

# Land Administration to Support Sustainable Development

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**Key words: Land administration, land management, land policy, sustainable development**

## SUMMARY

‘Sustainable development confronts, not just society, but each of us at the heart of his or her purpose. It invites us to give practical support to the values of social equity, human worth and ecological health; it questions our readiness to involve ourselves in the struggle for change’ (Reid, 1995 cited in Elliott, 2006:260). A principal concern of any country today is to define and better understand the interrelationship between population, environment and natural resources and economic development for the purpose of realising what is commonly known as sustainable development (WCED, 1987). Owing to excessive growth of population in many countries, there has been increasing demand on land and its resources for shelter, food, better living conditions and an improved market economy (Platteau, 1996). This pressure which includes informal occupation of land particularly in the developing countries has led not only to uncertainty as regards ownership or stewardship and the spatial boundaries of land parcels but also to the excessive fragmentation of land. This in turn leads to diminishing land productivity, uncontrollable development and land degradation.

The objectives of the study were to investigate the relationship between land administration and sustainable development, and to assess how land administration can support sustainable development by way of drawing lessons from different case studies within the wider context of literature. Results show a close relationship between land administration and sustainable development, and an indispensable role in the sustainability of land if land is effectively administered. There are four main pillars upon which land administration rests so as to achieve sustainable development and these include: land tenure, land value, land use and land development.

Land being in one way or another the basic source of material wealth and a commodity that is always affected by the forces of demand and supply is of crucial importance and requires effective management. Land cannot be treated like other commodities because not only does it have economic value, it also has social, cultural and religious implications. Therefore it is of the utmost importance that an adequate supply of land is available for all purposes at an affordable cost. For this reason, an integrated land administration and management view has been seen as a mean and tool for ensuring a balance between exploitation, utilisation and conservation and thus achieving the sustainability of land.

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## 1. INTRODUCTION

The concept of sustainable development which arise from the fears of overpopulation, pollution and the exploitation of resources reflect the view that land is a resource that must be preserved for future generation (Henssen, 1991). Land being in one way or another the basic source of material wealth and a commodity that is always affected by the forces of demand and supply is of crucial importance and requires effective administration and management to support sustainable development. FAO (2007) records that access to land, security of tenure and land management have significant implications for sustainable development. Land administration provides important parts of the infrastructure for an efficient economy, which means that it touches all aspects of how people earn a living. Land administration is the way in which the rules of land tenure are applied and made operational. It includes land registration, land use planning, land consolidation, land management and property taxation. All the constituents of land administration are cardinal in achieving sustainable development as evidenced in the text. This paper begins by briefly discussing land policy, land management and narrows down to land administration, how it supports sustainable development and ends with land administration in Zambia, its processes and constraints.

## 2. LAND POLICY, LAND MANAGEMENT AND LAND ADMINISTRATION

First and foremost placing land administration in a broader context is worthwhile. The highest level in a land hierarchy is land policy, which falls under the national development plans of a country (Dale & McLaughlin 1998)<sup>1</sup>. Land policy is a governmental instrument that states the strategy and objectives for the social, economic and environmental use of the land and natural resources of a country (GTZ, 1998). It is considered of the utmost importance that a country trying to organise its land matters starts with the development of a land policy that fits in with national objectives and leads to concrete actions<sup>2</sup>. This is by no means always the case. Land matters are often dealt with by numerous, scattered organisations without a common strategy, an aim or cooperation (Dale & McLaughlin 1998).

Different approaches have been used to describe the relationship between land policy, land management and land administration. While some experts have viewed land management as encompassing land policy and land administration (Dale and McLaughlin, 1988), some have seen it as a distinct from land policy and land administration (Steudler and Williamson, 2002). Yet others see land administration as a key component of land policy (Molen 2001b). The three concepts land policy, land management and land administration have been put in a

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<sup>1</sup> Management of land use and development, and policy preparation (Dale and McLaughlin 1998 p. 163, FIG 1995).

<sup>2</sup> Williamson and Ting (2001 p. 339-366), who pledge a “holistic” approach and have a vision of “a clear road map” to guide the country’s land administration sub-projects towards contributing to the common goals.

hierarchical scheme by Dale and McLaughlin (1999). Barry and Fourie (2002) suggest that they are complementary sub-systems whose hierarchy is not always distinguishable.

From a system performance perspective Steudler and Williamson (2002) describe a hierarchical “land business structure” with three management levels:

- Land policy level – land policy is concerned with the definition of the rule of law and the use and ownership of land i.e. objectives and the land business.
- Land management level – land management is about controlling the processes that put land resources to good effect i.e. land business strategy.
- Land administration level – land administration includes the functions involved in implementing land policy i.e. land business operations.

This scheme provides a good description of the relationship between land policy, land management and land administration. It can however be improved by emphasising the interdependent nature of the three concepts by considering information flow (see figure 1 below) rather than their hierarchical relationship.

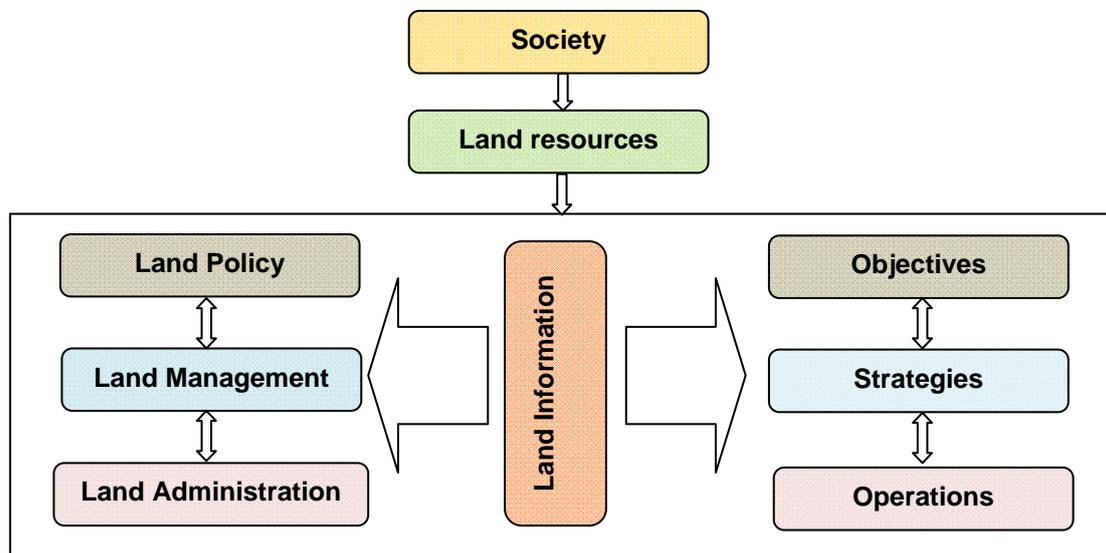


Figure 1: Management Levels in the Land Business, Adapted from Steudler and Williamson (2002)

Land policy consists of socio-economic and legal prescriptions that dictate how the land and the benefits from the land are to be allocated. It relates to economic development, equity and social justice, environmental preservation and sustainable land use (UN-ECE, 1996). According to Dale and McLaughlin (1988) land management is about decision making and the implementation of decisions about the use of land resources. It entails the processes which allocate land resources “over space and time according to the needs, aspirations and desires of man and within the framework of his technological inventiveness, his political and social institutions, his legal and administrative arrangements.” It includes the formulation of land policy, the organization of land administration arrangements and the management of land information. Drawing from this definition and the land business scheme described by Steudler and Williamson (2002), land management can be seen to play a coordinating role between land policy and land administration. Its objectives are to fulfil environmental, economic and

social goals of land policy by planning, promoting and controlling efficient land use through the process of land administration.

The UN Economic Commission for Europe (1996) defines land administration as the processes of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies. Dale and McLaughlin (1999) view land administration as a combination of routine processes that include “regulating land and property development and the use and conservation of the land, the gathering of revenue from the land through sales, leasing and taxation and the resolving of conflict concerning the ownership and use of the land”. Steudler, Rajabifard *et al* (2004) describe land administration in terms of its functions. They divided the functions of land administration into four components (see figure 2 below):

- Juridical: land ownership
- Regulatory: land development control and land use planning
- Fiscal: land taxation
- Information management: integral component fulfilling the information requirements of the other three components

All three definitions mention the three key components of land administration as land ownership, land use, land valuation and land information management.

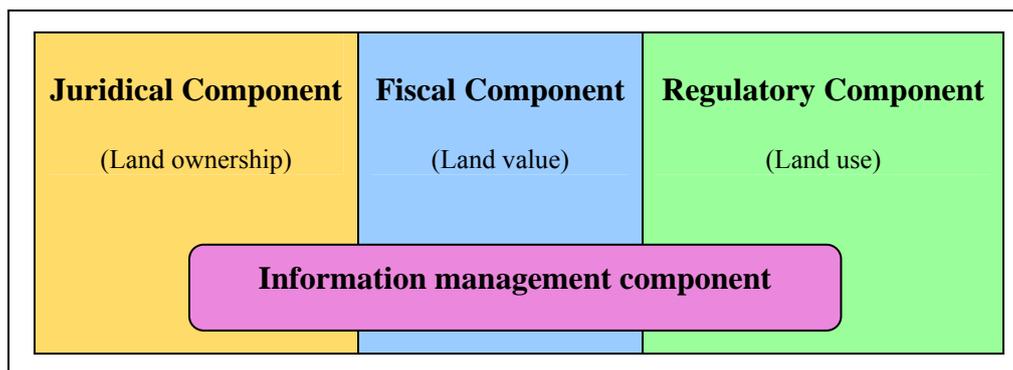


Figure 2: The Four Basic Components of Land Administration, Source: Steudler, Rajabifard *et al* (2004)

According to GTZ (1998) land administration is one, if not the main land policy instrument and land administration includes the regulations and measures of the rights to land (land tenure), the use of land and the valuation of land. Dale and McLaughlin (1998) add to this the alienation, development and transfer of land. Land administration enhances legality and provides information about land. Its components may differ, but a relative consensus prevails on its core function, namely that of land registration (GTZ, 1998) and of the basic unit of the cadastral parcel. Henssen (1994) interprets land management as being almost equivalent to land administration as defined by others, with only planning added. The line between these terms is neither static nor significant. The relationship between the two is as follows, that land management implements land policy by means of land administration. Land management is a positive and creative activity that aims at sustainable land use, while land administration is an implementer that follows the law and enhances it. The point is that land management without proper land administration operates without any connection to reality.

The main challenge of land administration system is to support the implementation of land policy. It makes use of various tools to operationalise land policy instruments. The essence of land administration is its land information system. The completeness, accuracy and currency of the information in the system determine how well the land information system will serve the society. The main tools that are used to generate and maintain land information are cadastre and land registration.

## 2.1 Land administration systems

Land administration systems are concerned with the social, legal, economic and technical framework within which land managers and administrators must operate (UN-ECE, 1996 cited in Enemark, 2004). Alongside the legal framework, land administration systems are the main instrument of land policy administration. They include organizations and procedures for the survey, demarcation and mapping of land, recording of land rights and transactions, provision of documentary evidence of land rights, as well as resolution of land disputes and competing claims. Land administration systems are generally managed by specialist formal land institutions, established by government. However, responsibilities for land allocation, documentation and the management of rights can be devolved to local, community or customary bodies and as some services may be delivered by the private sector (UN-Habitat, 2008). According to Enemark (2004) land administration systems support efficient land markets and are at the same time concerned with the administration of land as a natural resource to ensure its sustainable development. This global approach to land administration systems is shown in figure 3 below.

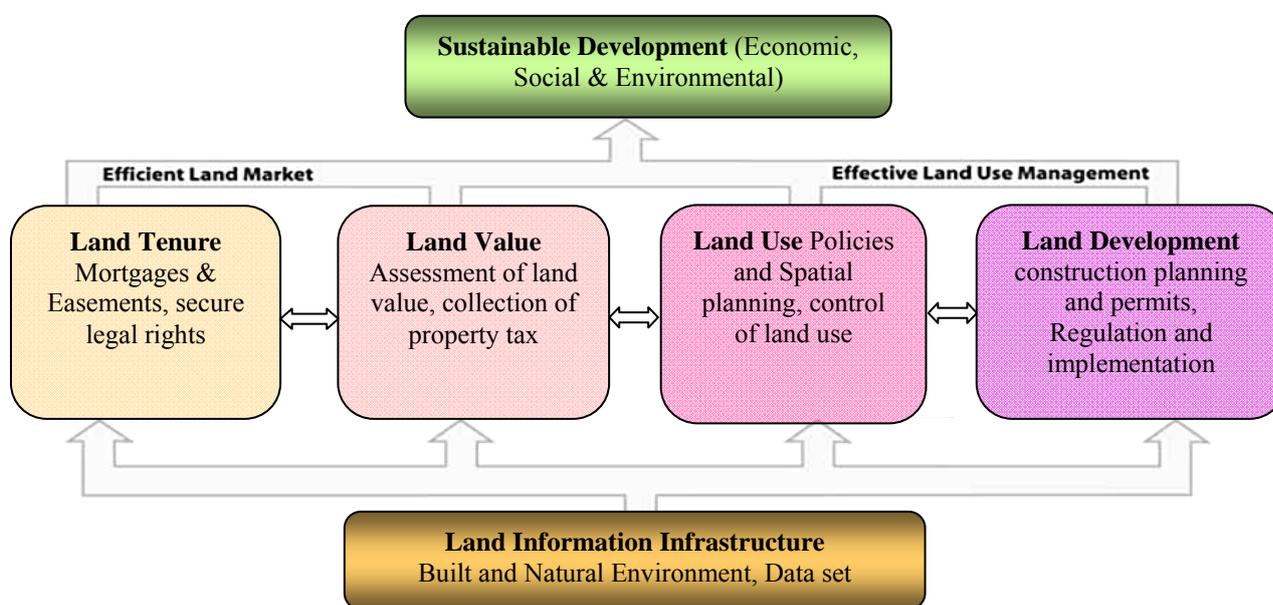


Figure 3: A Global Land Administration Perspective, Source: Enemark (2004)

With reference to Figure 3 above, Enemark (2004) records that land administration comprises an extensive range of systems and processes to administer, which include the following:

–*Land Tenure*: the allocation and security of rights in lands; the legal surveys to determine the parcel boundaries; the transfer of property or use from one party to another through sale or lease; and the management and adjudication of doubts and disputes regarding rights and parcel boundaries.

–*Land Value*: the assessment of the value of land and properties; the gathering of revenues through taxation; and the management and adjudication of land valuation and taxation disputes.

–*Land-Use*: the control of land-use through adoption of planning policies and land-use regulations at national, regional and local levels, the enforcement of land-use regulations and the management and adjudication of land-use conflicts.

–*Land Development*: the building of new infrastructure; the implementation of construction planning; and the change of land-use through planning permission and granting of permits.

These four systems i.e. land tenure, land value, land-use and land development, are interrelated. The actual economic and physical use of land and properties influences the land value. The land value is also influenced by the possible future use of land as determined through zoning and land-use planning regulations and permit granting processes. And the land-use planning and policies will of course determine and regulate the future land development. The information on land and properties permeates through the overall system and provides the basic infrastructure for running the systems within the four interrelated areas. Land information infrastructure is the integral component fulfilling the information requirements of land tenure, land value, land use and land development. The essence of land administration is its land information system. The completeness, accuracy and currency of the information in the system determine how well the land information system will serve the society. The main tools that are used to generate and maintain land information are cadastre and land registration. The Land Information area should be organized to combine the cadastral and topographic data and thereby linking the built environment (including the legal land rights) with the natural environment (including environmental and natural resource issues). Land Information should be organized as a spatial data infrastructure at national, regional and local levels based on relevant policies for data sharing, cost recovery, access to data, standards and the like (Enemark, 2004).

### 3. SUSTAINABLE DEVELOPMENT

Sustainable development is an eclectic concept, as a wide array of views fall under its umbrella. The concept of sustainable development remains somewhat weakly defined and contains a large amount of debate as to its precise definition. In the same line, Temple (1992)<sup>3</sup> points out that others have criticized the overuse of the term:

*"The word sustainable has been used in too many situations today, and ecological sustainability is one of those terms that confuse a lot of people. You hear about sustainable development, sustainable growth, sustainable economies, sustainable societies, sustainable agriculture. Everything is sustainable (Temple, 1992)."*

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<sup>3</sup> Sustainable development – Wikipedia, Source: [http://en.wikipedia.org/wiki/Sustainable\\_development](http://en.wikipedia.org/wiki/Sustainable_development)

Sustainable development is a pattern of resource use that aims to meet human needs while preserving the natural environment so that these needs can be met not only in the present, but in the indefinite future. The term was used by the Brundtland Commission which coined what has become the most often-quoted definition of sustainable development as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs." (United Nations, 1987).

Sustainable development does not focus solely on environmental issues. The field of sustainable development can be conceptually broken into three constituent parts: environmental sustainability, economic sustainability and socio-political sustainability. The United Nations 2005 World Summit Outcome Document, refers to the "interdependent and mutually reinforcing pillars" of sustainable development as economic development, social development, and environmental protection (see figure 4 below).

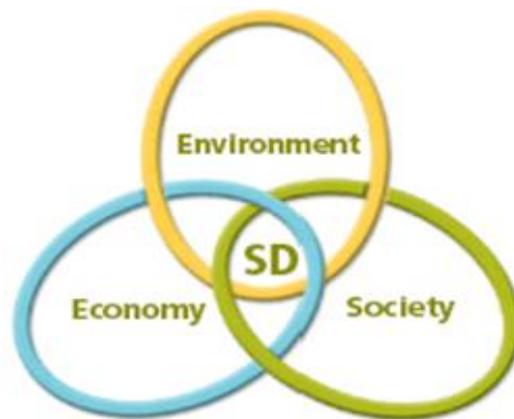


Figure 4: A holistic concept of Sustainable development (SD)

According to Hasna (2007), sustainability is a process which tells of a development of all aspects of human life affecting sustenance. It means resolving the conflict between the various competing goals and involves the simultaneous pursuit of economic prosperity, environmental quality and social equity famously known as three dimensions (triple bottom line). The process of achieving sustainability is of course vitally important, but only as a means of getting to the destination (the desired future state). However, the 'destination' of sustainability is not a fixed place in the normal sense that we understand destination. Instead it is a set of wishful characteristics of a future system.

Indigenous people have however argued through various international forums such as the United Nations Permanent Forum on Indigenous Issues and the Convention on Biological Diversity, that there are, in fact, four pillars of sustainable development, the fourth being cultural. In the same vein The Universal Declaration on Cultural Diversity (UNESCO, 2001) further elaborates the concept by stating that "...cultural diversity is as necessary for humankind as biodiversity is for nature"; it becomes "one of the roots of development understood not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence". In this vision, cultural diversity is the fourth policy area of sustainable development.

Economic Sustainability: Agenda 21 clearly identified information, integration, and participation as key building blocks to help countries achieve development that recognises these interdependent pillars. It emphasises that in sustainable development everyone is a user and provider of information. It stresses the need to change from old sector-centred ways of doing business to new approaches that involve cross-sectoral co-ordination and the integration of environmental and social concerns into all development processes. Furthermore, Agenda 21 emphasises that broad public participation in decision making is a fundamental prerequisite for achieving sustainable development.

Environmental sustainability is defined as the ability of the environment to continue to function properly indefinitely. This involves meeting the present needs of humans without endangering the welfare of future generations. The goal of environmental sustainability is to halt environmental degradation. An "unsustainable situation" occurs when natural capital (the sum total of nature's resources) is used up faster than it can be replenished. Sustainability requires that human activity only uses nature's resources at a rate at which they can be replenished naturally (see table 1 below). Inherently the concept of sustainable development is intertwined with the concept of carrying capacity. Theoretically, the long-term result of environmental degradation is the inability to sustain human life. Such degradation on a global scale could imply extinction for humanity.

Table 1: Environmental Sustainability

Consumption of renewable resources	State of environment	Sustainability
More than nature's ability to replenish	Environmental degradation	Not sustainable
Equal to nature's ability to replenish	Environmental equilibrium	Steady-state economy
Less than nature's ability to replenish	Environmental renewal	Sustainable development

### 3.1 Land administration vis-a-vis sustainable development

Land and its vital role in sustainable development is evidenced in the Agenda 21. In relation to land resources, Agenda 21 states: The broad objective is to facilitate allocation of land to the uses that provide the greatest sustainable benefits and to promote the transition to a sustainable and integrated management of land resources. Protected areas, private property rights, the rights of indigenous peoples and their communities and other local communities and the economic role of women in agriculture and rural development, among other issues, should be taken into account.

According to Enemark (2004) the design of adequate systems in the areas of Land Tenure and Land Value should lead to the establishment of an efficient land market. The design of adequate systems in the areas of Land-Use Control and Land Development should lead to an effective land-use administration. The combination of an efficient land market and an effective land-use administration should then form the basis for a sustainable approach to

economic, social and environmental sustainability.

In as much as land administration is vital in supporting sustainable development, UN-Habitat (2008) records that in many countries, administrative procedures for registering a land parcel, obtaining planning and building approvals or effecting property transfers are so cumbersome, expensive and confusing that they actually encourage the very unauthorized development they seek to prevent. Addressing this important issue will require political and administrative leadership. For instance, in Egypt, acquiring and legally registering a plot on a State-owned vacant land involves at least 77 bureaucratic procedures at 31 public and private agencies. In Peru, building a home on State-owned land requires 207 procedural steps at 52 government offices. In the Philippines, establishing legal ownership takes 168 steps and between 13 and 25 years. In Haiti, obtaining a lease on government land, which is a prerequisite for buying, takes 65 steps<sup>4</sup>

FAO (2007) states that land is the single greatest resource in most countries. Access to land, security of tenure and land management have significant implications for sustainable development. For instance land administration through taxes on land plays a significant role in raising revenue for public finances. Through registration and cadastre systems, land administration provides security of tenure and allows people to obtain loans through mortgages. According to UN-Habitat (2008), effective, well-adapted land administration systems facilitate the realization of the broadly accepted land policy goals of secure land as land-related services are accessible to all land users, including the poor and vulnerable as well as commercial investors. Secure land rights are a firm springboard for economic, productive activity and ultimately sustainable development as they facilitate household income gains, improve food security and act as a safety net in times of hardship. More equitable land distribution across society reduces social inequality. If land rights are to be effectively secured, land access improved, land allocations made fairer, land more productive and demand better matched with available supplies, two conditions must be met:

- i. Institutional arrangements for land administration are accessible to all. These are best delivered in a decentralised way, which can respond to local priorities rather than through highly centralised systems.
- ii. Comprehensive, up-to-date land information systems which can capture the complexity of existing land occupation, use and claims, including overlapping sets of rights.

Formal land administration services are most effective when provided at local level. One option is local land boards representing and responding to the range of stakeholder interests: those of local and customary authorities, land owners, male and female land users and community members (see Box 1 below).

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<sup>4</sup> World Bank (2001) Cited in The Challenges of Slums, UN-HABITAT (2003)

**Box 1. Decentralised land management in sub-Saharan Africa**

The new land laws and policies that many African countries have adopted in recent years provide for greater decentralisation in land management and administration – with a great variety of models and approaches to the nature and roles of local institutions; the role granted to customary chiefs; and the powers of decentralised institutions in land conflict management. Examples of such decentralization processes include Botswana's Land Boards, Uganda's District Land Boards and Sub-Country Land Committees, Namibia's Communal Land Boards, Tanzania's Village Councils, Niger's local land commissions and Ghana's decentralised Deeds Registries and pilot Customary Land Secretariats

Source: Adapted from UN-Habitat, (2008)

Formal land administration services must also include land management arrangements at neighbourhood and village levels. These might be provided by the lowest levels of local government through Internet-connected local land offices, village councils, traditional councils, customary authorities, or local secretariats, based on customary practices and supported by Web-based or simple manual systems of documentation and witnessing. The better understanding which results from land administration at the local level allows governments to tailor approaches to different settings and to upgrade rights and systems over time (UN-Habitat, 2008).

Effective delivery of secure land rights may therefore, depend on reform of centralized State land agencies with a view to devolving responsibilities to local and customary institutions. Both office- and field-based land registration and titling procedures can then be improved by computerization of land records and cadastral systems. Poorer groups will enjoy better access to land if they have clear information about their legal rights and how the administration system operates<sup>5</sup>. This can be enhanced if land administration services are locally available, operate in local languages, use clearly understandable units of measure, accept oral evidence in support of land claims and apply affordable user fees (UN-Habitat, 2008).

Weak governance, whether in formal land administration or customary tenure arrangements, means that the land rights of the poor are not protected. It affects the poor in particular and may leave them marginalized and outside the law. Weak governance may also mean that land is not used appropriately to create wealth for the benefit of society. Lack of competence in land administration can be an important constraint on development and the eradication of poverty (FAO, 2007). Good governance in land administration is one of the central requirements for achieving good governance in society. Weak land administration may be part of the overall problem of governance. Land administration may suffer from a lack of transparency and accountability as a result of confusing regulatory frameworks and complex administrative processes. People who work in land administration may be exposed to the temptation of corruption. They may corruptly enrich themselves by preventing land registration until bribes are paid, allowing state land to be grabbed by private interests; valuing assets at inflated prices as security for fraudulent loans and awarding contracts to those who offer private rewards rather than to those who offer best value for money. Land

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<sup>5</sup> Participation and information sharing vital in sustainable development according to Agenda 21.

administrators have monopoly powers over certain tasks. With monopoly comes power, and power can be abused (FAO, 2007).

Even where land administrators behave in a relatively honest manner, they might not take action to stop attacks on good governance by others. While carrying out their technical work, land administrators may become aware of illegal activities by others, e.g. illegal logging or encroachment on forest reserves or state lands. Such activities will continue if land administrators do nothing about them (FAO, 2007).

### **3.1.2 Zambian land administration: processes and constraints**

Governments in all countries at all times have felt a need to guide and control the use of scarce resources within their domains and this holds true especially for a scarce resource such as land and Moore (1978) has described three main justifications for such government interventions into the private urban land market:

- Eliminating market imperfections and failures to increase operating efficiencies;
- Removing externalities so that the social costs for land market outcomes correspond more closely to private costs;
- Redistributing society's scarce resources so that disadvantaged groups can share in society's output.

Land administration is the way in which the rules of land tenure are applied and made operational. It includes land registration, land use planning, land consolidation, land management and property taxation (FAO, 2007). In Zambia, the Ministry of Lands is responsible for formulating and ensuring proper administration of land. All land regardless of location is vested in the president (and the minister of Lands) on all land matters including granting of land, fixing ground rent, and determining the conditions under which land is held. The Lands and Deeds Registry is responsible for registering all interests in land and for issuing title deeds. The Town and Country Planning Department in the Ministry of Local Government is responsible for zoning, certain large local authority plans, and determining proper land use. The Ministry of Environment is responsible for the control of land use for forestry, factories, and other uses, and for formulating conditions under which land can be used in certain areas. It is also responsible for approving the consolidation and subdivision of land based on its environmental interests (Roth and Smith, 1995).

The Land Use Planning Section in The Ministry of Agriculture is concerned with the preparation of farm plans and farm layouts, settlement planning, land allocation and demarcations, site preparation, land use and land suitability assessment. It receives directives from the planning section of the department to find sites and prepare layouts for agricultural schemes and projects. It also gives advice to applicants for individual farm holdings based on conservation principles, i.e., suitable land use, farm size, farm and field boundaries, and location of services and facilities (Roth and Smith, 1995).

The Government Valuation Department (GVD) is responsible for assisting councils in levying

rates for local revenue generation, for monitoring and advising on legislative and procedural reforms for capital valuations of private sector housing, and for general advice on ground rents, office allocation, land allocation, land identification, economic ground rent, land value, and sale of government housing (GVD, 1993).

In Zambia the Land Survey Act makes comprehensive provisions for the registration and licensing of land surveyors, provides for the manner in which land surveys are carried out and the diagrams and plans connected therewith, provides for the protection of survey beacons and other survey markers, provides for the establishment and powers of a Survey Control Board responsible for the registration and licensing of land surveyors, and for the exercise of disciplinary control over such surveyors. The act imposes high and rigorous standards of ground survey. However, the Land Survey Division of the Ministry of Lands, with severely limited staff for meeting these standards, is badly behind in survey work with huge backlogs. To avoid long delays in the issuance of title certificates, the Survey Division and the registry have for many years adopted a policy of accepting, for registration, leases of up to 14 years if accompanied by an adequate sketch plan (thereby sidestepping the rigorous standards of fixed-boundary survey). The 14-year lease is surrendered and a 99-year lease is granted, covered by a final Certificate of Title once the necessary conditions are met. This practice is common, and is the mechanism for grants of land in settlement schemes. Its legality, however, is an open question because of the lower survey standard. (Roth and Smith, 1995).

Access to land, security of tenure and land management have significant implications for sustainable development. Land administration provides important parts of the infrastructure for an efficient economy, which means that it touches all aspects of how people earn a living. Land administration through taxes on land plays a significant role in raising revenue for public finances. Through registration and cadastre systems, land administration provides security of tenure and allows people to obtain loans through mortgages for instance. Yet formal land administration systems commonly fail. Customary land tenure arrangements also may not adequately serve citizens especially when those arrangements are weakened by transition and commercialization (FAO, 2007). The land administration procedures in Zambia, involving six different sections in three different ministries (the Agricultural Lands Board, the Commissioner of Lands, the Land Registry Section and the Land Survey Section, all in the Ministry of Lands, the Land Use Planning Branch in the Ministry of Agriculture, and the Valuation Branch in the Ministry of Local Government and Housing) are far more complex than can be justified. This complexity, coupled with severe understaffing, results in extended delays in leasehold transactions (Roth and Smith, 1995).

The legal framework for the control and regulation of all development of statutory leaseholds in Zambia is The Town and Country Planning Act (CAP 283). Submission and approval of these plans can be an onerous exercise. The requirement for planning permission is mandatory and extensive. The system often fails to plan and program the release of land to meet demand or development policy and to program and coordinate the release of funds for plan implementation including the opening up and servicing of land. The development plan system is over-demanding in its requirements of plan content and procedure of preparation for the modest planning guidelines needed for the development of relatively small rural provincial

and district centers. Staff resources in the Department of Town and Country Planning in Zambia have found it difficult within their day-to-day workload, to keep up with the monitoring, updating and new plan preparation needed for development. A more simplified system is required but one which nevertheless is capable of measuring land requirements and providing a framework for and encouragement of public and private investment (Roth and Smith, 1995). In as much as land administration is vital in supporting sustainable development, UN-Habitat (2008) records in a similar vein that in many countries, administrative procedures for registering a land parcel, obtaining planning and building approvals or effecting property transfers are so cumbersome, expensive and confusing that they actually encourage the very unauthorized development they seek to prevent. Furthermore, Dunkerley, (1983) states that governments have a wide variety of tools available to implement their objectives of regulating land use within its boundaries. These include planning tools, zoning ordinances, building regulations and by-laws, permits, inspections and penalties. What the tools all have in common (in developing countries), with rare exceptions, is limited implementation.

#### **4. FINAL REMARKS**

The paper clearly shows the vital role that land administration plays in supporting sustainable development. The institutional framework within which land administration is operational has to be effective so as ensure land policy goals are implemented hence provide an enabling environment for sustainable development. With reference to FAO (2007) land administrators cannot pursue technical excellence in isolation. Their skills and techniques should serve the interests of society as a whole. Land administrators can, and should, recognize their responsibilities and take them seriously. Their technical skills can help tackle economic, social and environmental problems and to fix injustices. This is particularly the case where there are interlocking systems that relate to land. Land issues cut across society and a well-governed land administration system can strengthen local institutions, thereby contributing broadly to governance. Land administrators act as guardians of the rights to land and of the people who hold those rights. In doing so, they act to stabilize public order and provide the preconditions of a flourishing economy. The choice for land administrators is to benefit personally from the opportunities that corruption offers for private enrichment in societies in which governance is weak, or to be a strong force working towards good governance, economic development, environmental conservation, social equity/development and ultimately sustainable development.

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## **BIOGRAPHICAL NOTES**

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