

Experiences of Cadastral Development in Southern and Eastern Africa

Tommy ÖSTERBERG, Sweden

Key words: land administration, cadastral systems, land registration, land tenure,.



SUMMARY

This paper summarise 20 year's experiences of institutional development of cadastral systems in Sub-Saharan countries. It discuss how land administration systems have evolved and been influenced from traditional systems and colonial systems. It discuss ongoing development of legislation, decentralisation, land redistribution. valuation and taxation, land for urban development and the importance of the technical and human development.

The paper also suggest a strategy for improvements of cadastral systems in African countries. It includes examples from the development in some countries like Zambia, Mozambique, Tanzania and others.

Experiences of Cadastral Development in Southern and Eastern Africa

Tommy ÖSTERBERG, Sweden

1. INTRODUCTION

This paper is based on my experiences of land administration systems in Africa, which mainly refers to Southern and Eastern Africa including countries of English and Portuguese-speaking traditions and to some extent from Northern Africa and the Middle East with Arabic-speaking traditions. In regards to West Africa and especially French-speaking traditions, my experiences are limited.

I have participated in a number of donor-supported project for institutional development of the land administration in African countries since more than 20 years. This paper summarises sum of the lessons I have learnt during these years.

1.1 Definitions

International organisations and countries as members of those organisations, like United Nations regional and factual organisations and the World Bank have put the question of land administration in focus as one of the key issues on the road to a more sustainable land use and to combat poverty. The International Federation of Surveyors (FIG) has together with these organisations developed a number of declarations and recommendations regarding land administration as follows:

The Statement on Cadastre (1994) defines the Cadastre as a land information system including information on rights, use and values regarding land and real property. The cadastral process can include not only registration of rights but also considerations aimed at protection of different interests (private or public) defined in the law, for instance protection of traditional land use and land use rights, environmental and cultural protection etc. The cadastre in this sense has a wider application than the European common understanding of the cadastre as a fiscal cadastre (France) or as a legal cadastre mainly describing the parcels for land registration (Germany).

The ECE (United Nations Economic Commission for Europe) guidelines for land administration (1996) defines land administration as the process to handle land rights, use and values as in principle a governmental responsibility. The guidelines are mainly focused on countries in transition from planned to market economy in Eastern Europe.

The Bathurst declaration (1999) tries to define the importance of cadastral development in the context of sustainable development. The declaration clarifies that some form of land or real property registration is necessary in order to create a foundation for an efficient land market. The land registration should however not only facilitate the development of the property market. It is also necessary as a tool protect the interest of sustainable development and of

social and cultural values. The declaration put up an objective to half the number of people who are lacking secure land tenure in the world before the year 2010. The declaration recognises that the approach to the land registration in e.g. Africa can be very different from systems developed in Europe or Australia.

Land administration is in this paper the governmental administration of issues related to rights, use and values of land. For this is needed a land information system to provide information, which also is called cadastre in this paper. The land information system dealing with legal rights to land can also be called land registry and the activity land registration. The geographic information describing the extent of a parcel and its area and other features can sometimes be called cadastral information and include information on land use and values. The activities are cadastral surveying, land use planning and land valuation and taxation. Land tenure is the mode in which rights to land are held. Land management is the way land resources are put into use. The term cadastral system is used as a synonym to land administration systems.

LIS in Zambia

- **Developed 1998-1990**
- **First textual part of real property and land registry later also digital cadastral index maps (Lusaka).**
- **Centralised to Lusaka and one provincial office, Ndola.**
- **Provide easy case handling, good access to information and more transparent procedures**
- **Created a possibility to invoice land users for ground rent**
- **Created a possibility to considerably increase the ground rent through differentiation**
- **half of the income from ground rent is going to a land fund, from which districts can apply for support for development projects, urban and rural.**
- **Difficulties to maintain the system due to a too small base of technical knowledge**
- **Politicians too eager to buy new systems from various**

2. GOALS, INSTITUTIONAL AND LEGAL PRECONDITIONS FOR LAND ADMINISTRATION, TECHNICAL OPTIONS AND SUSTAINABILITY

2.1 How has Land Administration Systems Developed?

Historically the need for land administration systems originates from two main demands. One has to do with the importance of control of land for human activities like hunting, fishing, ranging and agriculture and how this control should be exercised within nations, tribes, other communities, families and individual. This is the land tenure aspects and it implies that land tenure is not so much a relation between man and land but more a social institution between people on how to control land and keep the control within the family and the community. This institution is a fundamental base for rural and urban societies and changes in the tenure regimes will have profound consequences for all aspects of life.

Communities have developed different ways of controlling land rights in different situations, both how land is managed in relation to other members of the community and how rights can be transferred in connection with marriage, divorces, death etc. of members of the community. These rules also regulate how land rights can be transferred to others outside the family or the community. The rules have been implemented through the governing system of the community, councils, headmen, chiefs and in many societies developed into land registration through local courts or legal departments within the administration.

The development of more free land markets, free from the control of families and communities, occurred with the development of liberalism and market economy in general, starting from Western Europe. The demand for a more effective market created a demand also on more efficient systems for land registration. The title registration system developed as an answer to this. The IT technology has opened more possibilities to make the land registration more efficient (means easy access to reliable information and fast processing of applications). So, one main aim of land registration systems is to provide a legal framework and organisations that are capable to provide the security and control of land transactions that are needed to uphold traditional rights and restrictions on the one hand and on the other underpin an efficient land market.

The other demand for land administration comes from governments, whether they are traditional governments, kingdoms or republics. Control of land and land use is a fundamental base for any type of government and the possibility to be able to exercise such control in a manner which is beneficial for the society as a whole is one of the main rationale for governments. This administration is connected with questions of the ability to allocate or reallocate land for efficient use and to tax the land or the income from the land use. Also from this point of view it is necessary to know the rights to land use and in principle how well the land is used. The quality of the land, the value is also important to know for taxation and for planning of suitable land use. The original cadastres, as they are known from history from ancient flood cultures in the Middle East, India and China to the European kings and emperors had all this main purpose, to facilitate governance of a territory. So the second aim of land administration is to facilitate governance of land use by providing information on land

use rights, land capacity and to be able to elaborate land use plans and collect taxes from the land use.

2.1.1 Why is land administration in Africa special?

The traditional development of land administration systems was in many countries in Africa disturbed by the colonisation. The colonisation included among others that access to land for the newcomers was negotiated with the traditional leaders and large tracts of land set aside for colonisation from mainly Europe. The land administration systems set up for administration of these areas were very much influenced from the systems used by the colonial powers in Europe. There is a clear difference of land administration systems in countries of British origin, compared to countries of French, Spanish or Portuguese origin. The land administration systems set up in British colonies were however to large extent influenced by the Torrens land administration system developed primarily for the colonisation of Australia.

In most sub-Saharan countries the land under a formal land registration system originates from the land set aside for colonisation. This land amounts usually to around 2-10% of the area in the country. Much of this land was nationalised in connection with the liberation and turned into state farms or co-operatives, following influences from communist countries like the Soviet Union and China. This lasted however not very long and the land has then been subdivided and allocated through settlement schemes to individuals or organisations, usually but not always within the formal land registration system.

Traditional land tenure has prevailed in the remaining areas of the country, where most of the population lives. Also parts of areas, on which the growing cities have been developed are under customary tenure. Forms for governing customary land has not been static. In several countries like Botswana and Tanzania, the power of the Chiefs regarding land issues has diminished in favour of local councils, sometimes appointed by village assemblies with democratic origin. The forms for decision-making regarding land under customary tenure have developed, influenced by the general political and administrative development in the country.

The population growth in African countries is high but the population density in general low, which means that there still are possibilities for considerable investments and development of rural land use in many African countries. Many believe that investments in rural land use are a precondition for increased economic development. The issue of the land administration is one key question in this context.

One main question for land administration in African countries is if the prevailing customary land administration systems need to be replaced with land administration systems of European type. Another question is if the land tenure regime needs to be changed from customary tenure (which are of many different forms) to tenure regimes built on private ownership to land in the international (UN declarations) understanding of ownership rights.

Few African countries have actually tried to expand the formal registration system to areas under customary tenure. In fact, most sub-Saharan countries have faced tremendous difficulties to maintain the formal registration system in areas where it is used.

2.1.2 Why is Torrens system not suitable for land registration in Africa?

Torrens land registration system, which has influenced many formal land registration systems in Africa, was developed for registration of land in a situation of free access to land. It is a very useful system for division of virgin land into parcels, marking and documenting these parcels and the recording of the ownership and changes of ownership of these parcels on a land market.

Torrens system includes technical demands on the survey of the boundaries of the parcel. These technical demands have usually today been complemented with the demand to connect the survey to some national coordinate system, which in many areas in Africa has been impossible. The survey itself demands a technical skill, which has not been easily available in Africa. In conclusion, the technical demands on surveys in most Torren-influenced registration systems raise the cost for the survey beyond what is reasonable, given the value of the production on the land, if the system should be introduced more generally in rural Africa.

Torrens system is designed for registration of virgin land also in the meaning that no other already existing rights to that land are presumed and can be handled. For instance the system can not handle overriding rights, meaning that there can be different rights to different natural resources, agriculture, trees, berries, fishes, hunting etc in the same area. It can neither handle non-localised rights, for instance the right to fuelwood irrespective of where it is located. Such non-localised and overriding rights are common in jurisdictions, where land tenure regimes have developed under long time and have accommodated different changing interests over time. This is common both in Europe and in Africa.

2.2 Customary Tenure or more Individualised Tenure

One topic for discussion during many years is if there is a need to replace customary tenure regimes with more individualised tenure. This discussion is usually starting from the assumption that indigenous tenure systems cannot cope with the demands of modern development in an efficient way, either to support economic development, land markets or to protect environment from detrimental land use.

It is sometimes argued that customary tenure does not provide *security* enough for investments in land development, new technology etc. One conception is that customary tenure means communal control of land and the common decision-making should obstruct investment decisions. However, in customary tenure systems land use rights are allocated based on the traditional rules and once acquired, the rights are exercised individually within the family structure and strongly protected. As such they are not disincentive for improvements in general. The security can be disturbed by a number of disturbances

generated by environmental disasters, intervention through conflicts or war, refugees, land grabbing, or formal land administration and donor projects. Experiences also show that conversion from customary tenure regimes to formal systems more often increase tenure insecurity for the rural population than the opposite.

Another argument is that customary tenure prevents *access to formal credits*, since credit institutes are not willing to provide credits without some kind of security in the land, a mortgage. However formal credit is anyway usually not accessible for small-scale farmers in customary areas, depending on a number of reasons, such as lack of credit as such and difficulties to access credit institutes. Small scale farmers are mainly depending on short term credits with security in the crop. Even when formal systems have been established, like in Kenya, the access to formal credit have not increased, partly also depending on the very high transaction costs in the mortgage system and the difficulties to arrange a foreclosure.

Land markets in rural Africa are usually small and undeveloped and this will in principle hinder the allocation of land resources for best possible use through the market mechanism. The customary tenure systems are in principle hostile to open transaction of land use rights on a market. Also other factors limit the development of an efficient land market, mainly the access to alternative living conditions that a presumptive seller of land can achieve at some other place or occupation. However, in areas where there are more demand on land for other purposes, land transactions will take place also under customary tenure. In other words, land markets will develop more or less independent on the tenure system, when the economic and social conditions for this are at hand. The development of land markets can not be introduced by tenure reforms. However it is important to improve tenure and land registration in areas where land market develops in order to promote an orderly market development and support sustainable growth.

In customary tenure systems, *women's rights* are in general inferior to the right of men. That means that the woman's right to land is exercised through the husband's right to land. Women usually do not inherit land rights. Unmarried women's access to land is depending to the possibility to use land from a sister, who is married or a father. The general development towards commercialisation and individualisation of farming, will erode those inferior rights to the disadvantage of the woman. Land tenure reforms can aim at strengthening women's rights but in reality this can cause even worse problems if the local community does not accept the formal rights. However, also in this sense, customary tenure systems are not static and can change through information, awareness campaign and not least through support from an informed cadre of land administration officials. The FIG guidelines on women's access to land is dealing with these issues. There are also customary tenure systems in Africa, where the control of land is handled through women in a matriarchy.

Forest and rangeland is often under common property management in customary systems. The well-known argument of the tragedy of the commons, meaning that common property control will more or less automatically under pressure of growth, lead to over-exploitation of the natural resources, has been used among other as an argument for an individualised tenure regime. Another solution has been state management, which often has been worse, since land

under state management even more often is considered as a free resource. There are also many examples of common property management that are successful and have succeeded in adapting to changes in the environment and pressures of different kinds. Privatisation of common lands can lead to better management practices and better possibilities for economic development of the land. This will however most often also exclude some of the previous users from the land use and make them depending on alternative ways of surviving.

2.3 Recent Development of Land Administration in Sub-Saharan Countries

Land administration reforms are on the agenda in several countries in Africa. There are some similarities between the development. It has usually started with the development of a Land Policy, which after discussions have been adopted. The Land Policy usually addresses questions of the existing land administration and problems related to land issues. It formulates policies to guide the development of legislation. These policies are aimed at supporting social and economic development and equitable access to land. Sometimes women's access to land is given priority. The policies deal with the importance of sustainable land use and improvements of land capability and how this can be facilitated by extension activities and the establishment of land funds etc. The importance of land administration based on access to appropriate land information is usually highlighted. An action plan is usually also included.

2.3.1 Land Legislation and Decentralisation

Based on land policies new land legislation has been elaborated and adopted in several countries, among them Ghana, Mozambique, South Africa, Tanzania, Uganda, Zambia.

One important tendency in this new legislation is that they recognise customary tenure as it is, without trying to change land tenure regimes. Customary land tenure is through the law given a formal protection, which sometimes goes beyond what is given to formal tenure. Customary tenure can for instance be valid in perpetuity, while formal tenure usually is limited in time. However, in one important aspect, customary rules are not recognised and this regards the rights of women to property. Most new legislation states that any customary law or tradition that are restricting women's right to property in accordance with the constitution is void.

A land user can use his land under customary land tenure. He does not need to register the land for any specific purpose. However, if needs occur for some reason, for instance to sell the land, or to mortgage it, the land user can ask to have the land registered. This registration will be made in different ways and the demands on how such registration shall be handled and documented vary between the countries.

Another tendency is that the legislation promotes decentralisation of decision-making in land administration. This is to make land administration more accessible for land users, make it more efficient and complete and to counteract misuse of power and corruption.

Decentralisation is handled in different ways. In Tanzania, for village land, the power of decision-making regarding land issues is delegated to the lowest level, the village. At the same time, a governmental administrative reform have strengthened the responsibility of the districts and created demands on access to professionals at district level.

Allocation of village land in Tanzania will be decided by the village assembly. This to avoid that village council or member of the council will allocate land to others without the knowledge of the villagers. The village is supposed to establish a village land registry for land registration. There are no demands on surveying and mapping of parcels or boundaries, only that the neighbours agree on the boundary through walking. There are also no demands on the use of professionals for registering land use rights, for surveying and mapping, or for the elaboration of the land use plan.

In Uganda, the decentralisation has been handled slightly different. The decentralisation reform and the land administration reform have created considerable demand on recruitment and training of officers at local level like district land board members, clerks of recorders, land committees, land tribunals and local councils and courts in about 60 districts.

In Zambia, the decentralisation in customary areas has meant that land allocation in these areas have been made dependant of the approval of the chief. It has also been stressed that the chief cannot make this decision by himself, but must make it together with his council.

The new land legislation in Mozambique also recognises customary rights as they are. Land allocations can be made by the cadastral organisation, the provincial offices of Dinageca after a process that safeguards that all existing rights have been identified and protected. The cadastral authority is responsible for the process and the protection of exiting rights. In order to fulfil these demands, the cadastral authority has to organise a community consultation process. If the jurisdiction of the community is unclear, a community delimitation process can be initiated. All existing possessors of customary rights have the right to deny the allocation of a parcel if this allocation will interfere with his existing rights.

In Botswana exists since long Land Boards, who are responsible for land administration of customary land. The government has started a process to revise the land policy, which might introduce changes in the administration of customary land.

2.3.2 Land redistribution

Land redistribution is mainly an issue in South Africa, Namibia and Zimbabwe, where the land ownership is very uneven distributed between different ethnic groups Land redistribution is a difficult task involving several political, economical and organisational issues. The lack of competent staff and lack of necessary land information as well as appropriate methods for land distribution, access to support services and for land valuation is some obstacles for the process. One important aspect in this sense is the concept of the land value and what really constitutes this value, especially if a land market not really exists

2.3.3 Land valuation and taxation

Land under customary tenure is usually not taxed in African countries. Only land in the formal registration system is in some way under taxation. Since several countries consider the land as belonging to the nation or the people, the tax can also be regarded as a leasehold fee or a ground rent, paid by the leaseholder to the landowner. Connected to this is the concept that land itself has no value. Transactions of land itself is thus not possible, but the land use right can be transferred and the price paid will only reflect the value of the improvements made on the land, for instance buildings, fences, irrigation and drainage systems, etc.

The concept that land has no value means in principle that market mechanisms will not be allowed to influence how land is used. This has perhaps a more theoretical influence, mainly on land use planning of urban areas, where the location of the land is reflected in its value and where the efficient use of well-located land is important. The influence of this concept is also gradually decreasing with the general development towards a market economy.

Whether the land fee system is called land taxation or ground rent, it is anyway a considerable source of income for the government. Traditionally, these fees have been very low, and become even lower under the influence of inflation. The low capacity of the governments for administration has also meant that few landowners have paid the fees. Land administration reform can here assist by first of all providing information, which will make it possible to bill those who are obliged to pay. Secondly by better information on the land use, it is possible to differentiate the fee in such a way, that those who can afford can pay a higher fee than people with less capacity. In such a way the total fees collected can reach considerable amounts for the society. This has been done with success in for instance Zambia. In Mozambique and Tanzania, the responsibility to collect land taxes has been transferred from the Ministry of Finance to the land administration branch. This led to a considerable increase in the collection of the fees and taxes and the land administration branch has also been allowed to keep some of the collected funds for its expenses. In Zambia, part of the increased ground fee has been used to build up a land fund, which is used for land development projects in urban and rural areas.

Perhaps even more important is land tax systems for local governments. Municipalities need income and one obvious source is the land. Investments in improvements of facilities like roads, water and sewerage etc. will also create higher land values and part of this can be recovered by the municipality through tax systems. Systems for improved taxation of land has been developed among others in Lusaka, Kigali and Mombasa.

2.3.4 Urban land

The concept that land belongs to the people or the nation and has no value in itself is important for urban areas. Urban areas are growing fast and are demanding more well-situated land. The land use must be organised through land use planning in order to safeguard a suitable urban environment. The capital resources in African cities are distributed in a very uneven manner, giving very few access to capital. There is a considerable risk that an

opening of an uncontrolled land market will create opportunities for the development of a private monopoly on land for further urban development and thus open for land speculation. For the same reason it is also important that the concept of the traditional leaders as custodian of customary rights and not as owners of traditional land is upheld. Traditional leaders in areas close to cities have in several cases been deeply involved in land speculations. Land speculations mean that values are transferred from many people with smaller resources to a few, who accumulate considerable wealth, on a commodity, which is considered to belong to the people.

Land in urban areas in African cities is mostly included in the formal land registration system. The formal land registration has in many cases not been upheld under the pressure of fast urbanisation and is deteriorating. The cities have often expanded into neighbouring areas under traditional land tenure. Considerable informal settlements have developed on these areas and on other areas in the cities. In most African cities, the informal populations amount to between 40-70% of the population.

Several upgrading projects supported by donors and NGO:s are being undertaken in informal settlements. The upgrading should also include a formal recognition of the right to use the land for settlement. However, there is a considerable resistance from the business interests in many urban areas to keep the present chaotic situation regarding land administration. This is perhaps one of the most urgent questions for continued research and development in order to create awareness of the needs for reforms.

2.3.5 Land administration and technical development

The technical development in the field of land administration is going very fast and is influencing the possibilities to establish land administration system considerably.

Land administration is depending of information about land and land use. This information will relate to textual data in terms of landowners, values, capacities etc. This information is not really useful without reference to its location, the geographic position. Land administration requires maps of different kinds.

Land administration authorities at local and regional levels in Africa today use mostly manual technology. Digital technology both in the form of GPS, digital maps and digital data bases and communication is gradually introduced at the central level.

Small-scale topographic maps today cover most countries in Africa. These maps are however not digital and are in general not up-to-date. On the other hand, the changes are relatively small and slow. Large scale topographic maps for urban areas and other settlements are in much less supply.

The technology for map productions has changed considerably. The evolution of GPS has made the otherwise needed densification of the national grids almost unnecessary. Cheap handheld GPS receivers, which also are very easy to operate and understand, can be used for

most cadastral surveys in rural areas. For more accurate surveys, differential GPS is available, either using satellite correction data, or from ground reference station, which also reduces costs and speed up the survey.

Photogrammetric maps and orthophotos can today be produced from aerial or satellite photos much faster and easier, using ordinary PC and software. This decreases the need for training of staff and other infrastructure and reduces costs for mapping.

The data capture of the geographical component of a land information system can thus be made much faster and cheaper today than before. The demands are however increasing on the management structure to make efficient use of especially digital data for more users in a spatial data infrastructure. This will call for more coordination, development of rules and standards and more open attitudes towards exchange of data.

Another question is the use of IT in general. Land administration systems today are manual and many African land registrars lack paper and other facilities to keep the registration up-to-date. Computers in the form of PCs are available at many places and can be used to support the mainly manual procedures but need even more access to stationary.

A totally computerised textual land registration system has been in function in Zambia for about ten years. This system includes computerised titling, which means that the title shown in the computer system is the legally valid title. This is the only system in Africa which is using computer titles. Such systems need to be established on stable platforms with high requirements on the management and on the maintenance, safety and back-up routines. One difficulty for the maintenance of this system is that the computer manufacturer today not exists and that training in computer technology does not produce the competence needed to maintain the operation and application systems. This is a problem that can be expected to increase in future since land administration systems are expected to work for ever independent of available information technology. It is important that the manager of such systems can establish and maintain an in-house capacity for maintenance, independent of ongoing development of IT and the competence of consultants. Internet technology opens possibilities to communicate and make access to land information much more easy. This will for long time mainly benefit a small fraction in society, but this fraction might be those who actually can benefit from improved access to information.

2.4 Human Resources Development

Land administration is being undertaken by a number of different professions, including land surveyors, lawyers, rural and urban planners and valuers. This reflects the historical development of land registration in Africa, where the activities carried out by lawyers and surveyors are clearly separated usually also in the organisation, for instance in a survey and a lands department. Local courts undertake sometimes land registration. Valuation and planning are usually located in other departments within the government. Some countries influenced from Southern Europe operate system where notaries are involved in the land administration.

Land surveyors are usually involved to undertake cadastral surveys of a parcel of land before it can be registered. Land surveyors have usually an academic or technical education in land surveying including a number of technical topics regarding surveying and mapping. There are also usually technical/diploma training in land surveying/cartography in order to provide technicians for surveying and mapping. Land surveyors are either governmental or private operating under a licence.

Land registration is mainly the responsibility of lawyers or other people with legal background, assisted by administrative staff that has been trained within the organisation through on-the-job-training and in-service courses. They can be governmental officials or in private or semi-private practice as notaries or solicitors.

Land use planning can be of several types. Land use planning might be dealing with the best way of producing agricultural or forestry products on a farm. This type of land use planning is usually carried out by people with a background in agriculture or forestry. Another type of land use planning is connected with construction of houses, buildings, streets etc. Architects, civil engineers and land surveyors are usually engaged for this. A third type is the more strategic and comprehensive land use planning for most economic and sustainable use of land resources in the long-term. This planning is not very well developed in Africa and appropriate training is mostly lacking. Diploma training is offered to technicians working with land use planning of different forms.

Management of state owned or controlled land, including the allocation of such land to individuals, sometimes including tax collection is normally handled through a land officer. This officer has usually diploma training from some institute providing training in some related topics. There is usually not a dedicated education for the profession of land officer.

Regarding valuation, there is a similar situation as for land officer. A dedicated education for land valuers is often lacking. Training in land valuation is mostly connected to some other training in rural or urban land or real property development or economics.

In some jurisdiction there is a special land adjudication officer, who takes part in the process of formal land registration of existing land use rights. This person usually has a background from land surveying or law and has specialised on land legislation matters.

With the modern IT technology, people with a background and training in IT are more and more demanded also by land administration organisations. Most important is perhaps the design and development of data bases, standards and communication technology.

In Africa several training institutes exist, who provides training in land surveying. Technical development will make the existing training of land surveyors less necessary, except for a rather small number of highly qualified technical experts. Instead there seems to be a need training of land administrators. who know enough of land surveying and IT in order to make use of the new technology and also have enough training in legal issues and economics in order to lead legal procedures to allocate and register land and understand land taxation.

2.5 Strategy for Improvements of Land Information Systems

The development of cadastral systems in African countries have in general too much focused on the question of providing cadastral information in a systematic way for large tracts of land and too little on a cadastral system as a set of procedures to handle land use rights, solve conflicts and competing interests and provide transparency and participation in decision-making regarding land use. Cadastral development should follow upon an expressed demand on the system from the users, i.e. the users should see clear benefits of the system, which will motivate the costs and the participation. Only then can investments in improved land administration be sustainable through proper maintenance. These demands are more clear in a sporadic system.

There will probably not be demands on comprehensive coverage of African countries with land information for foreseeable future. But there will be demand on such information systems for specific situations for instance for:

- Areas where there are demands on land for investments in economic development
- Areas where more functional land markets are developing
- Areas affected by migration, especially urban areas

Cadastral procedures however can be applied everywhere in a jurisdiction, handle customary tenure as well as formal tenure and can contribute to the protection and development of many social and economic interests such as:

- Protect the interest of women, ethnic minorities and migrated people (sometimes in conflict with traditional society)
- Solve conflicting interest between investors and traditional land users and other conflicts regarding land use
- Promote fair allocation and access to land resources among the population (social justice), prevent land speculation and provide transparency and participation in decision-making
- For taxation of valuable land resources
- For better decisions-making regarding land use, increased sustainable production and protection of environmental values for all species

Information systems must be designed in such a way that the costs for the establishment and maintenance of the system are affordable compared to the economic value of the existing land use. This can be achieved through a combination of modern technology and a flexible/non-traditional approach to the information content of the information system and the technical and legal demands on accuracy etc. Land information systems should equally be capable of handling both customary and formal tenure systems.

Cadastral procedures should be designed to allow for an efficient decision-making based on law and free from political influence. The process should be participatory and transparent. The cadastral officer should be responsible to investigate all aspects of cases and to protect all private and public interests on an equal basis in the process.

Mozambique

- Land nationalised after independence
- A grace period of two years for former owners to reclaim land or compensation passed without any claims
- New land law recognising customary tenure
- Procedures for land allocation includes village land delimitation and village consultations
- Computerised case handling system for land allocations developed and implemented in all provinces
- Land legislation in urban areas obsolete. No transparent procedures established

Tanzania

- New land act and village land act recognising customary tenure, however not if the rules interfere with women's rights to land according to constitution
- New village land act gives power for land allocation to village assembly
- Village boundaries to be determined
- No demands on use of professional knowledge for village land registration, allocation or land use planning
- Boundaries should be agreed through walking
- Village land registry
- Decentralisation of power to districts, who lack resources
- The new law not yet implemented
- No digital registries

Lusaka City Council

- **Occupancy rights, limited in time**
- **Perimeter survey of the boundaries of a settlement area**
- **Numbering of each house and entered in a registry and on an orthophoto**
- **Local registration and updating in the area and connected to City Council through CD.**
- **Interest to pay registration fees and ground rents linked to the question what is coming back from City Council in forms of infrastructure improvements**

Kigali City Council

- **New concept, outsourcing to a commercial company on commercial conditions**
- **New digital map base for identification of land parcels**
- **A real property registry established for identification of parcels and parcel owners or users, from the map and what remain of paper records.**
- **Modules for land allocation building permits, land and house rents, subdivision**
- **Billing and accounting modules for collection of fees and taxes**

CONTACT

Tommy Österberg
Swedesurvey
SE 801 82 Gävle
SWEDEN
Tel. + 46 70 688 7232
Email: tommy.osterberg@swedesurvey.se