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**LAND TENURE,  
LAND MANAGEMENT  
AND LAND INFORMATION  
SYSTEMS**

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December 1995



# **LAND TENURE, LAND MANAGEMENT AND LAND INFORMATION SYSTEMS**

**A Report on the Round Table Meetings**

between

**The International Federation of Surveyors  
and The United Nations Centre  
for Human Settlement (Habitat)**

and between

**The International Federation of Surveyors  
and The United Nations Food  
and Agriculture Organisation**

held in Harare, Zimbabwe  
on 12th & 13th August 1995



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## **CHAPTER 1: Land Management, Land Tenure Security and HABITAT II.**

### **1.1. INTRODUCTION**

A one day meeting addressing the issues of land management, land tenure and the forthcoming HABITAT II Conference was held in Harare, Zimbabwe on 12th August 1995. The purpose of the meeting was to identify the ways in which the United Nations Centre for Human Settlements (UNCHS or Habitat) and FIG can work together, and to create a process by which the expertise resident within FIG can be brought to bear on the issues associated with urbanisation, particularly in developing countries. The specific objectives included the identification of ways in which FIG can contribute to the Habitat Global Plan of Action and to find ways in which FIG can have an effective, long-term relationship with the UNCHS.

The meeting was called in recognition of the fact that the world is undergoing massive change, both socially, economically and environmentally. Large population shifts are occurring both within the less developed areas of the world and within some of the more developed nations. The global push towards urbanisation affects all continents but especially Africa. Cities such as Lagos, once a small trading town, are joining the megacities of Tokyo and Mexico City as the largest centres of population on Planet Earth.

Such migration has a negative affect upon rural and agricultural communities, while the burgeoning megacities do not have the infrastructure to support such large populations. Many governments are unable to introduce policies and services that can overcome these problems. They find it difficult to prevent these population movements and seek solutions to the resulting problems through resettlement rather than looking for the root cause of the migration. In some cases there is partial success but in others the problems are only getting worse.

There is a need for positive land management policies and appropriate land tenure systems to provide the necessary framework within which solutions can be planned. There is also a need for an effective Land Information System (LIS) for the recording of land related data needed to support decision making. In many cases the policies do not exist, the land tenure systems are no longer appropriate, and the cadastral systems are ineffective or inadequate.

The meeting between FIG and Habitat included formal presentations by both organisations and by the United Nations Food and Agriculture Organisation (FAO). FIG will be exploring these issues further and seeking ways in which it can help both Habitat and FAO to achieve their goals.

### **1.2. STATEMENT BY HABITAT**

The views of Habitat were presented by Ms. Sylvie Lacroux, Chief of the Shelter and Community Services Section of UNCHS. The issue of Land for Human Settlements has always been considered as a priority of action in the UN Centre for Human Settlements work program ever since the Vancouver Conference (HABITAT I) in 1976. Resolutions and deliberations taken thereafter by Habitat have focused successively over time from 'Public Control of Land Use and Land for Housing the



Poor' to 'Land Within the National and Global Shelter Strategy'. More recently the emphasis has been on the enabling role of the public sector in the establishment of effective land policies, including the establishment of 'Land Management Systems and Techniques'. Since 1990, the main focus has evolved towards Urban Land Management stressing the role of municipal management in this issue.

During the activities of the International Year of Shelter for the Homeless (1987), the specific conditions of Women's Access to Land were clearly identified particularly by the developing countries and by the United Nations. The issue has been brought again onto the International Agenda by Habitat through its Women in Human Settlements Development Program, in the perspective of the World Conference of Women in Development (held in Beijing in September, 1995).

Since the United Nations Conference on Environment and Development (UNCED, Rio, 1992) the present focus has been on Sustainable Land-use Planning and Management of rural and urban settlements. The issues of land and finance are now being treated as two key components of human settlements management. Due to their particular importance these two issues have also been selected to be treated with special attention within the preparatory process of the HABITAT II conference.

Recent key topics developed by countries and by the UNCHS in implementing the Human Settlements Commission's resolutions include:

- \* the role of the private sector in the operationalisation of land policies in order to stimulate a supply of sufficient, affordable and officially recognised serviced land to meet low-income housing needs;
- \* options for land development including voluntary or compulsory land acquisition (public land reserve); land banking; and land pooling and readjustment; public/private sector co-ordination, such as guided land development; land taxation; land leasing and the development of existing vacant land in public ownership;
- \* access for low-income groups to existing and new urban land including techniques such as cross-subsidies; sites and services projects; vacant land taxation; appropriate, incremental standards for infrastructure; intensification of low density urban areas; land trading; and land sharing;
- \* incorporating informal settlements into formal systems of land management with an improved city-wide cadastre and land registration system, and an incremental system of land regularisation, infrastructure improvements and community services with increasing responsibility given to the community and the municipal administration in the process of tenure regularisation;
- \* improving the funding of land development through new sources of funds for the public sector employing user-charges, betterment charges and public participation projects such as land readjustment, stimulating private investments by simplifying land transactions, and improved access to long-term and short-term credit;



- \* options for governments to support and regulate the functioning of land markets for low-income shelter development, considering legal measures to reform existing land tenure systems, to stimulate private investments in the shelter sector, and to establish land registration and land information systems;
- \* urban land management with emphasis on the municipal management responsibilities and potential role particularly in producing accurate and updated land records, simplified methods for land surveying, use of advanced technologies to produce updated cadastral maps, improved local land tax collection and increased municipal land tax revenue.

Urban land management is one of the major components of the UNDP/World Bank/UNCHS Urban Management Program now providing assistance to countries at the regional level. Current efforts in the technical assistance programs include advisory assistance to Governments on land tenure (for example, in Ghana, The Philippines), assistance to Governments on improving land registration (for example in Bolivia, Colombia, Ghana), assistance in the establishment of improved land information systems (for example, in Colombia, Burkina Faso, Indonesia, Singapore), and assistance in the formulation of land development policies and mechanisms (for example, in Bangladesh, Brazil, and Indonesia). The main functions of the program to be performed in terms of land management include:

- \* assisting both national and local governments in the formulation, implementation and evaluation of policies, programs, strategies and action plans with all key actors involved in land management, such as: national and local governments; private promoters; community groups; NGOs; professional groups like surveyors, land commissioners, land developers; officers for land registration;
- \* preparing, executing and evaluating pilot projects for demonstration and replication purposes.

Promoting sustainable land-use planning and management is the present undertaking in implementing Chapter 7 and Chapter 10 of Agenda 21, whereby the component of environmentally sound physical planning and land-use is being further developed. Applications are in particular being developed in pilot cities by the Sustainable City Program (SCP), a joint UNCHS/UNEP program launched in 1990.

VISP, a new technique on Visual Information for Settlement Planning has been developed by UNCHS in collaboration with the Government of Finland, and more and more projects are making use of that new technique which is particularly adapted to the needs of developing countries. The technique is being disseminated through training assistance for settlement planning purposes particularly via land use mapping in Brazil, Costa Rica, Kenya, Malawi, Sri Lanka, The Philippines, and Indonesia.

The World Habitat Day on 4 October 1993 which celebrated the topic of Women and Human Settlements Development dedicated a special chapter in 'A Place of Her Own: Women and Land', whereby the various constraints related to access to



land and property for women were largely documented. In many countries, laws, customs and economics prevent women from owning, inheriting and using land. This in turn adversely affects their access to shelter, and their contribution to shelter and human settlements development. Land is one area where government's enabling role is critical. Enabling means removing constraints to all sections of the community, facilitating people's initiatives and paying special attention to all those who are currently disadvantaged. Women form a large proportion of this group. The preparation of the HABITAT II conference is further considering the issue and taking seriously into consideration that situation.

Access to land and secure land tenure as conditions for sustainable shelter and urban development constitutes a special initiative in the context of the Habitat II preparatory process which was launched at the end of 1994. This initiative recognises the need to focus on security of land tenure and enforceable property rights as a cornerstone of sustainable housing and urban land development financing systems. Moreover, the failure of so many governments to develop equitable national land policies and practices has been and remains a primary cause of poverty, inequity and hence political and social instability in many societies. The stakes are therefore high for economic development, as well as for the development of stable civic societies.

On that issue Habitat has launched a series of regional and global consultations. Each of these contributions has been designed to foster a dialogue among key actors from the public, private and community sectors so as to forge political commitments that will help ensure the incorporation of land policy and property rights issues as a central part of the Global Plan of Action to be adopted at the City Summit (HABITAT II) in Istanbul, 3-14 June 1996. FIG has been associated with this initiative as one of the partners from the private sector which is much needed in finding practical solutions to the managing and developing of land resources in a sustainable manner. UNCHS is very much looking forward to the contribution of FIG as an international professional association at regional and global levels in our common search for sustainable strategies on access to land and security of tenure for all.

The results of on-going regional consultations will be further discussed and consolidated to provide an input on land policy issues to the draft Global Plan of Action (GPA) to be endorsed by the City Summit. An interim draft GPA has been issued in July 1995 by the Preparatory Committee for the Conference. The two major themes of the GPA namely: Sustainable Human settlements in an Urbanising World and Adequate Shelter for All; the issues of sustainable land-use and balanced development; and ensuring access to land; state the objectives and list the most important actions recommended to Governments, to NGO's and the private sector, and to the international community.

It is expected that the results of the deliberations of this meeting in Harare will make a substantial contribution to the global initiative on land management towards the preparation of the City Summit.



### **1.3. STATEMENT BY FAO**

Dr. James Riddell, the Service Chief responsible for Land Tenure and Settlement at the FAO then offered a number of observations. In many parts of the world, but especially in Africa, it is the city that is the 'engine of growth' of national economies. However, the rural/urban dichotomy in development models has led many people to miss the important point that sustainable growth depends on the natural interrelationship between the two. Clearly, one cannot exist without the other and these interrelationships in economy are more than just flows of food and labour to the city. Not only does rural development with equity imply the economic power to buy the products of the city, but through exchange of services the rural community is the natural customer for most cities in developing countries. This requires sufficient capital accumulation by small rural producers to invest in goods and services from the urban sector. It also requires the creation of employment in the urban sector and the establishment of capital flows.

There are also interrelationships in politics that have made it a mistake to dichotomise rural policy from urban policy. What needs to happen is for rural policy reform to be made in terms of what is happening with the urban 'engine'. There is also the important recent realisation that there are few (if any) economies of scale above the family farm in agriculture. The implications of this are that rural sectors cannot be urbanised; that there are urban rewards for good rural land tenure policy; and that skewed land holdings are economical only where there are subsidised real land rents (costs). Economic and political liberalisation must also avoid a rural-urban false economy, and rural and urban Land Information System (LIS) development must go hand in hand.

Finally, there are interrelationships in demographics which span the whole gamut from rural-urban migration to the spread of aids. Less often do people talk about the urban sprawl at the peri-urban fringe which results in the loss of land for activities such as vegetable gardening and thus removes a transition zone which has sustainability. Yet, the move to the city does not have to be final and should build on rural ties for product and service flows.

While the current focus is on the megalopolis, most urban people live in small cities where the relationship with the rural sector is much more intensive, and although FAO does not work in the urban sector, it is most vitally interested in working with you in discovering and working on the rural-urban linkages in land administration, land tenure reform and LIS. The words "vitally interested" are critical because sustainable development of the rural sector will depend on how it is connected to the urban engine of growth.

### **1.4. FIG AND ITS CONTRIBUTION TOWARDS HABITAT II**

The aim of the workshop was to identify ways in which FIG could contribute to HABITAT II and to create a process by which the expertise resident in FIG can be brought to bear on the problems to be overcome. The objective of the HABITAT II conference (the City Summit) is to adopt and implement a Global Plan of Action, in support of National Plans of Action. These Plans will provide a new framework for international assistance and investment for urban development. It is intended that international and regional agencies, together with associations of professionals and NGOs should assist their national committees in implementing their work



programs and promote the active participation by key actors and groups in the preparatory process.

Participants at the meeting were asked to identify what they believed were the major issues regarding land management and land tenure security. These views were collated and discussed under the following headings.

**(a) Alternative Systems of Land Tenure and Ownership:**

- \* Systems should be able to accommodate formal, informal and indigenous types of land tenure. Land institutions should be flexible enough to cover all types.
- \* It is questionable whether a single system should be used for all types of tenure or whether separate systems should be used. Different forms of land rights may be appropriate in different circumstances.
- \* It is essential to consider the social consequences of different types of tenure and to ensure that each provides adequate protection.

**(b) Land Taxation and Valuation:**

- \* Societal programs must be financed and this can often be achieved by taxing land or property.
- \* There is a clear distinction between taxing land and taxing property. There is a similar distinction between the ways in which land and property are valued.
- \* Land taxes can be targeted to ensure that the land is put to the optimum use. Land tax policies should be linked to planning policies.
- \* Traditional lands in Africa are often taxed to provide services, but the taxes are not based on land.
- \* There is a need to explain why taxes are imposed upon communities and the benefits that come as a result of taxation.

**(c) Physical Planning and Use:**

- \* The problems are more pressing in urban areas that are subject to massive migration to cities.
- \* Illegal land use (e.g. residential accommodation on non-residential zoned land) can be difficult to eliminate as it can serve a valuable purpose in solving a critical problem (shelter for the homeless).
- \* It may not be appropriate for formal, western-style land management systems to be applied in Africa given its cultural differences.
- \* Planning laws must be dynamic.



- \* Communities must recognise why land use control mechanisms are needed and understand the differences between land use control in urban and rural areas.
  - \* Community participation should be encouraged in local land management. There is a need to listen to community views about plans that affect local land use.
  - \* New technology offers opportunities for long term monitoring of land use changes.
- (d) Access for the Poor and Disadvantaged in Market Driven Economies**
- \* Often solutions can be achieved with less highly educated personnel and less expensive services. Poor and disadvantaged people often do not have the funds to pay for survey and purchase lands.
  - \* An option is to adopt different policies for urban and rural lands.
  - \* The surveyor has a significant role to play in establishing fair participation of the poor and disadvantaged in land programs.
  - \* Problems arise when the promotion of land rights for women is at odds with local cultures, which traditionally may not recognise women's rights. Often a barrier to cultural change is not the change itself, but the pace at which it is required to be achieved.
- (e) The Role of the Cadastre and Land Information Systems**
- \* There are many different purposes of a cadastre (e.g. land tax, land use, ownership), hence its basic information must serve multiple purposes. The cadastre should be a multi-functional tool.
  - \* The role of governments (central and local) in collecting data must be clarified prior to decentralisation and the empowerment of local land information managers. The custodianship of spatial information must be assigned to ensure minimum duplication of effort.
  - \* The provision of aid from international donors can result in the occurrence of duplication of LIS, even though LIS are traditionally aimed at reducing duplication.
  - \* Professional groups that try to protect their own short term interests can be a barrier to the introduction of simpler cadastral systems.
  - \* The requirements of financial institutions such as banks may be a constraint on the simplification of the cadastre.
  - \* Cultural constraints may mean that people become extremely concerned with property procedures.



- \* Cadastral and LIS reform can help protect the interests of the poor and disadvantaged.
- (f) A Multi-Disciplinary Approach to the Problem**
- \* Surveyors should identify areas of common interest with other professionals and learn to work in a multi-disciplinary team.
- \* Often the surveyor is not the project leader of a multi-disciplinary team, but surveyors should not always see their tasks as a service industry.
- (g) Education of Surveyors:**
- \* There is a need to ensure that the forms of education are appropriate. Education is about knowing why, not just how.
- \* Surveyors have traditionally not always been well trained in communication, problem solving or management skills.
- \* There is a need to listen more closely to the client's and the public's needs.
- (h) Empowering Member Associations**
- \* Empowerment can result through participation in regional workshops and higher level seminars such as this meeting.
- \* FIG should encourage member associations to provide listings of key groups and organisations in their country so that these can be made available to agencies such as Habitat and FAO
- \* FIG should provide associations with information that will help them present arguments to their national bodies.

All participants agreed that underlying all of these issues is the matter of urgency!

### **1.5. HOW HABITAT AND FIG CAN WORK TOGETHER**

In considering ways in which Habitat and FIG can work together it was noted that Habitat is to regionalise its operations to cover the areas of Latin America, Europe, Asia and Africa, and that its work program will cover the major development problems as sub-programs. These sub-programs will deal with urban governance, reduction of poverty, disaster mitigation, strengthening of local communities, the promotion of sustainable human settlements and shelter policies, and the urban environment. FIG can assist Habitat in the following ways:

- \* Co-operation with proposed Habitat regional offices.
- \* Participation in seminars, workshops and expert group meetings at global, regional and country level.
- \* The promotion of networks of professional experts and participation in existing networks of regional experts set up by the Urban Management Programme (UMP), a joint UNCHS/UNDP/World Bank initiative.



- \* Exchange of experiences.
- \* Technical assistance with pilot projects as requested.
- \* Contribution to multi-disciplinary teams.
- \* Provision of advice on education and training in land management, land administration, and land use and control.
- \* Strengthening of local educational institutions.
- \* Provision of information about the options available and the arguments for adopting particular solutions to the problems of land management and land tenure security. These are seen to be the tools of empowerment for governments.
- \* Dissemination of information amongst FIG member associations.
- \* Discussions with other professional groups concerning areas of common interest.



## **CHAPTER 2: African Countries, the Challenges of Land Tenure, Agricultural Productivity and Land Information Systems**

### **2.1. INTRODUCTION**

Following the successful meeting with UNCHS (Habitat), a one day meeting was held with FAO with the theme 'African Countries, The Challenges of Land Tenure, Agricultural Productivity and Land Information Systems'. The purpose of the meeting was to identify those areas where FAO and FIG can collaborate in assisting their joint member nations to use modern Land Information Systems (LIS) to enhance the performance of existing rural and urban land tenure practices and institutions for the more effective and sustainable use of Africa's land base. The objective was to find ways and means whereby FAO can involve surveyors at the local level in the resolution of local problems, and how FIG itself can help in determining optimum solutions.

This meeting was similar to the one held in Melbourne in 1994 at which FAO and FIG attempted to find ways to collaborate in matters of cadastral reform in rural economies in transition. FIG Publication No. 10 sets out the results of that meeting.

### **2.2. STATEMENT BY FAO**

The meeting began with a statement by Dr. James Riddell, the Service Chief for Land Tenure and Settlement at FAO in which he pointed out that the language of development in Africa is formed around a profound concern for land tenure. Indeed, many concerns of cultural continuity, social survival and so forth are, in Africa, discussed as land tenure problems. One thing is certain, however, sustainable development, whether in the rural or the urban sector, will not take place without profound changes in land tenure and the development of adequate LIS tools to support this change.

While the above statement has been made many times before, by many different writers, in fact it goes back to the earliest colonial observers. The answer has always seemed so simple: individualise, privatise and register the land. By the turn of this century many colonies already had model title registration legislation on their books, with Senegal being a good example. In that instance, France created the kind of land tenure legislation it wanted for the metropolises in its colonies. It was thought that African farmers would realise the inherent benefits of title registration. Model villages were created where participants were given titles, mortgages and other support. Yet at the time of Independence less than 5% of Senegal land had been registered. The key reason for this was that the superiority of individual title was simply not apparent in the rural sector. On the other hand, the situation is usually different in the urban sector where higher value is placed upon individual titles, and mixed title/customary arrangements have long been recognised and accommodated.

African rural land tenures have proven remarkably resilient and the question must be asked as to why they should be changed at all. At present no specific changes are being proposed since the land tenure systems of Africa are already in a state of rapid change. There are compelling reasons for this. For example, looking at the demographics, most systems simply can no longer guarantee a sustainable farm



parcel to all who have inherent rights to such parcels (for example, the youth). There has also been tremendous change in the social fabric leading to the feminisation of agricultural production in Africa, yet women do not represent the majority of the land holders even though they are responsible for the majority of production.

From an economic perspective, there are insufficient soil and land enhancing investments being made with the result that there is little other agricultural re-investment occurring. In addition, new cost effective technologies are being ignored, since for many rural inhabitants of the continent agriculture is neither economically viable, rewarding nor sustainable. Often, good land use practices of the past associated with traditional land tenure are being ignored (for example, fallow) and will have to be rediscovered in the future. In many cases, land transactions are taking place even where they are officially forbidden, and sales and other permanent transfers that would normally happen within traditional land holding groups now take their place alongside limited transfers made to "outsiders" to repay loans.

There has been an increasing knowledge of when and where Common Property Resource Management (CPRM) and pooled resource management techniques are the most sustainable, but this comes at a time when pressures from all sides are causing a breakdown in these very systems. The growing evidence is that there are now almost no economies of scale in agriculture beyond family farming (although plantations may be a special case), given the high resource and management costs associated with larger farms. This is not a romantic notion, and we need policies that will support family farming and take away the high costs of market labour and land rents.

Where, then, does that leave us? The question is in fact a profound one. We are used now to the news media presentation of the plight of Africa. The refugees, the starving and abandoned of the continent face us on the news programs every time the broadcasters need to present a human interest story. Yet this was not always the case, as discussed in De Casto's *Geographie de la faim* (Geography of Hunger) of 1949, which was part of the founding thought behind the establishment of the FAO arising from the Depression of the 1930s and the Second World War. Indeed, up till the mid 1960s, Africa was a food exporter yet today it cannot feed itself. Clearly, the problem will require the application of soil-building agricultural technologies that increase sustainability, and these can be found in many parts of Africa, such as the Mandara Mountains. Unfortunately each introduced technology (irrigation being the most notable) runs into insurmountable land tenure and other social and cultural barriers.

Thus we are back to the problem of helping the continent's rural populations resolve their land tenure problems before much else has a chance to succeed. What this help will look like is not known and hence the reason for this meeting. However, it will involve the use of modern LIS concepts and techniques, it will mean working with land "law-in-action", and it will probably look quite different from land tenure systems in the Euro-American experience. That is why we need to also be aware of how other countries are preserving traditional common property and pooled tenure systems.



This meeting will explore the route that we may take and will look at the constraints in agricultural land tenure, the tools available in modern LIS that could be applied, and how members of the surveying profession, FIG and FAO can all help.

### **2.3. STATEMENT BY HABITAT**

The United Nations Centre for Human Settlements (Habitat) welcomes the opportunity to discuss land management problems with other UN agencies, Non-Government Organisations (NGOs) and professionals in the field. As a means of contributing to the agenda of this meeting, Habitat is looking for an inter-agency approach to land management. Habitat believes that the political dimension is often the missing element when trying to overcome the issues concerned with land management and that this has caused many groups to shy away from tackling the problems. Even so, we must not fail to recognise the importance of land management to sustainable land development.

Historical evidence suggests that civil strife and political unrest is often due to the failure to provide land reforms. Yet land reforms are often critical to national economic development. We must provide access to land and security of tenure to the ordinary citizens. It is not enough for the international community to assist countries to hold free elections.

Other issues such as land reform and management must also be addressed. We need to find a way in which we can implement the relevant Chapters of Agenda 21 relating to the facilitation and implementation of appropriate land management practices and policies.

Separation of urban and rural land management problems has caused duplication of effort, yet there is a strong case for an integrated approach to land management which embraces both areas. One reason is that land provides the basis for all forms of human activity (such as the provision of shelter, food and recreation) and there is no distinction between urban and rural land activities. The interactions between the two are also witnessed at the urban/rural fringe where rapid urban migration is causing acute problems through the loss of rural agricultural lands. In addition, programs of land settlement are often seen as only involving rural problems, yet there is a critical urban dimension to the problem as well.

Habitat welcomes the opportunity to participate in this meeting and to use it as a means of helping to develop an integrated approach to land management in conjunction with the FAO, FIG, member societies and other professionals.

### **2.4. COMMENTS BY AFRICAN DELEGATES**

Delegates from the African countries present at the Workshop were then invited to comment on the problems as they saw them.

#### **(a) Kenya**

Kenya has a total area, inclusive of inland waters, of over 588,000 sq. km. and its Exclusive Economic Zone covers a further 145,000 sq. km. It has an arable land area equal to 20% of its total land mass, with the remainder being either semi-arid or



arid land. It has a Development Plan in progress for the years 1993-1996 with the theme of Resource Mobilisation for Sustainable Development. Several land reform programs are underway, including:

- \* The Land Settlement program, where land is owned/bought by the government and distributed to the landless.
- \* The Land Consolidation program (to be discontinued).
- \* The Land Adjudication program (started in 1968).
- \* Subdivision of company and co-operative farm lands.

A number of constraints to land reform were perceived. These included:

- \* The rapid urbanisation process (Kenya has one of the highest growth rates in the world at 3.2% per annum).
- \* Inadequate statutory powers (existing laws are difficult to enforce).
- \* Conflict between different activities on land.
- \* Complex land legislation and procedures.
- \* Inadequate land information (such as poor mapping).

With respect to Land Information Systems, the increasing population and development growth needs in Kenya's 53 Districts makes LIS crucial for planning and development purposes. Hence the need to prepare a land information database for each District Lands Office.

#### **(b) Malawi**

Malawi is a small country having an area of 46,000 sq. km. of which 9,000 sq. km. is water. It has a population of about 9 million with 85% of that number living in rural areas. Significantly, the population has doubled in the last 20 years.

The country's economy is based on agriculture and in the early years of independence the government wanted to increase agricultural activity mostly in the growing of burly and flue-cured tobacco. To encourage tobacco growing, customary tenure land was allowed to be leased and provision was made for lease issue (without survey) on the basis of a sketch plan.

The Land Act divided land in the country into customary tenure (the largest proportion), public land (mostly in urban areas), and private land (in freehold and leasehold forms). Sale of land is only available in the freehold sections, while leases can be obtained from the government in urban public land areas and for customary land in rural areas (although the land has to first be converted to public land status before the lease is granted). Registration is therefore made of private and public leasehold land, but no registration of rights is available for customary land.

With an existing population density of over 250 people per sq. km., the government is having difficulty controlling the population increase and there is a considerable pressure for more land to be made available. As part of its Poverty Alleviation Program, the government is at present working on a Land Reform Policy (with assistance from the World Bank) which it intends to put in place by the end of 1996. Land Information Systems will be important in helping the government develop this policy.



**(c) Nigeria**

Prior to 1978, there were two land tenure systems in Nigeria broadly affecting the southern and northern states respectively. The system in the southern parts of the country saw land owned by communities, villages and families, whereby the head of the group had absolute control of the land. Family members could be assigned use of the land without tributes paid to the head of the family or community. Delimitation of boundaries was not given serious consideration and the general boundary approach of referring to hedges, trees and prominent features was adopted. However, with urban settlement and development, stricter procedures were required to define boundaries. Interests in land were registered by state and federal government under a deeds-based system, and while there was no guarantee of ownership consideration was given to priority of registration.

In Northern Nigeria the situation is quite different with over 350 very diverse ethnic groups and the widespread existence of Islamic law. The land tenure system was such that rural lands were owned by the Local Native Authority while urban lands were owned by State Governments. Land transactions were normally with one of the government bodies, and land holdings were usually leaseholds for specified periods. This centrally-controlled system provided for simpler transactions and less incidence of problems associated with overlap and encroachment - resulting in minimal litigation.

The Land Use Act 1978 was based on the northern Nigerian land tenure system and represents perhaps the most revolutionary land reform in Nigeria in recent times. All lands vest in the territory of each State, which are empowered to hold the land in trust for the people. The Governor is responsible for the allocation of all land.

Advantages to Nigeria of the land reform were seen to be:

- \* Governments can acquire land cheaply for development and public purposes.
- \* A single national land tenure system will reduce costly litigation in the southern states.
- \* Valid and reliable titles to land will be created.
- \* Land speculation in urban centres will be reduced.
- \* Rights in land are more freely transferable between persons.

Problems that need to be addressed include:

- \* In some cases the actual practice of land sales is not in accordance with the legislation.
- \* There is a lack of up to date mapping.
- \* There are no comprehensive inventories of land use.
- \* Urban migration is placing additional pressures upon the demand for land.
- \* There is sporadic and uncontrolled land development.
- \* Most Nigerians are still unable to afford land, while the wealthier members of the community have already obtained large tracts of land.
- \* There are significant delays in processing certificates of occupancy.
- \* People who originally had titles to their land may now have an instrument which is inferior to their original holding.



- \* The title recording system is localised and fragmented.
- \* There is a lack of co-operation between those who collect data and those who use it.

**(d) South Africa**

Prior to 1991, indigenous people in South Africa had access to only 13% of land in the country. Urban migration is now a critical problem and informal settlements now number over 1000. While no land redistribution legislation is intended, land resourcing will occur through land taxes. On the other hand, some land restitution will take place where traditional owners have been removed from their lands. Outside the indigenous areas, communal land registration (group rights) is being considered, and the government is now considering a major revision of the cadastre. With respect to LIS, a national system is in place, although it is difficult to access certain types of information and copyright issues are restricting data sharing. Clearly, the scope and pace of change is wide ranging with some observers labelling it chaotic, however the surveying profession recognises that it has a major role to play in the process and will be heavily involved in future work.

**(e) Swaziland**

Swaziland is a small, mountainous country some 700 km in width, with little usable land. It is a monarchy governed by a King who represents the people as the custodian of their traditions. This means that the customary system of land tenure is very entrenched and that there is very little public debate over alternative systems since it might be seen to impinge upon the position of the monarchy.

Besides the customary tenure, there is also a formal land tenure system operating in urban areas as a result of previous colonial rulers although there is very little land available for sale. Today, many of the laws of the previous colonial period are still in force and a consultant has been appointed to examine their content and consolidate them into a single Act. It is expected that this Act will help promote further public debate about land tenure systems in Swaziland.

**(f) Zambia**

Zambia is a land locked country with a population of 8 million people and a density of approximately 10 people per sq. km. There are two land tenure systems: the British statutory tenure system accounting for some 6% of the land; and customary tenure applying to reserves and trust lands constituting the remaining 94% of the country. Significantly, 42% of the population is found in urban areas where the small percentage of statutory land lies. A new Land Bill is being drafted at present.

With regard to statutory land opportunities:

- \* Private leasehold ownership of land and interests is possible and guaranteed, which has ensured economic development in the subject areas.
- \* Though prohibited by law, informal/squatter settlements have flourished due to reasons such as political patronage; relaxation of controls on population movements following independence in 1964; and slackening of local planning controls.



Customary land opportunities are affected by:

- \* The large amount of land available.
- \* Equal opportunity, no landless people.
- \* Perpetuation of a subsistence economy and traditional way of life which is affordable by the majority of rural dwellers.

Statutory land constraints include:

- \* In the land delivery system, administrative procedures in obtaining title to land and planning approval can stretch to many months.
- \* With high inflation rates, service charges have been prohibitively expensive to the extent that the target groups for whom the plots have been serviced are excluded.
- \* Unsatisfactory controls (for example, the Land (Conversion of Titles) Act, Rent Act, and the Town and Country Planning Act). These have reduced/restricted the supply of land, caused delays in the land development process, and have stifled investment initiative.
- \* Due to the factors mentioned above, informal/squatter settlements have grown in number and size, even though the statutory controls do not permit them.
- \* Land may not be sold to non-Zambians.

Customary land constraints on the other hand involve:

- \* No private ownership of land, as land is held communally.
- \* Land cannot be sold.
- \* Land is not easily acquired by non-land owning groups.
- \* Not easy to ascertain individual interests of land use and varies with time and space;
- \* As a result of the four constraints above, the Western/European type of socio-economic development model is mostly restricted to State lands.
- \* Lack of parcel-based information.
- \* Lack of funding and technical knowledge for agricultural projects.

#### **(g) Zanzibar**

Zanzibar is a small island country with a population density of 300 people per sq. km, and only a small percentage of land covered by customary tenure mainly in the poorer agricultural quality land. It has a subsistence agricultural economy and consequently has to import many goods. It now has a free market economy which has led to new land tenure systems. During the period 1989-1994 six land laws were enacted relating to Land Tenure, Land Adjudication, Land Registration, Land Transfer, Land Tribunals, and Land Surveys. The purpose of this legislation is to create a unified land system which supports government economic policies. Land Information Systems will help overcome some of the problems listed below and projects in two pilot areas are underway in which land will be adjudicated leading to eventual registration of land titles.



Opportunities created by LIS include:

- \* Supporting land valuation.
- \* Updating of land information and an improved land inventory.
- \* Monitoring and control of land resources.
- \* Improved land management and administration.

Current constraints faced include:

- \* Urban migration problems.
- \* Lack of information on resources available.
- \* Inadequate security of tenure to support investment projects.
- \* Lack of skilled personnel, equipment and other resources.

#### **(h) Zimbabwe**

The current system of land registration in Zimbabwe is by way of registration of title deeds. The State guarantees title and administers the system, but it is time consuming, expensive and complex. A Land Tenure Commission is now operating to investigate appropriate means of reform and the government has a program to redistribute land. Zimbabwe has three means of land tenure: customary title in the rural and resettlement areas; State title; and freehold title in urban areas covering housing and industrial land. However, the imbalance in land ownership is reflected in the fact that 42% of the agricultural land is owned by just 5% of the population.

The major problems experienced in Zimbabwe are:

- \* The need for consolidation of the 21 statutes affecting land registration, coupled with the complexity of the existing Roman-Dutch system which does not serve the entire population.
- \* Difficulty in co-ordinating the activities of the four government departments tasked with land development, delivery and conveyancing.
- \* The systems is expensive, complicated and slow, with many parties being involved, and cannot be expanded to handle communal areas.
- \* Existing surveying and registration technologies are old.
- \* Technical advice received has not always been appropriate.

To help overcome these problems, it is considered that Zimbabwe needs:

- \* A complete multi-purpose cadastre for the country.
- \* A single system capable of covering all tenures.
- \* New land adjudication processes.
- \* Registration and protection of rights.
- \* Finance and new technology.
- \* Institutional change, such as re-organisation of the government ministries dealing with land.
- \* Introduction of minimum and maximum land parcel sizes to ensure equitable holdings.
- \* Communal land re-organisation for more planned settlement.



## **2.5. DISCUSSION OF ISSUES**

Several topics were then discussed by the participants. These related to rates of change and the effect of absorption capacities upon sustainability; approaches to more effective land management; and the place of LIS and the types of systems needed. The key points raised were as follows.

### **(a) Rates of Change and Absorption Capacity**

- \* Often the focus is on the present land supply conditions, ignoring the enormous increases in population. This may result in program failure.
- \* Population pressure can cause a reduction in the rural land base.
- \* Pressure may also result in settlement of environmentally sensitive areas such as hill slopes .
- \* Often, the prime lands have already been taken by landholders and there is nothing left for the youth, which again puts pressure on governments to open up other areas such as grasslands and forests (for example in Zambia where protected forest areas are being settled).
- \* We should not limit our thinking on absorption capacity to only consider its effect upon agricultural land, since it is a resource for many other activities and services and also a means of creating employment.
- \* Problems are caused by parcel fragmentation due to inheritance laws (for instance in Malawi where people hoard small parcels of land), although in some cases governments have legislated to proclaim a land floor or minimum parcel size (for example in Zanzibar, which has Islamic law and where the minimum parcel size is 6,000 square metres).
- \* Rapid city growth often means that communal lands are absorbed as the urban fringe moves outward.
- \* As for sustainability, there can be problems in gathering the necessary experience together so that sustainability can be achieved. Hence, while a program may hand back land rights it may cause other environmental problems.

### **(b) Approaches to Land Management**

- \* It was generally agreed that a holistic approach was needed to produce integrated land management practices, and that a key problem is getting people to accept that their actions may impinge upon the rights of others.
- \* Clearly, education at all levels is part of the process, even at the farm level, and some countries already have weekly meetings in villages with advisers to discuss their land management practices.
- \* The key to the education programs is explaining why a particular action is required, before discussing the means by which it can be achieved (the how).



- \* In addition to education, local people (including the local authorities) must be empowered so that they become part of the planning and management process.
- \* When land management advice is needed in villages, governments should have appropriate extension service mechanisms in place.
- \* Land management is more than just LIS and is typically studied in relation to the formal tenures, although academically it may also study the customary aspects.
- \* To support land management, often essential data is not easily available or is dispersed amongst many central agencies.
- \* LIS are not usually designed to support land management.

**(c) The Place of LIS and Types of Systems Required**

- \* LIS tend to be operated by governments for administrative purposes and not necessarily for the benefit of the people.
- \* There is a crucial need to involve, in the development stages of the LIS, those arms of central and local government which will gain the benefits from using it.
- \* One option is to place the emphasis upon using appropriate information, which in turn leads to decisions on how data should be collected, stored and displayed.
- \* Often the impediments to implementing LIS are organisational rather than technical.
- \* It is easy to have a technology and information overload which impedes use of the LIS.
- \* If LIS are too cumbersome to use there is the danger that users will go and recollect their own data.

**2.6. FUTURE COLLABORATION BETWEEN FIG AND FAO**

In the final session of the workshop, programs for future collaboration between FAO, FIG and member societies were discussed with respect to the formation of networks; assessment of technologies and techniques; participation by member societies; and the application of such programs.

The importance of providing access to sources of information and the establishment of personal contacts were stressed. Joint participation in global, regional and national seminars and workshops would provide opportunities to achieve both objectives. FIG now has a contact database available on diskette and also has a home page on the World Wide Web.

The provision of comparative reports on equipment or tenders was considered not to be one of FIG's roles when collaborating with the FAO. On the other hand FIG



might supply panels of names of people who could assist with helping agencies in their decision making. There is an opportunity, when FAO is working in a particular country, to draw upon advice from member societies in surrounding countries to examine alternative practices and procedures. Participation in UN activities could be seen as a substantial benefit to member societies through having the opportunity to work with FAO on development programs of national importance. The key to successful participation by member societies is for information to be disseminated to them advising them of forthcoming regional activities, programs, seminars and workshops.

The key to FIG and its member societies collaborating with FAO in the future was seen to be through the provision of advice and information, as opposed to the provision of goods and services. This can occur at the international level (such as the hosting of this meeting), through the FIG Technical Commissions (such as production of the Statement on the Cadastre), or at the national level through co-operation with local member societies. As always, there is a political dimension to such collaboration and member societies, in particular, will need to be aware of the local roles of the public and private sectors of their professional community and the sensitivities that may be involved when assisting FAO.



### **CHAPTER 3: Postscript**

This workshop presented an excellent opportunity for FIG to learn more about Habitat, its operations, and how the two organisations might work together with regard to the forthcoming HABITAT II conference in Istanbul, 3-14 June 1996. Habitat appreciated the request by FIG to participate more actively in HABITAT II and in national activities, and much was learnt about FIG, its commissions, and the changing role of surveyors in their professional context. Accordingly, surveyors can be seen by Habitat as major actors in its future work. Habitat looks forward to working with FIG to overcome the problems and challenges associated with land management and land tenure security.

The discussions between FIG and FAO focused on the means by which modern Land Information Systems can be employed to enhance the performance of existing rural and urban land tenure practices and institutions, for a more effective and sustainable use of Africa's land base. LIS has a critical role to play in this process by providing information that is both appropriate and applicable to the needs of users. In addition, LIS must be continuously usable and expandable to accommodate future change as required. As the profession most concerned with the development of land information systems, surveyors have a key role to play in the future. The meeting with FAO concluded that there is a challenge here that is big enough for all parties to be involved, and FAO and FIG look forward to further collaboration in the future.

From the perspective of FIG both meetings were highly successful in identifying areas of common interest where co-operation can be of mutual benefit in achieving the goals of each organisation. FIG is grateful for the opportunity to discuss the contribution that surveyors can make to sustainable development. FIG as a United Nations Non-Governmental Organisation will continue to explore ways whereby the skills of the surveyor can be made available to the community at large.

Finally, on a personal note, FIG thanks Dr. Gary Hunter for his work as a rapporteur at the two meetings and for preparing the draft of this report, and Professor Peter Dale for preparing the final text.



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