI's total working time likely to be devoted to each category, according to the perceptions of the RIs interviewed. It is evident that computerisation is unlikely to reduce the time spent by RIs on the collection of land revenue and other dues, miscellaneous enquiries, issuing certificates or attending courts. Computerisation will, however, enable the RIs to concentrate on important matters such as timely submission of reports for disposal of cases, field visits, and correction of records.

While COLR is a positive development it should not be regarded as a panacea for improving land administration. Its impact will only be maximised when:

- it is accompanied by rationalisation of the RI's workload and of the procedures of revenue administration. It may be appropriate to hire a management consultancy firm to undertake a systematic work-study of the RI. The terms of reference for such a study could include an assessment of the training needs and avenues for promotion of RIs and tehsildars, and decentralisation of some of the tasks;
- it becomes more widely used and different government departments use it to transfer information and databases. A computer link, for example, between the sub-registrar's office and the tehsil headquarters would be of considerable benefit to agents transacting in land.

It is clear that the computerisation of land records and the computerisation of the land registration system have to be undertaken simultaneously and effectively coordinated for transaction costs to be significantly reduced. A proposal to computerise the registration system in Orissa and integrate it 'backwards' into land records management has been recently been sanctioned by the state government (see Box 9).

²⁸ This is only an average; for example, there are 70 villages within Begunia RI circle, Khurda district.

Table 8: Scope of responsibilities of Revenue Inspectors

Collection of dues	Updating land records and maintenance of other records	Issue certificates, attend courts	Respond to miscellaneous enquiries from the Tehsildar
40%	25%	10%	25%
December to March and June, is the collection season in which the RI camps in particular villages. In spite of focusing on the post-harvest season when collection is likely to be easy, annual arrears is around 15%. Half of the amount is usually pending for more than 3 years.	According to the Manual on Tehsil accounts, the RI is expected to maintain 16 registers: <ul style="list-style-type: none"> • Jamabandi Register, • Tenant's ledger, • Register of changes in revenue demand, • Register of encroachment cases, • Register of water rates, • Register of government lands temporarily leased out, • Register of <i>sairat</i> sources* • Demand register of <i>sairats</i> • Miscellaneous revenue items • Remissions • Register of receipt books • Receipt book • <i>Sadar siha</i>** • Village-wise <i>siha</i> • Cash book • Monthly demand, collection, etc. 	The RI is expected to provide information to concerned departments on: <ul style="list-style-type: none"> • income, • solvency, • caste status, • nationality, • residence, • legal heir, • property valuation, and • professional status to relevant departments for issue of certificates to people within the RI circle. <p>The RI also attends revenue or civil courts as and when necessary.</p>	The RI is responsible for sending reports to the Tehsildar on: <ul style="list-style-type: none"> • ceiling surplus cases under the Orissa Land Reforms Act, • mutation cases where fraction plots are involved, • encroachment cases, • lease of government lands, • property statements for execution of attachment warrants in Certificate cases***, • fire accidents, and • natural hazards

* *Sairat* sources are those that are auctioned e.g. tanks, mines, etc.

** *Siha* refers to the ledger of petty cash. *Sadar siha* is the ledger maintained for urban areas.

*** Certificate cases relate to late payment of dues.

The shaded portion suggests the tasks which might benefit from computerisation of land records

Source: Compiled from field notes.

Box 9: Computer-aided Registration Administration System (CRAS)

The present registration system is manual and dependent upon age-old methods and procedures. The increasing volume of transactions has led to inordinate delays and inefficiencies. Further, documents are subject to decay and the retrieval of documents is laborious and prone to delays. At the same time, valuation of property, essential to confirm that the sale price is not below the prevailing market price, takes a great deal of time in manually searching through the previous three years' records to find the highest value.

On the initiative of the Orissa Revenue Department, the state unit of the National Informatics Centre was contracted to develop a proposal for the computerisation of the registration administration system (CRAS) and its backward integration with land records computerisation. CRAS is expected to:

- reduce scope for the manipulation of records, and the time required to complete registration;
- eliminate the need for Form No.3, and thereby reduce delays, as information pertaining to land transaction may be sent directly to the tehsil computer;
- enable the sub-registrar to ascertain the validity of the transaction at the time of registration, by linking to the tehsil computer, thereby reducing subsequent delays and unnecessary costs; and
- assist the tehsildar at the time of mutation to ascertain relevant facts directly by means of a link to the sub-registrar's computer for speedier disposal of mutation cases and updating of RORs.

Source: National Informatics Centre, 1998

4.1.4 Will reduced transaction costs facilitate land sales and increase access to land by rural poor?

To address these questions, we first need to examine the functioning of the rural land market. Why do farm households buy or sell land? And, who buys and who sells?

It is conventionally assumed that the full specification and documentation (in the form of assured title) of private rights in land will eliminate risks and uncertainty in land rights and will lead to an active land market. However, a characteristic feature of the rural land market in Orissa, and elsewhere in India, is that the demand for land far exceeds its supply. This is usually because land ownership is one of the principal sources of livelihood security in the villages. No one wants to sell land unless forced to, since

'land prices do not fully compensate for the high risks in parting with this secure asset as evaluated by the farmer. In the absence of integrated financial markets, the transaction costs of investing the sales proceeds in alternative ventures is also far too high. Besides, the externalities of landownership in terms of social status and credit collateral for the owner may not be fully reflected in the land prices in the market.' (Bardhan, 1984: 95)

Land ownership is also a major source of prestige and social status. It is estimated that in urban areas of Orissa, nearly 300,000 household heads, mostly employed by the government, each own more than three acres of land in their natal villages. They hold on to their holdings as absentee landlords for prestige²⁹. Until recently, status in urban areas was usually derived not so much from the size of one's village holding, but from the fact that 'food (grain) comes from my village land.'

²⁹ Member, Board of Revenue, Cuttack, personal comm.

A recent study on the operation of land markets in a village in Sambalpur revealed that about 70 percent of land sales over the 40-year period 1955-95 were distress sales, i.e. for consumption and debt repayment, medical or marriage purposes, which are highly inelastic (Sarap, 1998). Land sale for investment purposes accounted for between 20 and 33 percent of all transactions for marginal, small and medium farmers, but for nearly half of the land sale transactions of large farmers³⁰. The investment expenditure of the former group was found to represent a form of distress diversification into low productivity, non-farm enterprises³¹ which required small amounts of working capital. The large farmers, on the other hand, invested the proceeds from the sale of land in purchase of commercial vehicles, building construction, financing higher education, and finding jobs for their children.

The research also showed that large farmers:

- purchased a larger area of land per transaction compared with other size classes of farmers, suggesting that they enjoyed more ready access to credit;
- often purchased productive land in the village, or plots situated near their present landholdings; and
- purchased land from everyone - from other large farmers as well as from medium, small and marginal farmers.

Swain (1998) reported similar findings on the operation of the land market from a comparative study of an agriculturally advanced and irrigated village in Cuttack district and an agriculturally backward village in Dhenkanal district. All land transactions bar one in the advanced village were for distress purposes: consumption, marriage, loan repayment, replacement of dead bullocks, and funerals. One farmer sold off his unirrigated holding to buy an irrigated plot. In the agriculturally backward village, two out of every three land sale transactions were for meeting the expense of a daughter's wedding.

These findings suggest that the land market is underdeveloped and sluggish across different parts of Orissa. It is mostly driven by distress sales, as farmers are unwilling to part with their plots of land under normal conditions. And, it is the large farmers who are the dominant players in the land market, buying productive and better located lands and consolidating their holdings.

Discussion in this section suggests a general 'Principle of Joint Requirements' (Lipton, 1998: 4), if access to land for the rural poor is to be enhanced through the market. It seems that lowering the costs of transacting in the land sale market alone may be unable to induce land sales, unless several requirements are met jointly. The total rate payable for stamp duty and registration fees must be reduced. Land records and the registration system need urgently to be computerised and the two systems integrated. The revenue inspector's workload requires a measure of rationalisation. But these steps will have to be accompanied by a number of additional measures. Imperfections in the credit market need to be removed. Non-farm employment and investment opportunities need to be increased. And there will also have to be improved access to education, health and skill formation, if reduced transaction costs are to facilitate land sales and lead to improved access to land by the rural poor.

As first steps, GOO should focus on rationalising rate of stamp duty, coordinating the computerisation of land records and registration, and rationalising revenue inspectors' workload. These may not immediately encourage new sellers to enter the land market, but at least the existing transactors would be spared considerable hardship and harassment.

³⁰ Marginal: less than 1 acre, Small: 1 - 2.5 acres, Medium: 2.51 - 5 acres, and Large: above 5 acres.

³¹ E.g. small vegetable shops (in a portion of the house), paddy husking, or spices and vegetable marketing.

4.2. Land fragmentation

Agricultural holdings do not normally comprise a single compact block but are made up of a number of parcels scattered across the village. The fragmentation³² of operational holdings into multiple plots is commonly perceived to be a serious constraint on agricultural productivity. High direct and opportunity costs in cultivation are frequently ascribed to fragmentation, including: the time and energy expended in moving labor, draft animals, seed, manure and irrigation water from one plot to another, and bringing harvested crops to a common point; supervision of labor; increased expenses of irrigation and drainage; difficulty of access to scattered plots; and loss of land in boundaries (Mearns 1998).

State governments have attempted to control fragmentation through legislative means and by encouraging land consolidation, or making it compulsory. This section examines the extent of fragmentation in Orissa, legal provisions to control it, and progress achieved and problems encountered in the administrative process of land consolidation.

4.2.1 Extent of fragmentation

There is widespread consensus that the rate of fragmentation of land holdings in Orissa is very high, though the evidence is patchy. This is because there is no systematic compilation of data within the state on the number of parcels per operational holding. These data is collected at the time of consolidation operations, and may even be sent to the Director, Consolidation at Cuttack. But they are rarely aggregated so as to form a comprehensive view of the extent of fragmentation, regional variation, or of the relative success of consolidation. Thus, much of this discussion is based on village studies, National Sample Survey (NSS) data, and informed estimates.

The trend in fragmentation over time and across land sizes is shown in Table 9. In 1961-62 there were an average of 6.4 fragments (or parcels) per operational holding across all size classes. By 1981-82, this had fallen to 5 parcels per holding. The average area per parcel has also declined during this period, though marginally, from 0.31 to 0.29 ha. It is evident that the rate of fragmentation is higher in medium and large holdings.

In the absence of more disaggregated data, it is difficult to form an accurate view of regional variation in fragmentation. Knowledgeable sources claim that fragmentation is a more serious problem in irrigated and coastal areas than in western Orissa. However, and we discuss below, there is considerable resistance to land consolidation in western Orissa.

³² Fragmentation is defined as the number of non-contiguous plots per operational or ownership holding within a village.

Table 9: Land fragmentation in Orissa by operational holding size

Size of operational holding (ha)	1961-62		1981-82	
	No. of parcels per holding	Average area per parcel (ha)	No. of parcels per holding	Average area per parcel (ha)
0.00	-	-	1.56	-
0.002-0.20	2.19	0.03	1.28	0.05
0.21-0.40	3.52	0.08	3.98	0.07
0.41-1.00	4.60	0.14	4.53	0.15
1.01-2.02	6.08	0.23	6.24	0.24
2.03-3.03	8.32	0.28	6.66	0.37
3.04-4.04	9.92	0.34	7.17	0.48
4.05-5.05	10.64	0.42	7.58	0.59
5.06-6.07	9.91	0.53	9.10	0.60
6.08-8.09	12.59	0.53	9.19	0.72
8.10-10.12	11.08	0.80	9.23	0.96
10.13-12.14	15.46	0.65	15.24	0.70
12.15-20.24	10.58	1.53	8.50	1.67
20.25 and above	8.30	2.78	6.51	8.04
All sizes	6.39	0.31	5.02	0.29

Source: Compiled from Thangaraj (1995).

4.2.2 Legal provisions and progress of land consolidation in Orissa

Consolidation of land holdings is designed to reverse fragmentation through a scheme of redistribution of lands in compact rectangular blocks³³. The Orissa Consolidation of Holdings and Prevention of Fragmentation of Land (OCH & PFL) Act, 1972 aims to provide a compact parcel of agricultural land to the cultivator in lieu of his scattered plots. In this scheme, the fragmented patches of landowners are brought under one, two or three *chaks* and the right, title and interest of a landowner is decided in the preparation of ROR and village map. Simultaneously, a separate category of land is reserved for communal and developmental purposes of the village. The Act also aims to set aside land for drainage canals in irrigated villages while in unirrigated villages, farmers are encouraged to utilise groundwater resources.

Tables 10 and 11 provide an indication of the progress of land consolidation operations in Orissa since 1974 when the OCH & PFL Act was operationalised. These data suggest that land consolidation has so far been completed on only 17 percent of the total operated area in Orissa. Some 11 percent of this total was consolidated over the period 1995-98 at a cost of Rs. 626 million (Table 11), or around Rs. 6,000 per hectare. However, these official data must be interpreted with caution owing to wide variations in actual implementation across the state. Efforts to consolidate land holdings in western Orissa, in particular, appear to have unsuccessful (see section 4.2.4). While the process may be have been 'completed', in the sense that consolidation officers have processed the necessary paperwork and filed reports under the OCH & PFL Act,

³³ While some regard land consolidation to be a potentially important component of India's land reforms (e.g. Oldenburg 1990), others argue that land consolidation does not constitute land reform on the grounds that it usually attempts scrupulously to ensure that land distribution remains unchanged.

little change may actually have taken place on the ground as farmers frequently refuse to exchange plots or alter existing plot boundaries.

Table 10: Progress of land consolidation in Orissa, 1974-98

Status	Number of villages	Share of total no. villages in Orissa (%)	Area (ha)	Share of total operated area in Orissa (%)
Excluded from consolidation u/s 5(1)	686 (6.9)	1.3	132,318 (8.1)	2.5
Updating of records and publication u/s 13 (4)	426 (4.3)	0.8	101,281 (6.2)	1.9
Completion of consolidation operation and publication of ROR and Maps u/s 22(2)	6992 (70.5)	13.7	918,020 (56.6)	17.3
Consolidation operation yet to start	1817 (18.3)	3.6	471,594 (29.1)	8.9
Total (i.e. issue of notification u/s 3(1))	9921 (100.0)	19.4	1,623,213 (100.0)	30.6

Note: Figures in parentheses are percentages of the total

Source: Director (Consolidation), Board of Revenue, Cuttack

Table 11: Progress and expenditure in land consolidation in Orissa, 1995-98

		1995-6	1996-7	1997-8	Total
Progress u/s 22(2)	No. of villages	184	257	213	654
	Area (ha)	22,414	40,725	36,735	99,874
Progress u/s 13(4)	No. of villages	11	28	74	113
	Area (ha)	3,803	8,990	14,784	27,577
Total expenditure (in Rs. Crore, at current prices)		18.67	21.33	22.61	62.61

Source: Director (Consolidation), Board of Revenue, Cuttack

4.2.3 Process of consolidation

The land consolidation process is designed to amalgamate plots into consolidated blocks while maintaining more or less constant land distribution within the village, and taking into account broad variations in land quality. The selection of villages for consolidation and broad operational procedure is as follows:

Village selection and local representation: Under the OCH & PFL Act, a consolidation operation may be taken up only in those villages in which a minimum of 70 percent of all landowners agree to consolidation. In addition, it is required that at least 25 percent of owners should have more than 3-4 plots per holding. If these two conditions are met then the village is said to be 'consolidable'. The Act also provides for a Consolidation

Committee to be formed in the village to ensure local participation in the consolidation operation. The committee should comprise 7-15 members representing all land holding size classes, plus one landless person and one member each from the scheduled castes and scheduled tribes³⁴. An advisory committee is also to be formed at the range-level to ensure the smooth implementation of the programme, and should include the local MLA.

At the outset, government consolidation officers hold meetings with landowners to explain the potential benefits of land consolidation, the main provisions of the OCH & PFL Act, and the manner in which their interests shall be represented. Villagers are then called upon to nominate the names of people for the committee. In practice, there tends to be extensive public involvement in the plains and coastal areas in which a high proportion of the operated area is irrigated, but much less involvement or commitment in the hilly tracts of western Orissa.

Survey and correction of existing RORs: Consolidation is carried out within the circle of a particular police station. Eventually all villages within the circle are covered. The first step is to conduct a plot-to-plot survey of the village area (similar to the process followed in a survey and settlement operation), beginning in the north-west corner of each village and ending in the south-east corner. The existing RORs are then updated. Following the initial survey, if it is determined that there is too little cultivable land to make land consolidation worthwhile, the operation does not proceed further (i.e. these villages are placed under section 13(4) of the Act).

Consolidation of holdings: There are two alternative processes of consolidation, depending on the type of terrain: (i) *rectangulation*, where the entire area to be consolidated is flat and irrigated (as in parts of Ganjam district); and (ii) *amalgamation*, where there is undulating terrain (as in Khurda and Sambalpur districts).

Under the amalgamation process, the model pioneered in Uttar Pradesh is adopted, in which relative scores are awarded to plots on land of differing quality, subject to agreement among members of the local consolidation committee (Oldenburg 1990). In this process, the land that is locally agreed to be of highest quality is given a score of 100 and declared the 'standard plot'. The relative value of all other land is assessed in relation to this standard plot, and awarded proportionately lower scores. Each landowner's total holding is then calculated as a weighted area; the weightings determined by the relative scores allocated to land of each type.

Following the assessment of the value of each landowner's original holding, the consolidation officers draw up proposals for plot reallocation and amalgamation. The entitlements of individual landowners are decided by 'sector' (normally following natural boundaries within the village). For example, if a farmer originally holds plots in five sectors, his or her claim is eliminated from the two sectors in which s/he has the least land. The aim is that each landowner should end up with a holding of a weighted area within +/- 33 percent of the original weighted holding size, but the new holding should be made up of not more than three individual plots. At this stage, land is also set aside for communal use (roads, canals, etc).

Finally, provided there is local agreement, land holdings are reallocated, and the revised RORs and village maps prepared in accordance with the agreed scheme. The OCH & PFL Act specifies a minimum period of 27 months for the completion of land consolidation in a given village, although it normally takes much longer. It takes about five years to consolidate land in all villages within one police station circle.

4.2.4 Failure of consolidation in Sambalpur

³⁴ Note that this level of representation is lower than the proportionate share of the total population accounted for by people of scheduled castes and tribes (16 and 22 percent respectively).

In order to gain further insights into the manner in which land consolidation is conducted in practice, and with what consequences, we conducted a short field investigation in several villages of Sambalpur district. On average, there are about 7.5 plots per holding in 93 villages in the four tehsils for which data was made available. The averages mask wide variations in the extent of 'scatteredness', however. In Talab village of Rengali tehsil, for example, there were 14.5 plots per holding prior to the start of the land consolidation operation.

A total of 146 villages falling under six police stations were taken up for consolidation after the promulgation of the OCH & PFL Act, 1972. One village failed to satisfy the minimum conditions for consolidation to proceed, and landowners in a further eight villages failed to cooperate with the proposals for land reallocation following the preparation and publication of the land register. As a result, consolidation operation in these 8 villages had to be called off. At the time of our survey, land consolidation had been completed in 134 of the remaining 137 villages, and is ongoing in three villages.

Of the 134 villages in which the operation had been completed and *pattas* distributed, however, landowners in 47 villages (35 percent) have refused to take possession of the new holdings, since they are unwilling to undertake the large-scale exchange of plots that would be required to effect the consolidation process. Some of these villages are located at the tail-end of the Hirakud irrigation system where there is considerable fluctuation in water availability. It appears that landowners do not have confidence in the way the proposals were prepared in practice, and fear that the method adopted has not adequately taken account of variations in land quality (see Box 10 for a more detailed village case study). In spite of the undulating terrain and widely varying soil types, 75 percent of landowners have been allotted land in a single compact block (*chak*), and 20 percent in just two *chaks*. Only five percent households have been allotted land in three *chaks*. Diversification of holdings across land types is regarded by local farmers as essential under the prevailing cropping systems. It is suggested by informed observers that such conditions, accounting for much of the local resistance to land consolidation, are typical of the hilly tracts of western Orissa.

4.2.5 *Resistance to consolidation*

In summary, resistance to consolidation may arise from:

- ***predominance of paddy:*** In undulating tracts, paddy is grown on terraced fields which need to be flat and require a bund to retain water. It is obviously easier to level and maintain smaller plots than one large fragment. Further, given the labour-intensive nature of paddy cultivation, the farming efficiency of small fields can be high, given the low opportunity cost of family labour in circumstances of limited non-farm employment potential;
- ***variability in soil types:*** As the case study from Sambalpur highlights, there can be a sizeable variation in output per plot due to soil quality and farmers with plots in fertile and well-drained soils are reluctant to exchange them for fewer fragments on poorer soils;
- ***need to spread labour:*** Diversification between plots reduce peaks in labour demand throughout the year, on the expectation that crops in different plots may be at different stages in the cropping cycle at any given time. This explanation is less plausible where cropping cycles vary little between plots, and with use of modern seed varieties and irrigation;
- ***risk aversion:*** This seems a valid reason for persistence of fragmentation in unirrigated tracts where different soils have different moisture-retention capacities. Holding a diversified portfolio of land parcels can enable the farmer to minimise the risk of low yields in the worst years;

**Box 10: ‘We do not intend to move’:
resistance to land consolidation in Laderpally village, Sambalpur**

The resistance to land consolidation that arises in villages of extreme heterogeneity in land quality are exemplified by the experience of farmers in Laderpally village, in formerly undivided Sambalpur district. Land here is rocky and undulating and initial holdings were highly fragmented. Soils are generally deficient in nitrogen and phosphate. Cultivated land is classified locally into the following five categories, in ascending order of fertility:

<i>Land category</i>	<i>Local name</i>	<i>Share of area (%)</i>	<i>Preferred crop</i>
Ridges	<i>att</i>	38	groundnuts or minor pulses
Slopes	<i>mal</i>	34	paddy
Dales	<i>berna</i>	14	paddy
Lowland	<i>bahal</i>	12	paddy
Fertile land	<i>barchha</i>	2	paddy

Given the undulating nature of the terrain, consolidation was attempted by means of the amalgamation method. The *bahal* land was taken as the ‘standard plot’, and given a score of 1.00. Relative to this, *berna* and *mal* lands were rated 0.75 and 0.50 respectively.

Consider the case of Keshu Pradhan, a semi-medium farmer. Before consolidation, he owned 6.36 acres in 14 individual plots. After consolidation his total holding increased to 6.9 acres, now distributed over three plots. While the weighted area of Keshu’s holding declined from 5.06 to 4.70 acres, this remains within the +/- 33 percent range of variation allowable (see Table 12).

However, Keshu Pradhan (and many others like him) is unhappy with the consolidation process since it has resulted in his losing almost 60 percent of his valuable *bahal* land. *Bahal* land is particularly valued because it requires lower labour inputs in paddy production than does *mal* land. For example, a single person can operate a tractor on the wetter *bahal* land, while *mal* land requires additional labour, particularly in summer when the *mal* lands dry up. At the same time, productivity of paddy on *mal* land is almost half that on *bahal* land. Keshu estimates that while his labour inputs will need to increase by about 20 percent, output will decline by almost one-third, and concludes that ‘consolidation will not benefit us.’

Land consolidation has also reduced Keshu Pradhan's options in the event of contingencies. With land held in only three discrete plots, he is now unable to lease-out a small, distant plot, or sell or mortgage one of a number of small plots in the event of an emergency. One of Keshu’s daughters is now of marriageable age and he anticipates the need to raise money to meet the wedding expenses in the near future. He had hoped to sell one of his former small plots for that purpose. As Keshu explains,

‘They [consolidation officials] do not understand the problems they create. They are only interested in targets and in keeping the standard plot ratio [the weighted average] within [the prescribed] limits. It creates many problems for families who have to move out of productive lands to unproductive areas. Nobody is happy with the consolidation here and we do not intend to move.’

The resistance to moving to consolidated holdings is owed to more than an emotional attachment to ancestral property. Given current prices of different types of land, Keshu stands to lose about four percent of the value of his total holding. He also anticipates that over the next 5-10 years the value of *bahal* land is likely to appreciate much more than that of the other two types of land: ‘I do not want to lose in the future’.

Table 12: Impact of land consolidation on one holding, Sambalpur district

Land Category	Relative Weighting	Approx price (Rs. Per acre)	Before Consolidation			After Consolidation		
			Area (acres)	No. of plots	Imputed value of holding (Rs.)	Area (acres)	No. of plots	Imputed value of holding (Rs.)
<i>Bahal</i>	1.00	80,000	3.00	3	240,000	1.25	1	100,000
<i>Berna</i>	0.75	60,000	1.50	3	90,000	2.50	1	150,000
<i>Mal</i>	0.50	50,000	1.86	8	93,000	3.15	1	157,500
Total			6.36	14	423,000	6.90	3	407,500
Weighted total			5.055			4.70		

Source: Field notes, Laderpally village.

- **information asymmetries and transaction costs:** A possible reason for the infrequency of voluntary exchange of land parcels between farmers may be the lack of necessary information about the potential productivity of each other's land. However, this seems unlikely in villages where there can be few secrets. It seems more plausible that farmers may be unable to agree on the exchange value of fragments in the context of thin land markets. Uncertainty surrounding its legal status and the high cost of obtaining *pattas* may also discourage potential transactors.
- **need to hold land as a liquid asset:** Land enters the sale market infrequently and in small fragments. Landowners will be unwilling to consolidate their land parcels as this might preclude the option of selling/mortgaging a small piece of land in order to meet future contingencies (e.g. marriage or funeral costs). The discussion in Section 4.1.4 established that most land sales are distress sales. Clearly, consolidation programs that seek to restrict resale also restrict the liquidity of land as an asset in the limited portfolio available to cultivators (Heston and Kumar, 1983).

Of these, soil heterogeneity seems to be the chief constraint on land consolidation in the north-western plateau of Orissa, and risk aversion in unirrigated regions. While high transaction costs in land markets also act as a disincentive to voluntary consolidation (i.e. the voluntary exchange of plots), the importance of holding land as a liquid asset, in the absence of other durable assets or steady income-streams, is a critical factor in explaining the widespread resistance to land consolidation in practice.

4.2.6 Policy issues

Land consolidation, where it may successfully be implemented, is more likely to contribute positively to agricultural productivity than to improving access to land for the poor. In theory, consolidation ought not change net land distribution, and so should not leave the poor worse off. Our findings in Orissa suggest that land consolidation, like land survey and settlement operations, actually tends to worsen land distribution at the bottom end, to the extent that it has brought about any real change on the ground. While land consolidation may contribute positively to agricultural productivity under certain conditions, it will not help increase access to land for the rural poor unless attention is also paid to other aspects of a land reform agenda. For instance, insecure tenants and share-croppers whose names do not appear in land records may lose their rights in land, if consolidation is pushed through without first securing their rights.

Moreover, under existing practices of partible inheritance, land consolidation can only ever be a temporary, or stop-gap solution to the problems attributed to land fragmentation, since the gains achieved will be eroded over time with the subdivision of holdings upon inheritance.

4.3 Land encroachment

One way in which the rural poor and other socially excluded groups compensate for their lack of access to and control over privately owned arable land is through access to common and public land (Mearns, 1998). Of course, non-poor and larger landowners also seek to increase their effective landholding by occupying common land. Commons in Orissa amount to around 20 percent of the total area of the state, including (see Table 1):

- ‘barren and uncultivable wastelands’ (3 percent of total area) which are set aside for public or communal purposes and are not generally liable for revenue;
- ‘cultivable wastelands’ (*peromboke*, 3 percent area) which have been cultivated in the past but have been left uncultivated and subsequently purchased or otherwise acquired by the government;
- ‘permanent pasture and other grazing lands’ (*gochar*, 4 percent area); and
- village forests (9 percent area).

The first three categories are revenue lands and the last is owned by the Forest Department. All four categories fall within village boundaries and are also known as village lands. The land revenue department classifies village lands into ‘non-objectionable’ and ‘objectionable’ lands. Only government-owned cultivable wastelands constitute ‘non-objectionable’ land, which may be granted to landless households as described below. The ‘objectionable lands’ include *gochars*, cemeteries, village roads, all forest lands, tanks, tank beds, and river embankments. None of these lands should be encroached upon for settlement or cultivation. The reality, however, is very different.

Land encroachment is the result of:

- ***loopholes in land reform legislation:*** The Orissa Estate Abolition Act, 1952 was biased in favour of estate owners as it allowed them to keep 33 acres for personal cultivation. All tenants on the ‘resumable’ area of each estate were evicted for fear that they would otherwise acquire ownership rights to the land. The Orissa Tenant Protection Act, 1948 and the Tenant Relief Act, 1955, while seeking to protect tenants from unlawful eviction, could not be enforced adequately owing to the absence or manipulation of land records. Evicted tenants were thus compelled to eke out an existence by encroaching on government or common lands;
- ***displacement as a result of development activities:*** Inadequate attention tends to be paid to resettlement and rehabilitation of people displaced by large development projects (dams, irrigation schemes, mining operations, etc.) (see Box 11). To the extent that displaced communities are resettled at all, they are frequently allocated remote land of poor quality. Consequently, displaced people tend to encroach, illegally, on nearby government land;
- ***lax implementation of existing land laws by revenue officials:*** For instance, those who encroach on government land are required to be ‘booked’ by the revenue inspector (RI) and have proceedings initiated to evict them. However, encroachment represents an opportunity for rent-seeking by revenue officials. Instances of encroachment on public and common land are overlooked, in return for a suitable consideration, usually payable annually. This practice clearly encourages encroachment in the long-run, and favours larger landowners who are most able to pay the requisite bribes;

- **increasing pressure on land:** Orissa's population, growing at an annual rate of 2 percent, continues to depend substantially on agriculture for their livelihoods. The 'cultivable land' frontier is therefore being pushed progressively further onto government and common land.

4.3.1 *Typology and extent of encroachment*

In Orissa, all types of common land are under threat of encroachment. In private discussions, government officials freely acknowledge the widespread encroachment of government land, but official data is either not gathered or not readily forthcoming. For example, survey and settlement operations do not recognise claims established through encroachment. The reason for this is to preserve original rights in land, but the opportunity is missed to acquire more reliable aggregate data on the extent and forms of encroachment. An encroachment register is maintained at tehsil level, for purposes of proceeding with eviction cases from government land. Owing to the incentives for rent-seeking at this level, these data must be regarded as highly suspect. They are not, in any case, aggregated at any higher level, although in principle some monitoring of encroachment is carried out at district level.

Who encroaches on what types of land? Table 13 summarises the current status of encroachment on different types of public and common land. An important type of interaction between the state and the land user is the de facto 'privatisation' of common lands through encroachment. Successful encroachment of *peromboke* lands and other common lands (such as uncultivated wastelands) depends upon the degree of influence the individual encroacher enjoys, both with regard to other villagers and to government revenue department officials. Individuals of widely differing socio-economic status encroach upon *peromboke* land. Landless and near-landless households are perhaps the most numerous, but their position is vulnerable to better-off and relatively more powerful groups who are able to employ intimidatory tactics to evict them. Those with a greater degree of influence may be in a position to see that weaker groups are evicted, yet also manage to evade the law themselves through bribery to allow their encroachment on public and common land to go unnoticed, and eventually to have the encroached land registered in their own names. A lengthy process of de facto occupation of *peromboke* land and payment of annual fines for encroachment may thus eventually lead to a change in the revenue classification of the land and acquisition of legal title. Revenue records inevitably lag significantly behind the true extent of encroachment at any given moment.

From our field investigations, it appears that opportunities for further encroachment are now generally limited. Local revenue records and discussions with RIs and tehsildars reveal that most of the encroachment takes place on land designated as *peromboke*, cultivable waste, permanent pastures and other grazing lands, and only to a very limited extent on land under the jurisdiction of the forest department. Focus group discussions with

Box 11: How development can reduce access to land

Until 1981, coal mining companies could acquire substantial tracts of land with few restrictions under the Coal Bearing Areas Act. Under an agreement reached in 1981 between GOO and the coal companies, land is now required to be acquired by the Revenue Department at market rates (under the Land Acquisition Act) and each displaced family is to be assured of one permanent job in the mines.

Two major obstacles have frustrated the original intentions of this agreement:

- *the definition of 'family'*: households often consist of extended families with several adult members. Only one will be found a job although all are displaced.
- *inadequate land records*: since land claims may not be accurately established in land records, intra-family struggles may ensue to establish a claim to the single job offered in compensation. All other household members are forced to seek alternative livelihoods.

The loss of common land is generally not compensated under this agreement, which adversely affects the landless. One study of people displaced by the Upper Indravati dam in Koraput district found that many of the displaced were landless people dependent upon *podu* (shifting cultivation) on common lands (Mohapatra, 1983). Entitlement to government compensation rested upon private property rights only and ignored customary rights in common property.

villagers revealed that little usable common grazing land remains. Grazing commons have either been encroached upon or are so degraded that they are no longer used for grazing and the animals are now stall-fed.

In the absence of more reliable data, it is difficult to form an accurate view of the socio-economic status of those who encroach on common land. A series of focus group discussions with land owners and landless farmers in Laderpally village, Sambalpur district, suggest that 90 percent of all who encroach on village land in Laderpally own less than two hectares of private land. Medium and large farmers make up the remaining 10 percent. The estimated distribution of encroachers by size of class of existing land holding is as follows:

Landless	10%
Marginal (0-1 ha)	10%
Small (1-2 ha)	70%
Semi-medium (2-4 ha)	5%
Medium and Large (>4 ha)	5%

At least in Laderpally, much of the impetus for encroachment comes from small farmers, belonging to the middle level of the village hierarchy. While poor, they are not the poorest, and while predominantly dependent upon agriculture, it is not their only source of livelihood. There is evidence that, having acquired some skills and education, small-farmer households are beginning to move into the service sector and rural non-farm enterprises (Sarap, personal comm.). This upwards mobility provides them with the additional clout in the village necessary to displace poorer groups from common land, and the ability to influence lower-level land revenue officers to their advantage.

Table 13: Encroachment by land category

Ownership status	Land category (share of total state land area)	Use Status	Means of increasing private land access	Whether land transfer legally permissible	Ground-level reality
Government land	Barren/ Uncultivable wasteland (3%)	Village Commons	Encroachment	Landless categories can be settled after being booked by RI; other categories evicted	Extensively encroached both by landowners and landless; encroachers rarely booked by RI; widespread rent-seeking
	Cultivable wasteland (3%) (<i>Peromboke</i>)	Village Commons	Encroachment	Landless categories can be settled after being booked by RI; other categories evicted	Extensively encroached both by landowners and landless; encroachers rarely booked by RI; widespread rent-seeking
	Permanent pastures and other grazing lands (<i>Gochar</i>) (4%)	Village Commons	Encroachment	Private ownership not permitted	Extensively encroached both by landowners and landless; encroachers rarely evicted; widespread rent-seeking
Private land	Land owned by non-tribals (area n/a)	Private land most commonly used for cultivation, recent attempts to convert for non-agricultural purposes	Sale, exchange, inheritance	Permitted though restrictions on converting crop land for non-agricultural purposes	Increasing conversion of agricultural land for non-agricultural uses
	Land owned by tribals (area n/a)	Private land for settled or shifting cultivation, though decline in latter	Sale, exchange, inheritance	Permitted only among the scheduled tribes and scheduled castes. Transfer to non-tribals only under exceptional circumstances and not without permission of revenue authorities	Legislation ineffective in controlling tribal land alienation; permission from revenue officials available at a 'price'

4.3.2 Land alienation from tribal groups

Orissa has a large tribal population (22 percent of total population, three times the average for India) and tribal land alienation by moneylenders has long been recognised to be a critical issue. Tribal people, with generally low educational and skill levels and limited access to formal credit markets, have had little option but to seek credit at high rates of interest from moneylenders. In the event of default on loan repayments, moneylenders have tended to appropriate first tribals' forest produce, and later their land itself. This process has been reported in numerous village studies dating at least as far back as Bailey's classic study of socio-economic change in a western Orissa village since the late 19th century (Bailey, 1957).

Alienation of land held by members of Scheduled Tribes (ST) has been restricted by legislation as a matter of public policy. After Independence, the Constitution of India enabled state governments to make regulations restricting alienation of land by STs in Scheduled Areas. In Orissa, Regulation 2 (1956) in Scheduled Areas provides that land held by a person belonging to a scheduled tribe cannot, without permission of the appropriate authorities, be alienated to a person not belonging to a scheduled tribe. The law also allows for a *suo moto* action by the Collector for restitution of alienated tribal lands. Section 22/23 of the OLRA applies to prevent land alienation by tribals in non-scheduled areas.

In practice, however, land alienation remains prevalent if officially unacknowledged (Fernandes *et al.*, 1988). When money is lent, the loan agreement ensures that the moneylender has rights over all the produce for a certain number of years (usually nine). Since the borrower is therefore left without any income, he is forced to keep borrowing, thereby mortgaging the produce of his land for many subsequent years. Rights to the produce of the land eventually accrue to the moneylender for such a long period that tribal land owner is reduced to the status of little more than a bonded labourer producing crops for the moneylender, on land that legally remains his own. One study of four districts (Dhenkanal, Ganjam, Koraput and Phulbani) estimated that about 56 percent of the total tribal land was lost to non-tribals over a 25-30 year period through these means (Viegas, 1987). Of this total, 40 percent was lost through indebtedness and land mortgage, 23 percent through encroachment, 17 percent as a result of displacement by development projects, 15 percent through personal sale, and the balance due to floods and other natural calamities.

A less well-understood pattern is the administrative erosion of tribals' communal land rights through survey and settlement operations themselves. In recent decades, cadastral survey by the chain survey method has gradually given way to the plane-table method to reduce operational costs. But land with a gradient greater than 10 percent cannot accurately be surveyed by the plane table method, and in Orissa these unsurveyed lands have customarily been lumped together as 'uncultivable wasteland' in the record-of-rights in land (Roy Burman, 1987). The outcome is catastrophic for tribal groups. In a 1961 land survey and settlement operation in Niyamgiri hills of south-western Orissa, for example, only 15 acres out of a total village area surveyed of 2647 acres were declared to be 'cultivable land' (Roy Burman, 1987). Only on this land was rent assessed and demanded of the 16 owners in the village. One acre was recorded as grazing land, 7 acres under housing, and only half an acre classified as common land for the village graveyard. The remaining 2624 acres, being of a gradient greater than 10 percent, were recorded as (state-owned) 'uncultivable wasteland'. In reality, much of this area was owned by tribal households, and was cultivated in demarcated plots on which fruit trees had been planted.

Anecdotes abound concerning the loss of tribal land to powerful interest groups and the lower levels of the land revenue administration. Even discounting a certain amount of exaggeration, it is difficult to ignore the emerging picture of a steady process of land alienation, in spite of the well-intended legislation designed to prevent it. Clearly, legislation alone is inadequate to bring about social justice. It needs to be accompanied by socio-political consciousness-raising and awareness-building among tribal groups of the sort that is being undertaken throughout Orissa by civil society organisations. For example, Gram Vikas, an NGO based in Berhampur, Ganjam district, has won several landslide legal cases by hiring lawyers to act on behalf of tribal communities in public-interest litigation to defend their land rights.

4.3.3 *Legal framework and how it operates*

The central purpose of the Orissa Prevention of Land Encroachment (OPLE) Act, 1972 is to prevent unauthorised occupation of government land. It is even-handed and clearly lays down penalties for all instances of encroachment, to be followed by eviction. Through a 1982 amendment the state has recognised that there are different types of encroachers on different types of lands (see Table 13). While all encroachers are required to be evicted from ‘objectionable’ lands, landless encroachers are legally entitled to be settled on up to 1 standard acre per family of ‘non-objectionable’ land (i.e. cultivable wasteland).

The eviction process proceeds as follows: (i) based on his enquiries, the RI files a report to the land revenue (tehsildar’s) court, and legal proceedings are initiated; (ii) the tehsildar issues notice to show cause why penalty should not be imposed; (iii) encroacher shows such cause; (iv) if this cause is admitted as valid, the mutation process is initiated for the issue of *patta* to the land; (v) if cause not admitted as valid, notice is issued for imposition of penalty and eviction within 30 days. The statutory minimum period for the entire process is three months, but in practice cases may take between six months and a year to settle/ dispose of.

Steps (i) to (iii) in the above sequence are similar for both landless and landowning encroachers on ‘unobjectionable’ land. Only landless encroachers may move to step (iv), whereas landowning or other ineligible encroachers are issued penalty and eviction notices as in step (v). As described earlier, however, the incentives for RIs and other tehsil-level officials to ‘book’ encroachment cases in this manner are very low, as encroachment represents a lucrative source for rent-seeking.

The consequences of this process for various stakeholder groups are as follows:

Landless: Although legally entitled to claim rights to ‘non-objectionable’ land, landless encroachers must first commit what is regarded as an unlawful act (encroachment) and be ‘booked’ for it before they are allowed to press their claim by establishing ‘due cause’ by virtue of their landlessness. Only then, and after due process of law, may they be issued with the *patta* which regularises their land rights. The entire process hinges upon whether or not the case is ‘booked’ by the RI in the first place. There are few or no incentives for the RI to do so and frequently bribes are demanded or eviction threatened. The landless encroacher, if unaware of their rights under OPLE, is likely willing to succumb to the RI’s demands in return for temporary access to cultivable land. Even if aware of their rights, landless encroachers may still prefer to take the easier option of regularly bribing the RI since they are also likely to be aware of the numerous transaction costs incurred at the tehsil office in initiating a mutation and obtaining *patta* to the land (see Box 12).

Landowners: There are few disincentives under the law for an already landed encroacher to vacate illegally occupied government land. The penalties for encroachment on government land, fixed in 1976, are set at the very low level of Rs. 100 per acre per year. The assessment is based upon land classification fixed by settlement authorities; and if the land is irrigated, then water rates of Rs. 36 per acre (during rabi season) and Rs. 16 per acre (during kharif) are also levied. If the land is put to commercial use (e.g. operating a rice mill), the penalty is Rs. 10 per day.

Revenue officials: The low penalty and assessment rates provide a perverse set of incentives for the RI and the tehsildar that actually serve to encourage encroachment on government land. The imposition and collection of penalties from encroachers has emerged as an important component of the tehsil's income from 'penalty and rent cess', owing to the now very low levels of land revenue. Perversely, the tehsildar may be more willing to allow encroachment on objectionable land since the penalty amounts to more than the land revenue demand from that land. In Attabira tehsil, Sambalpur district, for example, the annual income from 'penalty and rent cess' is about Rs. 60,000. According to the tehsildar, a large proportion of this income derives from the fines levied on encroachers. The tehsildar elaborated that the amount had increased in recent years 'because of increased pressure on land.' Since land revenue derives from a more or less constant area, we assume that 'increased pressure on land' is a euphemism for increased encroachment on government land, thereby increasing potential government income from penalties.

It is often the case, especially in unirrigated areas, that encroachers are evicted but leave only after harvesting the crop³⁵. They are likely to return during the following cropping season, however, often to the same plot of land, and the penalty process starts all over again. The penalty remains constant irrespective of the number of times a particular farmer encroaches on government land.

Box 12: Operation of the OPLE in Ganjam district

In Buruda village (Digapandhi tehsil, Ganjam district), 10-12 families encroach currently on government land. The RI comes every year and instead of 'booking' them takes bribes from them, of between Rs.100 and Rs.400, depending on the extent of encroachment. The current 'going rate' is about Rs.400 per acre. Often the landless encroachers have gone to the tehsildar and requested that their claims to the land be regularised and *pattas* be issued in their names. The tehsildar sends the RI to settle the matter who instead takes bribes. The encroachers are convinced that the RI must be passing on a share of the bribe to the tehsildar, and perhaps even to higher-level officers. One informant encroached on 80 decimels of land and paid a bribe of Rs.370 in 1997. The RI measures the land, says he will issue a *patta*, but never does so. He threatens them, saying that if they fail to pay, he will not allow them to harvest their crop. This has been going on for the last 15 years.

4.3.4 Conclusion

The discussion in this section reveals that existing legislation to prevent encroachment and alienation of tribal land have failed in their objectives. Loopholes in the law encourages rent-seeking, and complex rules are easily manipulated by vested interests. The rural poor may acquire *de facto* but

³⁵ It is rare that the tehsildar would impound the standing crop and auction it, as he is supposed to do.

insecure rights over revenue wastelands through encroachment, but are unable to convert them to the *de jure* rights to which they are entitled under the law, and are therefore also denied access to complementary resources such as institutional credit.

At present, there are few effective sanctions to prevent the encroachment on commons by non-poor groups. Existing penalties under the OPLE are too low and are rarely enforced. Computerisation of the encroachment register at tehsil level will make possible the ready detection of habitual encroachers. Increasing the penalty according to the frequency of repeat encroachments may also act as some disincentive, although only over the medium-term rather than the short-term, and not so long as incentives towards rent-seeking remain strong for low-level revenue department officials.

The inefficiencies and distorted incentive structure that prevail in land revenue administration are only likely to be checked with greater awareness and voice on the part of local communities. In order for local groups to be able to press their legal claims, they first need to know what their rights are. A combination of awareness-raising and local organisational capacity-building, efforts to expand the effective powers and accountability of the panchayati raj institutions, increased vigilance of superior officers in the revenue administration, and an informed public opinion (e.g. through readily accessible manuals in local languages) are required in order to protect and promote access to remaining common land by the rural poor.

4.4 Land tenancy

The abolition of tenancy in order to vest land ownership with the actual tillers of the land formed the corner-stone of most land reform efforts in India after Independence in 1947. It was predicated on the widely (and then largely correctly) held belief that the tillers of the land were locked in exploitative relationships with intermediaries who had little interest in the land but for the extraction of rent. The Orissa Estates Abolition (OEA) Act, 1952 initially permitted landowners to resume 33 standard acres for personal cultivation (section 2.3), which led to the large-scale eviction of tenants. No parallel legislation was introduced to protect tenants. Under the Orissa Land Reforms (OLR) Act, 1960 (as amended in 1972), the leasing of land was explicitly banned, except where lessees fell into certain excluded categories³⁶. Under the 'adverse possession' clause in the OLR Act, if it can be demonstrated that a tenant has cultivated a parcel of land continuously for 12 years, permanent occupancy rights to that land may legally pass to the tenant. But the institution of tenancy has proved to be highly resilient on the ground, for reasons outlined below, and attempts to regulate tenancy by legislative means have been counterproductive. It is as widespread in Orissa as it is illegal, though now less exploitative and better concealed from official records.

A substantial literature now corrects many long-standing perceptions that share tenancy is necessarily inefficient or that landlord-tenant relations are necessarily exploitative (Otsuka and Hayami 1988, Singh 1990). Share tenancy represents a second-best response to missing, thin and imperfect markets for land, credit, labour, management, information, and insurance, and performs some very

³⁶ Except by landlords with a disability or the 'privileged raiyats'. A person under disability refers to: (i) a widow or unmarried woman, or a woman divorced or separated from her husband by a decree or order of court; (ii) a minor or a person of unsound mind; and (iii) a person incapable, because of some other physical or mental disability, of cultivating personally the land he held as a raiyat. Privileged raiyats include (i) trusts holding land for public purposes; (ii) charitable and educational institutions engaged in work for public benefit; and (iii) religious or other institutions by which the public benefit.

important functions which would otherwise have to be fulfilled by other institutions; it is neither necessarily inefficient nor a barrier to the adoption of new technology; tenancy contracts often play an important role in matching land, labour and capital endowments. They are not necessarily exploitative, but where they are, owing to the unequal bargaining power between agents, attempts to 'fix' relations in one sphere can lead to compensatory shifts in other contracts to leave tenants net worse off (Mearns 1998).

This section examines the extent and nature of land-lease (tenancy) markets and the terms of the contracts across Orissa to understand how formal restrictions on tenancy along with loopholes in the law, its lax implementation, lack of updated land records, and the manipulation of revenue administration by the relatively rich and powerful, combine to restrict access to land by the rural poor.

4.4.1 Extent and nature of tenancy in Orissa

There is general agreement that available data on both the number of tenants and the acreage under tenancy are underestimates (Singh, 1988). Both the Census of Land Holdings carried out by the National Sample Survey Organisation, and the Agricultural Census, tend to underestimate the proportion of land under tenancy. However, the former is considered more reliable as it is based on independent household surveys while the agricultural census is based on a retabulation of the land records of owner-cultivators. The under-estimation of tenancy stems from reporting bias as lessors tend to understate the leased-out area owing to (i) the fear that tenants will stake claims in favour of continued right of cultivation; (ii) desire to escape the ceiling on land holdings; or (iii) a combination of (i) and (ii). The share of operated area leased-in is therefore considered to be a more reliable measure of the magnitude of agricultural tenancy than the share of owned area leased-out as lessees have fewer incentives to under-report the extent of area leased-in (Narain and Joshi, 1969). Nonetheless, land reform legislation designed to prohibit sub-letting, regulate rents, and confer security of tenure has given many landlords and tenants a common interest in concealing agreements which may be deemed illegal (Singh, 1988). Only intensive field surveys and careful village studies can provide more precise estimates of tenancy since '[T]he longer the period of stay in villages, the higher is the tenancy recorded' (Laxminarayan and Tyagi, 1977: 880).

Unfortunately, there is a dearth of surveys and few village studies in Orissa which offer such insights. This section combines field notes gathered in the course of the present study with material from two in-depth field studies (Sarap, 1998; Swain, 1998) to form a partial picture of the extent and nature of tenancy arrangements in different parts of Orissa.

It is estimated that on average, 10-20 percent of households in each village participate in the land-lease market in Orissa, although this is subject to wide inter- and intra-regional variation. Using NSS data, Swain (1998) reported that 17 percent of households leased-in land in 1981-82. More than 80 percent of the leased-in area is in the size class of less than 10 acres, and the percentage of leased-in area to operated area decreases with the increase in size of operational holding. At the same time, nearly 85 percent of the area leased-out is by farmers with less than 10 acres. Together these results indicate considerable leasing activity (both in and out) by small and marginal farmers.

Land leasing or tenancy may take the form of fixed rentals or sharecropping arrangements, in which rents are paid in cash, in kind, or a combination of the two. Sharecropping is the predominant, though declining, form of tenurial arrangement in Orissa. About 42 percent of the leased-in area is under sharecropping as against about 14 and 8 percent respectively under fixed-produce and fixed-rent contracts (Swain, 1998). However, share tenancy seems to be more prevalent in non-irrigated

villages than in irrigated villages. For example, Swain (1998) reports that more than 40 percent of the operational area is under share tenancy in a dry village in Dhenkanal district as against 12-19 percent in irrigated villages in Cuttack district. This pattern seems to confirm the persistence of the potential for risk-sharing under share-cropping contracts.

On the other hand, fixed tenancy with payment in varieties of cash and kind is common in the irrigated villages in Sambalpur district (Sarap, 1998). Only about 20 percent of land-leasing households were found to participate in sharecropping (*bhagidi*) contracts. They were small landowners and the primary reason for leasing-out land was their inability to cultivate land either with the help of family labour or by hired labour³⁷. Land leasing on fixed tenancy is of two types: in kind (*kara*), when the agreed amount of paddy is delivered after the harvest; and in cash (*chhidol*) where the rent is paid up front in cash before the lessee is permitted to use the land. The *kara* lessors tended to be small farmers with limited access to family and/or hired labour (army personnel, widows); or medium farmers with an adverse land-labour ratio. Among the *chhidol* lessors, nearly half resided in other villages, and leased out their land because these plots were at a distant location and of inferior quality. The other *chhidol* lessors were small farmers who required funds for urgent purposes. The rents paid by lessees varied from Rs. 120 to Rs. 550 per acre per year; this wide range in rents payable is indicative of the heterogeneous terms and conditions among such contracts.

Table 14 provides a typology of various land leasing contracts in different parts of Orissa, and Table 15 summarises the most common reasons for leasing land. It is evident that leasing households participate in the tenancy market in response to missing markets for labour or draught power.

4.4.2 Terms of tenancy contracts

Tenants are under no obligation to lease-in land from a particular lessor. They are quite free to take their own decisions on how much land area to lease-in and from whom, and are not expected to provide unpaid labour to the lessor. However, it was commonly reported that tenants may borrow money from their landlords and repay the loan with labour contributions. While there is little evidence of extra-economic coercion in leasing contracts, it does appear that some factor markets may be interlinked. Unlike the situation that prevailed prior to Independence, tenants no longer appear to be locked into exploitative relationships with landlords. At the same time, they have no legal status because tenancy is banned.

In leasing out land, landowners employ various devices to get around the law banning tenancy. Most contracts are oral and of short duration. Oral contracts help to ensure that tenants are not recognised in the updated land records during survey and settlement operations (section 3.1). At the same time, short-term contracts (typically 2-5 years), prevent tenants from establishing claims to land through 'adverse possession'. Under the adverse possession rule, a tenant who has been in practical possession of a plot of land for a period of 12 consecutive years may thereby acquire legal occupancy rights to that land.

Rule 21 of the Orissa Survey and Settlement Rules, 1962, clearly specifies the particulars that need to be recorded in the preparation of the RORs. These include the name of each tenant or occupant; the class to which each tenant belongs; the situation and extent of the land held by each tenant or occupant; the name of the landlord of each tenant; and the name of each proprietor and landlord.

³⁷ There is a close relationship between the two, since hired labour normally requires supervision by family members.

Table 14: Typology of land tenancy contracts in different parts of Orissa

Form	Terms of contract	Common among:		Geographical location	Whether limited to particular crops
		Lessors	Lessees		
Sharecropping	Gross output divided equally (1:1) between landlord and tenant after deduction of expenditure on chemical fertilisers or HYV seeds	Small and marginal farmers	Landless, and small and marginal farmers	Sambalpur	No
	Gross output divided equally (1:1) between landlord and tenant	Small and marginal farmers	Landless, and small and marginal farmers	Cuttack, Khurda, Gopalpur	Paddy, gram, lentils and jute
	Gross output divided either (1:2) or (1:3) between landlord and tenant respectively	Small and marginal farmers	Small and marginal farmers	Cuttack	Potato
Fixed tenancy in kind	Agreed amount (8-10 bags/acre/crop) to be paid after harvest; tenant responsible for cultivation	Medium farmers	Small and marginal farmers	Sambalpur	Paddy
Fixed tenancy in cash	Agreed amount of cash paid to landlord before getting access to land	Medium farmers	Small and marginal farmers	Sambalpur	Paddy

Source: Sarap (1998), Swain (1998), and field notes.

Table 15: Common reasons for leasing land in Orissa

Leasing-out	Leasing-in
<ul style="list-style-type: none"> • Lack of supervisory labour • Lack of bullock power • Small (uneconomic) holding • Land distant or of poor quality 	<ul style="list-style-type: none"> • Limited non-farm employment opportunities (i.e. excess labour-land ratio) • Availability of bullocks • Consolidate and increase operational holding

Source: Sarap (1998), Swain (1998), and field notes.

In practice, however, landowners are easily able to ensure that the record-of-rights in land do not make mention of any existing tenants. During our field investigation, many instances were reported in which land rights were mis-recorded during survey and settlement operations. Tenants also have good reason to conceal tenancy, as highlighted in Box 12. In 1981-82, an estimated 36 percent of all tenancies in rural Orissa were concealed (Sawant, 1991).

Box 13: Tenant motivations for concealing tenancy

Consider this apocryphal tale of a conversation between a politician and a tenant in rural Orissa. The politician said to the tenant, “You have lived on this land for so many years, the land is yours. Register a case against the landlord.” The tenant replied, “ How can I start a case against him? I know this land is his. How can it suddenly become mine? When I have problems I go to him for help. We live in the same village and we see each other every day. You are here now, but after one hour you will be gone and it will be difficult for me to see you. How can we get their land in our name? It is not good.”

Source: Mohanti (1990)

4.4.3 Policy Implications

The discussion in the preceding sections highlights that:

- tenancy (whether sharecropping or fixed-rent) is as widespread as it is illegal;
- the rent paid by the lessee is almost always in excess of the legally stipulated rent of one-fourth of the gross produce;
- most of those seeking to lease-in land are either the landless or the small and marginal farmers suggesting that lease markets are of great importance as a means for the rural poor to gain access to land; and
- both landowners and tenants have their own reasons to conceal tenancy arrangements.

This suggests that:

- tenancy is a response to missing markets, especially for labour;
- rent is determined more by prevalent social and cultural norms of fairness than by state legislation;
- most transactions are non-exploitative as they take place often within the same class of farmers, and are an effective mechanism for the poor and the landless to increase access to land, and
- concealing of tenancy affects the tenants adversely by denying them security of tenure and consequently limiting their access to institutional credit.

The key policy issue is to devise an effective mechanism to deregulate tenancy but at the same time legally to register and make possible the protection of tenants’ rights in land. The question of deregulating tenancy has been discussed in a meeting of the Orissa Cabinet in which opinion was divided on whether or not to grant tenants new rights. Many Members feared a political backlash against any move to grant heritable and transferable rights to the tenants. In principle, at least, it is possible to specify a ‘middle ground’ in the hierarchy of rights in which tenants’ use rights are

protected without threatening the landlord's ultimate rights of ownership. It is argued that written contracts with protection under the law would, on the one hand,

- provide security of tenure to the tenant in the short-term;
- enable him to access institutional credit; and thereby
- improve agricultural productivity,

and on the other,

- release more land into the land-lease market as landowners would be less fearful of losing their land through 'adverse possession', and
- help to increase access to land by the rural poor.

5. CONCLUSION

5.1 Policy implications

A number of implications for policy are suggested by this analysis. Many, but not all, of these options are already being considered, or implemented in pilot forms by the Government of Orissa. A number of these initiatives are also expected to be of relevance to other states:

- ***Gender and land rights:*** women's access to and effective control over land may be enhanced through joint land titling. This measure is rather limited in scope, since ideally what need to be promoted are women's independent land rights. But while the principle of joint titling is readily accepted at the level of the Government of India, it has yet to be realized in practice in Orissa. In focus group discussions, village women assert that their bargaining power vis à vis their husbands and in-laws would be enhanced considerably by joint title over land. The common objection that this may make it more difficult for women to escape from abusive marriages was for them a second order consideration.
- ***Organization of land administration:*** a critical assessment of the respective roles and responsibilities of the Department of Revenue and the Board of Revenue appears warranted, in order to identify overlapping functions and areas where coordination between the two could be streamlined for increased efficiency. In the context of the ongoing computerization of land records, it will also be important critically to assess the particular responsibilities of the local-level Revenue Inspector. Many of the presumed advantages of computerization will not be realized unless limiting constraints on RIs' time and the incentive structure within which they work are addressed.
- ***Land records and registration:*** at present, there is little or no coordination between the maintenance of land records, which is the responsibility of revenue inspectors and tehsildars; and land registration, which is the responsibility of sub-registrars. Measures to coordinate and integrate these two services and enhance their efficiency through computerization promise to go a long way towards stimulating the land market. Of utmost importance is to combine registration and mutation processes, and provide a 'single-window' facility for the registration of sale deeds, correction of the record of rights in land, and issue of land title. Land records and the registration administration system should be integrated through a computer network to facilitate information exchange for this single-window approach. This should help to reduce the currently high, informal transaction costs to individuals in the land market. Existing registration fees and stamp duties should also be reassessed, as it is possible that their reduction, hand in hand with proper valuation, could lead to a net increase in state revenue.
- ***Survey and settlement operations:*** in the context of the computerization of land records, the continuing relevance of survey and settlement operations is questionable. There is substantial evidence that survey and settlement operations discriminate systematically against the rural poor and socially excluded, whose interests would be far better served by an efficient service for registration of land sales, mutation and issuance of title.
- ***Simplification and transparency in land administration:*** Many of the individual stages involved in land administration currently operate to the disadvantage of the rural poor and socially excluded groups. The complexity of the existing legal framework and a perverse incentive structure provides considerable scope for rent-seeking by the lower-level government officers with whom

landholders come into direct contact, while village elites are better able to manipulate the system to their own advantage. The draft Orissa Revenue Administration Bill is intended to simplify, consolidate and replace the various laws that currently govern land administration. However, the extent to which legislative and organizational improvements in land administration will enhance access to land for the rural poor, depends to a large extent on the degree of transparency with which land administration is conducted in practice. Access to information and public awareness of rights appear to be critical factors. The recent initiative of the Revenue Department, Government of Orissa, to disseminate a local-language 'how to' manual on matters of land transfers and access to land records, is a most welcome contribution in this area, and one from which other states could learn.

- **Land consolidation:** the involvement of local NGOs in the formation of village committees for land consolidation may help to overcome some of the resistance to consolidation, where consolidation is genuinely demanded by particular villages, but where the government-initiated process is perceived to be insufficiently participatory. NGOs could be encouraged to undertake mass-awareness generation by using informal media techniques (puppetry, folk theatre, etc.) and create a basis for negotiated and participatory land consolidation at village level. The government's role would be confined to the correction of existing land records, demarcation of common lands, assistance in land measurement, and preparation of the new set of land records. To the extent that both poorer and better-off farmers wish voluntarily to consolidate their holdings in the interests of raising productivity, the most effective public interventions are likely to be those that reduce transaction costs in the land market.
- **Encroachment:** the most promising avenues for protecting rights of access to common land for the rural poor are through efforts to raise public awareness and access to information. Some NGOs in Orissa have been successful in pursuing public interest litigation to defend tribal land rights. Following their lead, the strengthening of local panchayats could make a vital contribution towards promoting the watchdog function of civil society institutions. Only with strong civil society institutions will there be effective demand from below for accountability within the lower levels of land revenue administration, thereby limiting the possibilities for evasion of the legislation designed to prevent encroachment on commons. With such safeguards in place, the computerization of land records at tehsil level would also contribute towards making information on the extent of encroachment more publicly accessible.
- **Tenancy:** liberalization of the land-lease market, as proposed in the draft Orissa Revenue Administration Bill, and supported by Government of India policy under the Ninth Plan, is therefore cautiously to be welcomed, provided that the right balance can be struck between assuring landlords of their long-term ownership rights, and assuring tenants of their security of tenure and protection under the law for the duration of fixed-term tenancy contracts. Only with documentary evidence of such rights are tenants likely to face the possibility of access to institutional credit. The government's role would not be to specify the class of cultivators who may lease out their land, or to set a 'fair' rent as under the Orissa Land Reforms Act, but to ensure that contracts are upheld.
- **Other market-based approaches to increasing access to land by the poor:** learning from experience that land encroachment and tenancy, in spite of being banned, are widespread, the government might consider additional, market-based mechanisms to increase access of land to the rural poor. For example, a fixed proportion, say 50 percent, of the revenue wastelands should be auctioned for a limited, fixed period, for agricultural purposes. If at the same time, tenancy is deregulated, large landowners may be willing to take land on auction and lease-out to the small

and marginal farmers for cultivation. This would increase not only the poor's access to land but also government revenue. The only proviso is that the penalty for encroachment should be set high enough to act as a disincentive.

5.2 Stakeholder analysis

The following is a brief summary of the major stakeholder groups that have interests in land and land administration in Orissa. A number of other stakeholders have been left out of this analysis, including civil court lawyers, stamp vendors, and so on. A more complete stakeholder analysis would need to consider all such groups.

Government of Orissa: The Department of Revenue and the Board of Revenue are the government agencies responsible for land revenue administration. Between them, at state level, they are primarily responsible for policy formulation and implementation, and adjudication of matters relating to land revenue.

Tehsil-level revenue bureaucracy: The tehsil-level revenue bureaucracy is the cutting edge of land administration. The key officials at this level comprise the tehsildar, the revenue inspector, the sub-registrar, the assistant settlement officers and the assistant consolidation officers. The last two operate at the level of a range which may or may not be coterminous with a tehsil. The tehsil-level officers function under the district collector for revenue administration and have primary responsibility for implementing land policy.

Non-Governmental Organizations (NGOs): The strength and influence of the NGO community in Orissa has grown rapidly in recent years. Some are concerned with the protection of tribal rights to land and have been instrumental in initiating public interest litigation against the encroachment and alienation of tribal land by non-tribals and in promoting public awareness on these issues.

Large landowners: Large landowners, typically owning 5-10 acres of irrigated land, constitute the village elite, and usually wield considerable influence in village society. Much of their influence is derived from their control over land, labour and credit markets in the village. Although their power has been eroded to some extent by land reforms, they are still able to manipulate the land administration system to their advantage by building coalitions with the tehsil-level bureaucracy. They usually lease out part of their land or hire wage labourers to cultivate their land as they diversify into non-agricultural occupations.

Small and marginal landowners: These are usually owner-cultivators with about 1-5 acres of irrigated land. Adjustments in operational holdings (e.g. in relation to the availability of labour or draught power) may be possible by leasing-in or leasing-out additional land. Agriculture is their main source of livelihood, though accompanied by seasonal non-farm labour.

Landless farmers: They do not own any land but rely on their own labour for a livelihood, by hiring themselves out to other farmers as labourers. They are an important stakeholder group in land. Often they attempt to increase access to cultivable land by encroaching on government wastelands or village commons.

Women: Women, even in better-off households, are considered a land-poor category owing to social norms and customs that, in spite of legal rights, deny them access to land.

Tribal communities: Orissa has a large tribal population which has traditionally relied upon forest land and resources for their livelihoods. Their access to and control over land often continues to be determined by custom. There are legal provisions to prevent tribal land alienation by non-tribals, which operate with varying degrees of effectiveness.

Using this simplified list of stakeholders, Table 16 summarises the possible consequences of the policy options suggested in section 5.1 for each stakeholder group.

As a second step in the stakeholder analysis, it is then useful to summarise potential conflicts and complementarities of interest between stakeholder groups in the form of a simple matrix, as shown in Table 17. The shaded cells highlight the probable sources of resistance to the main policy options suggested by this study. Most obviously, large landowners may be expected to use their political influence to thwart the Government's attempts to formulate policies that aim to increase the poor's access to land or to improve the 'efficiency' of land revenue administration, if this means they have less chance of manipulating it in their own favour. Legislation to de-regulate tenancy might also be expected to meet with stiff opposition owing to the complementarity of interests between the large landowners and the legislators.

The state government might also need to be particularly mindful of the possible resistance to policy reform from the tehsil-level revenue officers. It may prove necessary for the state-level revenue administration to build coalitions with selected junior officers to implement the new policies successfully. This will also be necessary given the strong nexus of interests at village level between large landowners and tehsil-level revenue officers, which could so easily derail any casual attempts at reform.

5.3 Suggestions for follow up

A pilot study is constrained by its exploratory nature. It is suggested that further state-level studies be conducted, in selected states, applying the approach that has been tested here. The Annex specifies the minimum amounts of time required to conduct certain stages of the field investigation. The time required will naturally increase with an increase in the number of districts selected for analysis.

Priority states for subsequent studies would include Andhra Pradesh, Uttar Pradesh and West Bengal. Several criteria have guided their selection. **Andhra Pradesh** is a former *ryotwari* area with a relatively high agricultural growth rate, and demonstrated willingness to pursue improvements in land administration (relative success with land consolidation, registration of informal tenancies, progress with computerization of land records, and reform of the land administration agencies). **Uttar Pradesh** is a former *zamindari* area with high rates of tenancy and in which the need to deregulate land-lease market has been identified as an urgent priority. It also offers a relatively successful precedent with land consolidation, and a plethora of village studies and secondary data. **West Bengal** is also a former *zamindari* area with high tenancy rates, and which has received wide acclaim for the systematic recording of tenants' rights under 'Operation Barga'.

Table 16: Who will benefit and how: stakeholder analysis

Policy Option	Government of Orissa	Tehsil-level revenue bureaucracy	NGOs	Large land owners	Small and marginal farmers	Landless farmers	Women	Tribals
Issue joint <i>pattas</i> to husband and wife	Y (Promotion of social justice)	-	-	N (Reduced perceived control over family land)	N (Reduced perceived control over family land)	-	Y (Increased access to land and control over land-related decisions)	Y (Make land alienation more difficult)
Evaluate the role of DRE and BOR, and of the RI	Y (Increased work efficiency)	N (Reduced potential for rent-seeking)	-	N (Reduced ability to manipulate the system)	Y (Reduced delays and rent-seeking)	-	-	-
Abolish survey and settlement operations	Y (Reduced costs)	N (Reduced potential for rent-seeking)	-	N (Reduced ability to manipulate the system)	Y (Reduced rent-seeking; less potential for losing land to powerful interests)	-	-	Y (Make land alienation more difficult)
Combine registration and mutation	Y (Increased revenue with less incentive to undervalue property)	N (Reduced potential for rent-seeking)	-	Y (Reduced transaction costs)	Y (Reduced transaction costs)	Y (Reduced transaction costs in the event of land purchase)	-	-
Systematic computerization of land records	Y (Increased work efficiency)	N (Reduced potential for rent-seeking)	Y (Improved access to land-based information)	N (Reduced ability to manipulate the system)	Y (Improved access to land-based information)	-	-	Y (Make land alienation more difficult)
Involve NGOs in land consolidation and awareness-raising	Y (Improvement in land consolidation and ag. Productivity; Strengthening of civil society)	N (Reduced potential for rent-seeking)	Y (Increased recognition of their role)	-	-	-	-	-
Strict monitoring of encroachment	Y (Increased redistribution of wasteland)	N (Reduced potential for rent-seeking)	Y (Reduced costs of litigation)	N (Lose <i>de facto</i> access to encroached land)	N (Lose <i>de facto</i> access to encroached land)	Y (Increased prospect of getting rightful access to land)	-	Y (Make land alienation more difficult)
Tenancy de-regulation	Y (Improved agricultural productivity through secure land access to efficient farmers)	N (Reduced potential for rent-seeking)	-	N (Gradual erosion of power and social status in village society)	Y (Increased access to land and security of tenure)	-	-	-

Table 17: Conflict and complementarity in stakeholder interests

	GOO	Tehsil-level revenue bureaucracy	NGOs	Large landowners	Small and marginal farmers	Landless farmers	Women	Tribals
GOO	-	♥♦	♥♥	♥	♦	♦	♥	♦
Tehsil-level revenue bureaucracy	♥♦	-	♦	♥	♦	♦	♦	♦
NGOs	♥♥	♦	-	-	♥	♥	♥	♥
Large landowners	♥	♥	-	-	♦	♦	♦	♦
Small and marginal farmers	♦	♦	♥	♦	-	♥♦	♦	♦
Landless farmers	♦	♦	♥	♦	♥♦	-	-	-
Women	♥	♦	♥	♦	♦	-	-	-
Tribals	♦	♦	♥	♦	♦	-	-	-

Notes: Conflicts of interest are represented by ♦, complementarities of interest by ♥. The size of the symbol represents the extent of the conflict or complementarity. The shaded areas indicate the probable sources of resistance to policy change.

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ANNEX: Data Sources And Strategy For Field Investigation

Study theme	Data Sources		
	Primary	Secondary	Government Records
Sale	Difficult to collect in a short time because of sluggish land sale market. Focus group discussions in villages may be helpful; RI can provide circle-level information.	Village studies/research from state-level social science research institutes or universities a useful source. Few studies examine the working of the land sale market because of infrequent sales.	Data on registration of sale deeds available from the sub-registrar (at the tehsil) or the district sub-registrar (at the district). Sale transactions can also be picked up from the mutation register maintained at the tehsildar's office.
Fragmentation	Very difficult to collect in a short time. Villagers often reluctant to discuss because of fear of ceiling restrictions. Detailed discussions with Assistant Consolidation Officer may be helpful.	Few systematic studies exist on land fragmentation.	Data on fragments of holdings routinely collected prior to the start of consolidation to assess whether a village is 'consolidable'. This data is rarely used subsequently. NSS-data (various rounds) is another source though at a high level of aggregation.
Encroachment	Focus group discussions with groups of villagers can be helpful. If time not a constraint, rural residence can provide extensive information on encroachment.	Few systematic studies exist on encroachment of revenue wasteland or village commons.	Encroachment register at the Tehsildar's office the only source of information on extent of encroachment of government land in the tehsil, but data should be treated with considerable caution given incentives for RIs not to 'book' encroachment cases.
Tenancy	Very difficult to collect in a short time. Focus group discussions can help in ascertaining the main contractual terms and other variations. Difficult to get a handle on the extent of tenancy since villagers reluctant to disclose information.	Socio-economic village studies a useful source. They often provide information on the tenancy market even if not a subject of direct study. However, being confined to a few villages is a major limitation. Thus, necessary to consult a large number of studies.	Not collected by the state government. Independent studies conducted by IAS probationers at the Lal Bahadur Shastri National Academy of Administration, Mussoorie can be helpful.

Strategy for reliable data collection with an approximate of length of time required

Owing to variations in data availability and quality, it is necessary to optimise research time in data collection. An outline of a strategy is presented below. As is evident, different data are available at different levels of administration. Data pertaining to the same issue may be available at different levels of aggregation from more than one level of administration, and should be triangulated with one another.

	Strategy/ Activity	Level of Administration
Sale		
S1	Review existing secondary literature (village studies); conduct in-depth interviews with researchers and tehsil-level revenue officials	State, district and tehsil headquarters
S2	Consult government records for selected tehsils	Tehsil headquarters
S3	Conduct focus groups in selected villages	Village
S4	Cross-check focus group results with revenue officials	District and tehsil headquarters
Fragmentation		
F1	Get data on fragmentation from consolidation officials	Range, district and tehsil
Encroachment		
E1	Discuss with District Collectors and tehsildars; examine tehsil-level encroachment register	District and tehsil headquarters
E2	Conduct focus groups and rapid surveys	Village
E3	Cross-check focus group results with revenue officials	District and tehsil headquarters
Tenancy		
T1	Review existing secondary sources (village studies); conduct in-depth interviews with researchers and tehsil-level revenue officials	State, district and tehsil headquarters
T2	Conduct focus groups in selected villages	Village

Activity	Minimum time required in person-days*
S1 + T1	7
S2 + F1 + E1	10
S3 + E2 + T2	1 per focus group discussion
S4 + E3	3

Note: * The time estimate is for a medium-sized state like Orissa. A state the size of UP would probably require about twice this amount of time.