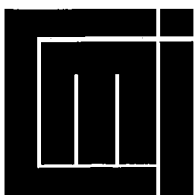


# **Land Reforms and Land Degradation in Tanzania:**

## **Alternative Economic Approaches**

Arild Angelsen and Odd-Helge Fjeldstad

WP 1995: 3



**Working Paper**  
**Chr. Michelsen Institute**  
Development Studies and Human Rights  
Bergen Norway

---

ISSN 0804-3639



# **Land Reforms and Land Degradation in Tanzania:**

## **Alternative Economic Approaches**

Arild Angelsen and Odd-Helge Fjeldstad

**WP 1995: 3**

**Bergen, July 1995**

# **Land Reforms and Land Degradation in Tanzania:**

## **Alternative Economic Approaches**

Arild Angelsen and Odd-Helge Fjeldstad

Bergen, July 1995. 38 pp.

### **Summary:**

This paper uses as a point of departure the extensive soil erosion problems in the highland area of Western Tanzania. The first part of the paper focuses on the ongoing debate on land reforms in Tanzania, particularly the question of state, village or private land ownership. In the second part, a microeconomic model of farm decision-making is developed, where the focus is on two factors which are important to the magnitude of soil erosion: (i) existing intensity of production (overexploitation of land), and (ii) investments in soil conservation. We also develop a model to study migration to/from the highlands, and thereby the impact of different property regimes and other economic factors on soil erosion.

### **Sammendrag:**

Dette notatet tar som utgangspunkt den omfattende jorderosjonen i høylandet i Vest-Tanzania. I notatets første del relateres dette til den pågående debatten om landreformer i Tanzania, spesielt spørsmålet om statlig, landsby eller private eiendomsrett. I andre delen utvikles en mikroøkonomisk modell for beslutninger i jordbruket, hvor fokus er på to faktorer som er viktige for omfanget av jorderosjon: (i) dyrkningsintensitet (overutnytting av jord), og (ii) investeringer som reduserer jorderosjon. Vi utvikler også en modell for å studere migrasjon til/fra høylandet, og derigjennom effekten av ulike eiendomsforhold og andre økonomiske variable på jorderosjon.

### **Indexing terms:**

Agriculture  
Soil erosion  
Land tenure  
Economic models  
Tanzania

### **Stikkord:**

Jordbruk  
Jorderosjon  
Landrettigheter  
Økonomiske modeller  
Tanzania

*To be ordered from Chr. Michelsen Institute, Fantoftvegen 38, N-5036 Fantoft, Bergen, Norway. Telephone: +47 55574000. Telefax: +47 55574166*

## Contents

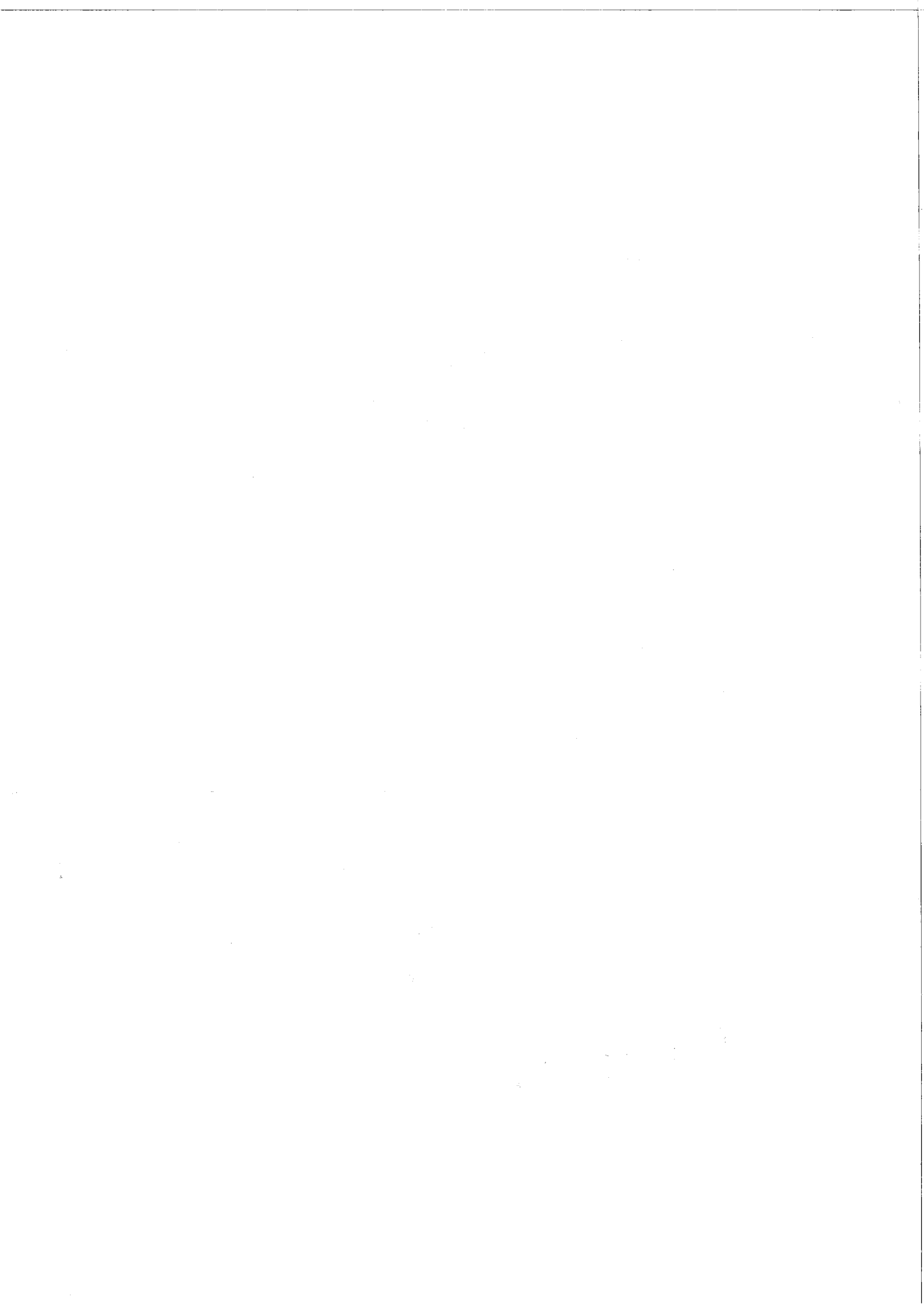
1	Introduction and overview	1
2	Land rights in Tanzania	3
2.1	Property rights regimes	3
2.2	The present land tenure system in Tanzania	5
2.3	Land reform recommendations	8
3	Criteria for assessment of land rights reforms	9
3.1	Agricultural productivity and tenure security	10
3.2	Internalization of environmental costs	12
3.3	Land distribution and the equity-efficiency debate	13
3.4	Transaction costs and the case of individualized titling to land	14
3.5	The evolutionary theory of land rights and land reforms in Tanzania	16
4	An economic analysis of farmers' decision-making	17
4.1	A two-period model	18
4.2	What determines the magnitude of soil erosion?	22
5	Upland land degradation, property regimes and migration	26
5.1	A simple migration model	26
5.2	The free market solution	28
5.3	The importance of different property regimes	30
5.4	The role of off-farm employment and rural-urban migration	32
6	Conclusion: The challenge of sustainable intensification of Tanzanian agriculture	34
	References	36

## Table

1.	Different types of power determining land allocation	14
----	--	----

## Figures

1.	Intensity of production in period 1 ( $z_1$ )	21
2.	Investments in soil erosion (s)	22
3.	The long-term allocation of the population between the lowlands and the uplands	27
4.	Migration equilibrium in a situation with open access in the uplands	31
5.	Rural-urban migration	33



## 1 Introduction and overview<sup>1</sup>

The problem of land degradation in tropical agriculture is caused by the aggregate effect of numerous decisions by farming households. Farmers respond to the natural, cultural, social, political, legal, and economic environment that surrounds them. In this paper we emphasize the economic factors and argue that these are the major determinants of farmers' choices. In particular, we focus on two sets of economic variables; the property rights regime governing land use, and the relative prices.

A basic tenet in the economic theory of property rights is that farmers have greater incentives to invest in land improvements the greater his certainty that the land will belong to him or his descendants in the future. We raise the question of whether this implies that soil conservation presumes private property rights. We argue that individualized titling may not necessarily provide the answer. Instead we argue that reinstitutionalization of the customary tenure system may secure land rights of the individual farming household, and thus strengthen the farmers' incentives to invest in soil improving measures. A major challenge in this respect is to develop procedures and practices which make the allocation of village lands transparent and subject to public scrutiny.

We use the highlands zone of Western Tanzania as our frame of reference. Because of its high altitude (1440 to 1750 meters above sea level) and regular rainfall (annual precipitation varying from 800 to 1600 mm), the area has a high agricultural and forestry potential. The major staple crops are bananas, cassava, beans, and other food crops. All these products may also be sold as cash-crops. Coffee production has been introduced recently (see Mwalyosi, 1992; and Fjeldstad, 1993). People also keep livestock, mainly poultry, cattle, goats, and sheep.

A number of factors has contributed to overutilization of land resources in the area, resulting in deforestation, caused mainly by shifting cultivation, overgrazing, and wild fires. This has led to extensive removal of natural vegetation and subsequent soil erosion and decline in agricultural productivity. In the vicinity of villages the concentration of people has led to increased soil exhaustion, reduction of grazing land, overgrazing and deforestation, and to more intensive use of land for cropping.

Today, these problems are particularly evident by the existence of poor and unproductive soils in parts of the area, long distances covered in search of firewood, widespread red scars on the land, gully erosion and frequent famines. In addition, the watersheds have been highly disturbed and most of the formerly

---

<sup>1</sup> We would like to thank Sufian Hemed Bukurura, Espen Sjaastad, Ussif Rashid Sumaila, and Arne Wiig for several constructive comments to and suggestions for improvements of earlier drafts of this paper. The usual disclaimer applies. Earlier versions of this paper have been presented at the Joint CSAE/CMI Workshop on Land Reform, Oxford, March 1 - 3, 1995, and at the annual conference of the Norwegian Association for Development Research (NFU), Trondheim, June 6 - 8, 1995.

perennial swamps and streams are now dry for most of the year. This has created water shortages for both people and livestock, especially during the dry season. People are forced to travel long distances in search of domestic water and water for livestock breeding.

The adverse socio-economic and environmental effects characterizing the recent developments in the area may be summarized as:

- changes in the local ecology as a result of poor farming practices, livestock husbandry, forestry development and haphazard settlement;
- changes in the hydrology of the area have imposed sedimentation loads on the major river systems with adverse effects on the flows to the areas;
- competition and conflict in land resource use;
- overpopulation relative to the available resources leading to increased pressure on the remaining resources; and
- migration of people to townships in the region and to Dar es Salaam, contributing to increased urban pressure.

Similar problems as described above can also be observed in other areas in SubSaharan Africa (see e.g. Wachter, 1992; Place and Hazell, 1993; and Brekke *et al.*, 1995). Thus the experience from Western Tanzania may have a wider relevance, and can hopefully contribute to increased knowledge of the relationship between land degradation, and land rights and economic policies.

This paper consists of two parts. Part one (sections 2 and 3) focuses on land rights and land reforms in Tanzania, and relates these issues to theories of property rights. In section 2 we define the concept of property rights, and identify four broad categories of land rights regimes commonly used in the literature. The present land tenure system in Tanzania is reviewed, and the proposed land rights reforms by the Land Commission (1994) is discussed.

Section 3 proceed by asking which criteria should be used to assess the (proposed) land tenure regimes. We put forward and discuss four different criteria which are of particular relevance for the discussion of alternative land rights regimes and reforms in tropical agriculture: (i) Agricultural productivity and security of tenure; (ii) internalization of environmental costs; (iii) land distribution and equity; and (iv) transaction costs related to individualized titling to land.

The aim of part two (sections 4 and 5) is to discuss the potential role of various economic factors in explaining the degree of land degradation. The emphasis is on the effect of different property rights regimes as well as other economic factors (particularly relative prices) in determining how farmers use and manage land resources. This part provides a more formal discussion of some of the points made in part one (sections 2 and 3) related to the first and second criteria for assessment of property regimes.



Section 4 presents a microeconomic model of farm decision-making. The focus is on two variables which are important to the magnitude of soil erosion; (i) existing intensity of production (overexploitation of land), and (ii) investments in soil conservation. Section 5 discusses a more macro-oriented model, where the focus is on factors determining the overall population in a region, and thereby the pressure on land. We do not presently have sufficient data to test the relative importance of the various effects discussed in these models. The purpose is more to present possible effects (propositions) that should be considered in policy-formulation, and which also provide a set of hypothesis for empirical testing, and therefore could serve as a guide for more detailed empirical research.

## **2 Land rights in Tanzania**

It is widely recognized that the property rights regime in place is a crucial factor in determining resource allocation in tropical agriculture (see, for example, Bromley, 1991). The property regime is a key factor in determining which costs and benefits are included in farmers' decision making, in particular to what extent long term effects are included. Furthermore, the property rights approach draws attention to the fact that subtle changes in the content of property rights can change the macro performance of an economic system and lead to economic growth or stagnation. Any redefinition of the structure of property rights by the state also has wealth effects involving both winners and losers. The latter issue is of particular importance in the Tanzanian economy which is dominated by agriculture.<sup>2</sup>

In this section we first define the concept of property rights and identify the land rights regimes most commonly used in the literature. Next, we describe the main characteristics of the Tanzanian land tenure system, and the land reforms proposed by the recent Land Commission (1994).

### *2.1 Property rights regimes*

In simple terms, property rights are the rights individuals or groups of individuals have to enjoy the benefits from a given resource, in our case land resources.<sup>3</sup> Three types of property rights are generally distinguished between in the literature (Barzel, 1989; Eggertsson, 1990:34);

1. *Use rights*: the rights which define the potential uses of land that are legitimate for an individual, including the right to transform it physically through, for instance, different agricultural crops and growing techniques.

---

<sup>2</sup> Agriculture accounts for more almost 50 percent of GDP in current prices, 1991-93 (Bank of Tanzania, 1993:14). It also accounts for nearly 70 percent of total export earnings (1992 and 1993), and provides employment for almost 90 percent of the labour force. See World Bank (1994) for a more detailed presentation of the agricultural sector in Tanzania.

<sup>3</sup> The term *land*, in its ground, soil, or earth-related sense has a variety of meanings. The most relevant definition for our purpose is that which sees land as a factor of production. The reader is referred to Wachter (1992: 6-7) for a listing of this and the other definitions.

2. *Income rights*: the right to earn income from the land and contract over the terms with other individuals.
3. *Transfer rights*: the right to transfer the asset to another party, that is, to alienate or sell the land.

A property institution consists of a set of *rights* and a set of duties or obligations (Angelsen, 1995b). Legal rights are never unlimited. For example, the kind of uses permitted by the law is often restricted (for instance, not growing opium), or the income from agricultural output may be taxed. Possible restrictions of these rights that shrink the set of alternative uses or capture part of the incomes from land use will lower the economic value of the land.

Property arrangements are social relationship among individuals, "they link not merely a person to an object, but rather a person to an object against other persons" (Bromley, 1989:202). The key element of this triadic relationship is the right of the owner to exclude others from the benefits related to the asset (use, income, and transfer rights). In short, property rights give a person the legal right to exclude others within the limits set by the law; to what extent these rights are protected is, *inter alia*, determined by the person's own enforcement of the rights (Angelsen, 1995b).

Property rights exist along a number of dimensions, thus any classification represents a simplification of a complex reality. It is most common to distinguish between four different property rights regimes (see, e.g., Bromley, 1991):

1. *State property*; the state holds the property rights.
2. *Common (or communal) property*; a group of individuals, for example a community, holds the rights.
3. *Private property*; an individual or an household holds the rights.
4. *Open access*; no property rights exists (either *de facto* or *de jure*).<sup>4</sup>

The main distinction is between situations *with* property rights (where the agent with the rights is either the state, the community, or an individual), and situations where *no one* has property rights, i.e. open access.

Whereas these four categories may clarify the discussion on property rights regimes, real life regimes are likely to be a combination of these four (Bromley, 1989; Ostrom, 1990; and Wachter, 1992). In describing actual property regimes a number of other dimensions must be added:

---

<sup>4</sup> In addition to these four regimes, a global social planner's solution is often employed to define the socially optimal solution, and acts as a yardstick to measure the outcome under the other regimes. Parts of economic theory have traditionally not distinguished between state property and the social planner's solution, but little knowledge about tropical resource management is needed to realize the lack of realism in this assumption. *Homesteading* could also be considered a separate regime, which is particularly relevant in frontier areas: land clearing/preparation gives private property rights to cleared land. Under this regime land is transferred from an open access resource (regime 4) to a private property resource (regime 3). See, e.g., Angelsen (1994).

- How *secure* are the rights (claims)? The three first categories assume 100 percent security for the agent against third party intervention, whereas the open access case assumes no security. The security of, for example, private rights depends on the protection given to these rights by the state, and its enforcement ability.
- Property rights can be either formal (legal) or informal (customary or traditional) rights. One difference is that it may be more difficult to enforce informal rights than formal ones in a legal manner, and customary rights may also receive less respect from potential users outside the community. The existence of informal property rights makes enforcement difficult, particularly against claims from outsiders (outside the village). The result may be property rights insecurity and conflicts.
- Property rights are a bundle of rights, and the agent may not have all the three types of rights listed above. Typically, a farmer may have the *user rights* and the right to the income, but not the right to sell the land to outsiders. More generally, property rights will always be constrained, for example, certain land uses may be prohibited.
- The agent may not be well defined; for example, individual households may use land in a particular way after consultations with the leaders of the community.
- Land may have different regimes governing different uses; for example, agricultural use may resemble a private property regime, whereas collection of forest products from the same land is governed by communal management.
- Finally, another complication of the above categorization is the fact that property rights will never be fully delineated because of *transaction costs* (see section 3.4).

## 2.2 *The present land tenure system in Tanzania*<sup>5</sup>

The Tanzanian land tenure system could probably be interpreted as a combination of the state property regime, communal management and private property. This situation partly reflects the fact that since independence mainland Tanzania has not had an explicit policy on land tenure. In spite of such fundamental statements of policy as the Arusha Declaration in 1967, the land tenure system has essentially continued to be governed by the rules underlying principles of the Land Ordinance of 1923, and is almost unaltered in its essentials from colonialism (Land Commission, 1994:135).<sup>6</sup> The Tanzanian Constitution, for example, has no

<sup>5</sup> This section draws mainly on the *Report of the Presidential Commission of Inquiry into Land Matters*, which we will refer to as Land Commission (1994). The Commission submitted its report to the President on November 11, 1991.

<sup>6</sup> According to the 1923 Land Ordinance (i) all land is publicly owned and under the control of the state, (ii) land rights and titles are based on use, (iii) commoditization of and speculation in land are proscribed, and (iv) rights of occupancy, the only recognized tenure, are held in two ways: (i) under granted rights of occupancy, given subject to development conditions for up to 99 years, or (ii) deemed rights of occupancy or customary tenure, which, subject to use, are

provisions on land and land ownership, except for defining the territory of the country for purposes of securing the political sovereignty of the state. Even major policy programmes, such as the villagization of the 1973-76, paid little regard to issues of land tenure. One possible explanation is that the state also after independence wanted to maintain its ultimate control over land; another one could be an underestimation of the importance of property rights.

The present land tenure system in Tanzania, as in many other developing countries, is based on a system of dualism and hierarchy at the same time. The dualism is between the peasant/pastoral sector governed by customary land tenure under the deemed right of occupancy (usufructuary rights), and the plantation/urban sector governed by the statutory system, with property rights secured in the written national law. The structure is hierarchical in that the statutory system is considered superior, with far greater security of tenure, than the customary system. Progress in this hierarchy means movement away from the customary to the statutory. In practice, this movement actually involves expropriation of customary land, as has been the case throughout the colonial and post-colonial history (Land Commission, 1994:140).

Under many of the customary land tenure systems in Tanzania, the ultimate ownership to land (the transfer right) was vested in a corporate entity such as the tribe, the clan or the family. Use and income rights depended on membership of the group. In the current structure the radical title in all lands which are declared to be public land is vested in the President,

*"and shall be held and administered for the use and common benefit, direct or indirect, of the natives of Tanganyika, and no title to the occupation and use of any such lands shall be valid without the consent of the President" (Land Commission, 1994:19).*

The President is empowered by the Land Ordinance to grant land by way of occupancy. In practice, the Ministry of Lands, Housing and Urban Development manages, administers, and allocates land. This means that the control and administration of peasant or village lands lay in the hands of the state. In effect, customary right holders in rural areas have been treated at best as "tenants-at-will", while those in urban areas are considered as "squatters". These groups use the land but have little security. On the other side, the holders of the granted rights of occupancy enjoy statutory security for the stated period so long as they use it according to prescribed conditions.

The villagization programme (1973-1976) involved a large-scale relocation of cultivators and pastoralists into villages.<sup>7</sup> The emphasize in this "operation

---

held in perpetuity.

<sup>7</sup> The Tanzanian countryside is today organized in village communities. The latest tally shows some 8,367 registered villages. There may, however, be other traditional and newly established villages which have not been recorded or registered (Land Commission, 1994:146).

Tanzania"<sup>8</sup>, as it was called, was on modes of production. Little regard was, however, paid to existing customary land tenure systems, and the "new" land tenure system in the new locations was not thought through (Land Commission, 1994:20). In some cases, land held under granted rights, but in practice abandoned or neglected by land holders, was allocated to villages without any formal procedures. This implied that the allocations of land within villages to individual farmers were unprotected by law.

Since the late 1980s some of the former land owners of abandoned farms and estates have started to claim their land held under customary tenure which had been alienated during villagization. To meet the problem of widespread confusion and dispute on land tenure in rural areas, the ruling party, Chama cha Mapinduzi (CCM) - the Revolutionary Party, in 1987 instructed the Government to complete demarcation and titling of villages under the legal regime of the Land Ordinance within five years. However, by mid-1991, only 22 percent of the some 8 400 registered villages had been surveyed. Only for 2 percent of the villages certificates had been registered (Skarstein and Havnevik, 1995:9).

The Land Commission (1994) argues that the whole procedure of preparing land certificates was beset with legal and practical problems. First, the existing deemed rights of villagers on village land were not made clear, thus causing double allocation and further confusion. Second, the right of occupancy of the village was granted to the Village Council, a body controlled by the state, and not the Village Assembly which was the only democratic village institution.

The government responded to the increasing problems related to land tenure to enact a new law (Act to regulate land tenure in established villages of 1992) which extinguished all rights of occupation of land based on customary law in established villages. This law, however, was challenged at the Court of Appeal which in January 1995 ruled the law unconstitutional and hence declared it non-valid (Birgegård, 1995).

The major problems with the present land tenure system can be summarized as follows (Land Commission, 1994:33):

- Procedures for allocating land are often disregarded or bent.
- Neither procedures nor practices of land allocation are transparent, open and subject to public scrutiny and challenge, thus facilitating abuse and malpractices.
- There is no clear law on the alienability of certain areas, such as conservation areas, leaving a wide discretion to civil servants and politicians, including the Ministers, concerned.

---

<sup>8</sup> "Operation Tanzania" is probably better known by the name "operation vijiji" (Land Commission, 1994:40).

- Villages lack firm control over the allocation of village land. Village land have thus become a pawn in the hands of powerful officers and organs of the central and local governments.
- There is a clear tendency towards alienation of large tracts of village lands to "outsiders".

### 2.3 *Land reform recommendations*

The principle underlying the Tanzanian corpus of customary law as well as the concept of rights of occupancy, is that land is for use and not simply a commodity at the disposal of the owner to do with it what he or she likes. The ultimate control over use and disposal of land lies in the community. The Land Commission maintains this principle in its recommendations. The other principle, which is also not new, is that security of land tenure depends on its use. With reference to the three types of property rights discussed in section 2.1, the Tanzanian system includes both the rights for individuals to use the land and the right to earn income from it.

The Land Commission (1994) recommends that the organizing principle for the land tenure structure to be a multiple land tenure system based on varied forms of land ownership and interests. It further recommends that all land in Tanzania be divided into *national lands* and *village lands*. *Village lands* are defined as all lands falling within the boundaries of villages, whether or not registered, while *national lands* are a residual category defined as all lands which are not village lands. Nonetheless, national lands constitute a significant portion of the land surface with respect to land use.

Village lands will, according to the Commission's recommendation, be vested in the respective Village Assemblies who hold land for the benefit of the villagers being members of the village in question. Where there are land traditionally used as commons, and extending over more than one village, for example pasturelands, then such adjoining village assemblies will have to enter into agreements for the use of the commons by the villagers of all the villages concerned. All adult members of the village are members of the Village Assembly. Thus, there is a close identity between the assembly and the rights-holders (Land Commission, 1994:146). The idea behind this is that the monopoly of the government over the control and management over land, should be done away with. At the same time, by maintaining the principle of the ultimate owner (or radical title), the Commission vests the ultimate control over land in the communities concerned, not in the state on behalf of and for the communities (Land Commission, 1994:141).

The ongoing economic and policy reforms in Tanzania implies a change towards a market exchange economic system. Thus, it may seem inconsistent with the government's macroeconomic policy when the Land Commission (1994) does not recommend individualized titling to land, and instead argues for a land tenure system where the ultimate control over and use of land lies in the community,

vested in the Village Assemblies. When the state or the local community, as in this case, imposes limits on exclusive rights, we may refer to these restrictions as attenuation of property rights. However, property rights to land in Tanzania are to some extent unattenuated since individuals have the rights to use and to earn income from the land, although restrictions on individual rights to trade in land exist.

This possible inconsistency may explain the fact that the Tanzanian president recently has appointed a new land commission which shall, particularly, focus on the possibilities of privatizing customary land, i.e., establishing individualized titling to land. This may also reflect external pressure from, for instance, the World Bank. The World Bank seems to regard title to property as necessary to encourage farmers to improve the land and maintain soil fertility (World Bank, 1989). Another explanation for the political drive towards legal private property rights may be the possibility for a change in the agricultural priorities, and the "signs of an awakening of Tanzania's long-rumored agricultural potential are to be sought not among smallholders but among larger commercial farms" (Putterman, 1995: 321).

To complete the uncertainty of the future land tenure, Havnevik and Skarstein (1995:30) report that the Government is about to enact a new Land Policy Law, which, in contrast to the Land Commission's recommendations and the World Bank policy, will continue to vest the radical title of land with the President.

### **3 Criteria for assessment of land rights reforms**

Which criteria should be used to assess the (proposed) land rights regimes in Tanzania? In general, actual land rights regimes would be the result of a combination of a natural evolution (as argued by the evolutionary theory of land rights, see Platteau, 1995), and the land tenure policy of the country. The relative importance of these two sets of factors remains an issue of controversy. It is the land tenure policy which is the direct choice variable, and we need criteria to make policy assessments and recommendations. In this section, we put forward and discuss four different criteria (or objectives) which are of particular relevance for the discussion of alternative land rights regimes and reforms in the study area:

1. Economic efficiency, here specified as agricultural productivity.
2. Environmental conservation.
3. Distribution and equity.
4. Transaction costs.

One could argue that the environmental concern and the transaction costs should be part of an overall assessment of the economic efficiency (i.e., 2 and 4 to be included in 1). However, we have for clarity of exposition chosen to separate these, and limit the efficiency discussion to *on-farm* agricultural productivity.

### *3.1 Agricultural productivity and tenure security*

From an economic efficiency point of view security of land rights is important for securing investments on the land, including investments in soil conservation or soil improving technologies. In the literature, usually three main arguments have been raised in favour of the granting of individualized titling of land (freehold title), under which complete usage rights and transferability are vested in the owner (Barrows and Roth, 1990; Wachter, 1992; and Pinckney and Kimuyo, 1994):

1. The farmer has greater incentive to invest in land improvements and include the long term effects of his current decisions, the greater his certainty that land will belong to him and his descendants in the future.
2. Titled land can be used as collateral to secure loans, thereby increasing the funds available for agricultural investments.
3. Assuming that the only value of land is its agricultural use, and assuming that no other impediments to increasing scale exist, more efficient farmers should be able to buy out their less efficient neighbours in a transaction that is beneficial both for farmers and society as a whole. Thus, productivity in the agricultural sector will rise over time as a result of these transactions.

The term "security of land" often refers to two aspects. First, it refers to security against loss of land. Second, it refers to security of investments in, and on, land. These two aspects are, of course, very much interrelated. In much of the economic literature, however, it is the second meaning of the term which is referred to. The security aspect is, in general, used as the main argument for private or individualized titling to land. However, if security of land rights are to be secured through traditional land tenure forms, this argument should be reconsidered. The key question would then be: Can the land tenure system recommended by the Land Commission (1994) provide sufficient security of land rights?

There is obviously an implicit security in the customary land rights system. However, the credibility of the system rests on the stability of the government and the credibility of its policy, and the legal protection given to traditional rights by the state. In particular, the credibility rests on the policy measures taken to secure village control over the allocation of village lands, and to eliminate the present tendency towards alienation of village lands to outsiders by powerful civil servants and politicians. One of the strongest arguments in favour of individualized property rights is that it makes land mortgageable and thereby increases the farmers' access to credit (see, e.g. World Bank, 1989). Secure rights will, according to this line of arguments, provide incentives for individuals to improve their land and "help rural credit markets to develop, because land is a good collateral" (World Bank, 1989:104). The use of land as collateral is dependent on the third class of property rights outlined in section 2.1, that is the transfer rights. However, the relevance of this argument on the accessibility of credit requires at least three assumptions to be fulfilled.<sup>9</sup> First, such credit must be available to a

---

<sup>9</sup> See, e.g., Land Commission (1994:119).



fairly substantial number of peasants. Second, there should be in place a developed financial infrastructure to advance credit to the agriculture sector. This in turn assumes an efficient and relatively independent judicial machinery to enforce ultimate foreclosures. Three, land-linked security must be the only (or the only one which is good) form available to organize rural credit. Empirical evidence from Tanzania, as well as from other SubSaharan African countries, have thrown considerable doubts on the validity of these assumptions. Other bottlenecks than lack of collateral seem to be more important for the provision of rural credit (Platteau, 1995). Place and Hazell (1993), in a statistical survey of regions in Ghana, Kenya and Rwanda, find that credit use was so infrequent in most regions that statistical analysis could not be used. In the three remaining regions, they find a positive, a negative, and no relationship, respectively, between land rights and credit use.

The demand for security of land in the villages in Tanzania is mainly confined to the security against loss of land, including the investments made. Villagers fear the loss of their lands, which is their main means of livelihood, through various means and mechanisms: Alienation of land to outsiders; government expropriation of village lands; urban expansion into village lands; etc., are examples of cases causing insecurity (see Land Commission, 1994:118). However, titling itself does not necessarily provide security against such risks of loss of land held by smallholders. The apparent insecurity of customary holders in Tanzania has been caused through a systematic administrative practice which has relegated customary rights to a secondary place, inferior to statutory land rights. Barring such practice, customary rights have the added advantage of legitimacy in, and supervision by, the immediate community, thus, enhancing their security. The security thus provided may then also be sufficient for such investments as may be generated within the peasant communities themselves. On the other hand, the security provided by the title, particularly to a land holder from outside the village community, has proved to be illusory in many cases. The very process of land alienation to an outsider in the face of the needs of villagers generates, according to Land Commission (1994:118), such hostility that it undermines the security promised by the registered title.

According to the arguments in favour of individualized land entitlement, the presumed added security gained by titling is supposed to induce more investment in land improvements directly, while the increased availability of land-secured credit should increase these investments indirectly. However, Barrows and Roth (1990), drawing on a variety of sources, illustrate that in Kenya security of tenure was not increased with titling. Further, there was little evidence of a correlation between titling and overall long-term investment. Finally, a "well-functioning" land market did not develop after titling since customary law was still determining sales and successions. Overall, it is hard to establish general empirical relationships between land titling, on the one hand, and agricultural productivity, input use, land investments, and credit use, on the other.

In a recent comparative study on land tenure reforms in Kenya and Tanzania, Pinckney and Kimuyo (1994:10) found that many farmers would never accept a land-secured loan if there were the least possibility of losing their land. Land for these people is worth more than its collateral value or the income from agricultural use. If profitable investments entail some risk, demand for land-secured loans may not materialize.

The sentiments against titling of land, may partly be explained by the fact that land is much more than simply a factor in economic production to a smallholder. Loss of agricultural land often means the loss of livelihood, and virtual marginalization and eventually destitution. It is not surprising, therefore, that when possible implications are understood, rural smallholders are very reluctant to use land as a collateral. Further, land continues to be the central force around which the rural people's spiritual and cultural life is organized. Tampering with land therefore means tampering with the social and psychological fabric of the society (Land Commission, 1994:119). Kinship ties remain strong and ethnic, local or regional feelings remain central considerations in social and political life. Land is thereby prevented from becoming a tradable commodity. People are often emotionally attached to "their" land which represents an important source of their identity. The "value" of land is embedded in the social structure and history of a particular community and has a significant symbolic component (Platteau, 1995:18). Thus, land represents far more than a mere input into an agricultural enterprise and it is impossible to abstract it from all the social, ritual, affective and political meanings associated with it.<sup>10</sup>

An immediate consequence of the central role of land as a source of identity and self-esteem is that original occupants are extremely keen to retain their land, even when they reside in towns, all the more so as loss of land implies discontinuance of rituals to ancestors. The reluctance to part with ancestral land is especially strong when it threatens to go to outsiders (Land Commission, 1994; Platteau, 1995).

### 3.2 *Internalization of environmental costs*

Environmental conservation could be considered as one kind of investments in the long term productivity of land. The discussion in section 3.1 on security of tenure is, therefore, very much interrelated with the discussion to what extent farmers will include the environmental consequences in their decisions. A major argument in the economic literature is that tenure security is essential if farmers are to incorporate long term *on-farm* environmental costs in their decisions. This is elaborated in a more formal way in section 4; thus we limit our discussion here.

---

<sup>10</sup> Such sentiments may seem to be universal. Lewis (1955:91), for example, writes that "there is probably no country in the world where land is bought and sold solely for its value as a factor of production, and no country where non-economic factors do not frustrate schemes which would otherwise increase output".

