

# Questions on Sustainable Land Administration

András OSSKÓ, Hungary

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## SUMMARY

It's obvious, the implementation of sustainable development is not an environmental problem only but first of all economic, social development. The successful implementation of sustainable development requires institutions which are able to co-ordinate the activities.

FIG included this topic in its long term professional strategy few years ago and UN organisations also supported FIG concepts. As a result of FIG/UN common activities, FIG Commission 7 with UN organisations-FAO, HABITAT, etc.- organised a joint workshop in Bathurst Australia in 1999, issuing the Bathurst Declaration "Land Administration infrastructure for Sustainable Development" It's very clear that the processes of sustainable development requires sustainable infrastructure, sustainable legal and institutional framework, sustainable, operational land administration.

To develop well functioning land administration is an increasing importance and interest world wide during the last decade but it's known by experience that creation of legal and institutional framework is not enough to guarantee the sustainable operation of land administration.

Which conditions are needed, among others, to guarantee the existence of sustainable land administration ?

- Legal and institutional framework (cadastre, land registry, valuation, taxation, etc.)
- Registration of all land and real estate properties (formal, informal)
- Cadastral maps any kind
- Continuous updating of legal and cadastral mapping data
- Decentralised institutional network
- Sufficient number of educated staff for long term
- Political recognition and decision to support land administration activities
- Technical development
- Sufficient financial sources for operating land administration institutions
- Public awareness and acceptance of the importance of land administration
- Exercise of rights and performance of obligations by citizens

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## 1. INTRODUCTION

It's obvious since years the implementation of sustainable development is not an environmental problem only but, first of all, economic and social development.

The successful achievement of sustainable development requires legal and institutional framework, organisations which are able to co-ordinate all land and property related activities.

The International Federation of Surveyors, FIG, has included the sustainable development, as a topic, in its long term professional strategy few years ago. United Nations and its organisations also find important to support the developing world, especially African, Asian, Latin American countries in order to accelerate their economic growth and social development. Because of common interest and professional goals, UN organisations support FIG activities and the two world organisations have established working relation few years ago. As a result of FIG/UN working relations several joint events, workshop were organised and many publications were issued during the last years dealing with land and property related activities, land administration matters.

As one of the most important events, FIG Commission 7(Cadastre, land management) with UN organisations (FAO, HABITAT) organised a joint workshop in Bathurst, Australia in 1999, issuing the Bathurst Declaration "Land Administration infrastructure for Sustainable Development". The Bathurst Declaration describes and proves that the process of sustainable development requires sustainable infrastructure and this should be the sustainable, operational land administration system.

## 2. REASONS OF INCREASING IMPORTANCE OF LAND ADMINISTRATION

The world has been continuously changing. The speed of changes have been accelerated in recent decades not in the technical field only, but in the economy and the world society as well, creating new challenges to be solved, implemented world wide

### 2.1 Changes and facts

- globalisation
- revolution in information technology
- increasing gap between developed and developing countries
- growing population in the developing world
- rural population moves to urban area

- lack of security in land tenure in many developing countries
- (Bathurst Declaration)

## **2.2 New challenges related to land**

- sustainable development
- developing active land market in transition and developing countries
- rapid urbanisation in Africa, Asia, Latin America
- creating secure land tenure in developing countries
- supplying sufficient food and drinking water for the world population (Bathurst Declaration)
- solving post conflict problems

These changes extremely influenced the land and property related activities and states, governments have the responsibility to find out effective solutions, developing, modernising legal and institutional framework to answer the new challenges in the 21<sup>st</sup> century.

The majority of countries world wide have recognised the importance of solving above problems, especially to achieve the sustainable development. The implementation of sustainable development very much depends on the quality of land and property related activities. Well functioning land and property related activities requires well operational, sustainable institutions, we believe, sustainable land administration.

## **3. THE ROLE AND FUNCTION OF LAND ADMINISTRATION**

Land administration is the “process of determining, recording and disseminating information about ownership, value and use of land when implementing land management policies” (ref. UN/ECE Land Administration Guidelines)

This is an interpretation of “ownership” and “land” “Ownership” should be seen a broad concept of land tenure- relationship between people and land- within various jurisdiction (statutory, customary, informal, etc.) “land” includes constructions at subsurface level, ground level and above land level (e.g. buildings).

Land management is the implementation of land policy by a wide range of land policy instruments (e.g. land reform, land consolidation, land markets, land taxation, marine resource management, etc.) (ref. FIG Commission 7 Work Plan 2002-2006 prof. Paul van der Molen chairman).

The definition of land administration makes clear that “The land administration activity is not an end in itself, but that it facilitates the implementation of land management policies” (Dorine A. J. Burmanje- Paul van der Molen “Spatial Data Infrastructure and Land administration in Europe”).

“Land administration serves various functions in a society. Documents like Agenda 21, Habitat, etc. relate the land issue very much to poverty reduction, sustainable housing, sustainable agriculture and the strengthening of the role of vulnerable groups in society like women, farmers, indigenous groups. A land administration system not a purpose in itself. They are part of such a broader land policy” (D.O.J. Burmanje - P.van der Molen “Spatial Data Infrastructure and Land administration in Europe”)

Land policy shows the way how governments want to deal with land matters in sustainable development or as the Guidelines say “land policy consist of the whole complex of socio-economic and legal prescriptions that dictate how the land and benefits from the land are to be allocated. That of course depends on the culture, history and attitude of people (GTZ 1998)

Now is understandable that the development of operational Land administration is an increasing importance and interest world wide, especially during the last decade. There is no doubt that the creation of legal and institutional framework concerning land and property related activities is the most important step towards the operational land administration, but it’s very well known by experience, the existence of legal and institutional framework itself doesn’t guarantee the sustainable operation of land administration.

There are many other conditions which are important for the operation of sustainable land administration.

- legal and institutional framework( cadastre, land registry, valuation, taxation, etc.)
- registration of all land and real estate properties
- cadastral maps any kind
- Continuous updating of legal and cadastral mapping data
- decentralised institutional network
- sufficient number of educated staff
- political decision to support land administration activities
- technical development, IT
- sufficient financial sources for operating land administration activities
- public awareness and acceptance of land administration activities
- exercise of rights and performance of obligations by citizens

#### **4. CONDITIONS TO CREATE SUSTAINABLE LAND ADMINISTRATION**

##### **4.1 Legal and institutional framework**

Developing legal and institutional framework concerning land and real estate property related activities is fundamental to guarantee the sustainability of land administration system. The legal framework describes the “rules of the game” and it has to represent the land policy of the state

The legal framework, laws related to land must be accepted by the society. Equal rights for all to access to land , property and also to access information concerning the ownership and other legal and mapping data, value and use of land is important as well. The legal framework must represent individual rights like private property right, harmonised with civil law. On the other hand there is increasing importance and influence of public law on land and property restricting the use and rights to land and properties, in order to enforce public interest. Of course restrictions by public law must be limited to keep the properties marketable.

In many countries besides written law, customary, informal laws are parallel existing which are very important for a lot of people. Sustainable land administration has to take unwritten laws into consideration if it wants to serve the entire society.

The operational land administration requires among others the following basic laws. Land law, Land Registry law, Survey law, Land consolidation law, Building law, Valuation law.

As I started, legal basis means the rules of the game. These rules defines how government land policy should be implemented, but institutional system equally essential to achieve land policy and operate the system. In case of land and property related activities this is the Land administration system. The well operational institutions should guarantee the sustainability of Land administration system.

The following institutions, organisations are fundamental in case of operational Land administration

- Cadastre
- Land Registry
- Valuation
- Financial institutions ( land and property tax)
- Town and land use planning

The cadastre, land registry are the most important organisations in the land administration system. The integrated land related activity, services are also demand by the market economy and the modern society today. In developed countries the integrated, co-ordinated activities particularly between cadastre and land registry are generally existing. In some countries the integration means the integration of data basis and services but many countries the integration of cadastre and land registry has been completed on legal basis and institutional level.

## **4.2 Registration of all Land and Real Estate Properties**

The full registration of land and real estate properties is fundamental to develop sustainable land administration. The registration of lands and properties is an inventory of the state assets. The registration means the description of land and property (id. number, location, area, address, status, use of land, etc) which are the basic data for the economy and other data users. The registration also means the registration of owner(s) (private, state, group, etc.) and rights, related to land s and properties, which are also essential implementing sustainable

development. Full registration allowing to mortgage properties which is a basic demand for investors and other players in the market economy.

### **4.3 Cadastral Maps any Kind**

The cadastral surveying and mapping creates the descriptive data of land and real estate properties, define boundaries, parcel numbers, surveying buildings and other objects. Cadastral maps are essential for planning, zoning, land management, valuation, land taxation. There are many technology of cadastral survey. The cadastral survey based on accurate demarcation and field survey is a very expensive and time consuming procedure, even developed countries when digital cadastral maps have been introduced, they digitalised the old graphic cadastral maps avoiding the costly, accurate field survey. In respect of above, especially in developing countries is advised to find the simply and low cost technology to reduce the time and cost to complete cadastral mapping in the entire country. The accuracy can't be top priority, especially not in building and detail survey and not in rural area. Photogrammetry, remote sensing, ortophoto, GPS can be applied. Producing cadastral maps any kind (digital, analogue) covering the whole country, is more important than producing partial, sporadic accurate maps.

### **4.4 Continuous Updating of Legal and Cadastral Mapping Data**

This question is critical. We can speak about sustainable land administration only if we can guarantee the continuous maintenance of legal (ownership, other rights, mortgage, etc), mapping and other data. Of course the continuous updating requires well operational, decentralised institutions and sufficient number of educated staff. It becomes meaningless to complete the full registration and cadastral mapping of land and real estate properties if we can't guarantee the continuous maintenance of data. Without updating, after sometimes, data became out of date and useless.

Up-to-date requirements are extremely important in cadastre and land registry database but up-to-date information about the value of lands and real estate properties are also essential.

### **4.5 Decentralised Institutional Network**

The existence of decentralised land administration institutions particularly cadastral and land registry institutions, offices are very important because the state must guarantee equal possibility for all to access to institutions, services, land and property data. This is crucial in less developed countries where the information technology is not yet developed and used in the whole country especially not in rural area. Lack or poor quality of telecommunication network is a fact in many developing countries. Poor and less educated population is not able to buy computers and using information technology tools. Concerning above the existence of decentralised institutions can guarantee only the operation of sustainable land administration.

#### **4.6 Sufficient Number of Educated Staff**

To guarantee the continuous updating of land and real estate related data and operate land administration institutions, sufficient number of educated staff is required. One of the reasons of well operational land administration in developed countries especially in Europe the sufficient number of educated staff. To operate land administration special education and knowledge are needed which education is not always available at universities and schools. Besides basic studies special courses, practical experience in institutions are essential as well. The IT knowledge of the staff is also a demand nowadays. It's known by experience that pilot IT and other projects developed by international support haven't been used for long term in many developing countries because of lack of sufficient number of educated staff and financial sources.

#### **4.7 Political Recognition and Decision to Support Land Administration Activities**

The importance of well, fully operational sustainable land administration, as a fundamental infrastructure for the market economy and sustainable development, have been recognised in developed countries since years. This recognition is more frequent in the less developed countries as well because the home and foreign investment in land and real estate properties is one of the tool to develop the market economy. Investors require legal security and without well operational, sustainable land administration institutions is not possible. It's every countries interest to develop well operational land administration system and political decision makers responsibility to create the legal and institutional framework and guarantee financial sources to operate institutions for long term.

#### **4.8 Development of IT and other Advanced Technology**

There is no doubt that the revolution in IT is one of the biggest changes in recent years world wide. The land administration activities have been very much effected by the IT development. The computerisation of land and property related legal data, the introduction of digital cadastral maps were major steps to create databases of land and property related digital data.

Introducing of IT improved data services, required by the economy and the society and made institutions more effective. Integration of different databases should result central database and on line connection, direct access to database which make the life easier for external users. Developing well operational countrywide IT system is very expensive task and running the systems is also requires continuous financial support and sources. In poor countries lack of financial sources is the major constrain to develop countrywide IT system supporting land administration.

There are quite many pilot projects in developing countries financed and expertised by international organisations, aid programs supporting the development of land administration but generally there is no long term result of these projects because of financial difficulties and

many times lack of sufficient number of educated staff. Low cost solutions should help to improve results.

#### **4.9 Sufficient Financial Sources for Operating Land Administration System**

To develop and operate land administration institutions sustainable way, long term, continuous financial support and investment is required. Political decision makers have to recognise the importance of land administration as infrastructure for sustainable development providing long term budget to serve the market economy and in the same time the interest of the entire society. Quality of land administration services, demanded by external users, should also generate income contributing for the good operation of institutions. Cost recovery approach is not a dream today in developed countries. Integration of land related activities and databases should also improve the quality of services and increase the income.

#### **4.10 Public Awareness and Acceptance of the Importance of Land Administration Activities**

The political will and support by decision makers to develop the legal and institutional framework is not enough to operate land administration system. The public awareness and acceptance of law, legal framework and land administration institutions are equally important. The sustainability of land administration institutions is also depends on citizens behaviour. If the society, citizens recognise and accept the benefits of using land administration services they are willing to pay for data and services contributing to increase financial sources. The public awareness should also result obligation by citizens to report changes in data and rights of land and real estate properties to land administration institutions to keep database up-to-date.

#### **4.11 Exercise of Rights and Performance of Obligations by Citizens**

In countries where a well operational land administration is existing is compulsory, according to law, to report changes in rights and data of land and real estate properties. This obligation helps to keep legal and mapping data, database (analogue, digital) in up-to-date condition. It's known by experience the law itself is not enough to oblige citizens to abide by law. The acceptance of the importance of land administration activities by the players of the economy and the society is equally important. It must be recognised that the states effort to keep land administration operational and the database in up-to-date, providing sufficient budget and staff, is one of the conditions only but the citizens positive behaviour and obligation to abide law, concerning land and real estate properties, can contribute to develop and operate sustainable land administration serving the economic and social development and as a whole the implementation of sustainable development.

### **5. ISSUES IN THE NEAR FUTURE**

There are different tasks in developed and developing countries to be achieved towards the sustainable land administration.

In the majority of developed countries the conditions of sustainable land administration are existing, the task is to keep sustainability for long term. In these countries one of the major tasks to harmonise land related data and geo spatial databases. It's also advised to integrate land and real estate related activities not only in services but on legal basis and institutional level.

In developing countries the task is to develop the conditions of sustainable land administration. Because of poor financial sources the development could be step by step approach looking for low cost solutions. The technical development is important but very expensive investment and requires educated staff. It's advised to develop other conditions of sustainable land administration, like legal and institutional framework, decentralised institutions sufficient number of educated staff, continuous maintenance of legal and mapping data- even without comprehensive IT development- countries can start in traditional environment with analogue data but of course the technical development should speed up the development of sustainable land administration.

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## **BIOGRAPHICAL NOTES**

Academic experience: Dipl.Ing. Land surveyor MSc. Budapest Technical University  
Dip. Certified Engineer, Budapest Technical University

Current position: Deputy Director, Budapest Land Office 1994-

Practical experience: Cadastral surveying, mapping, land registry, international expert in Land administration matters

International experience: expert in Nigeria 1977-79, 1982-86

Activities in home and International relations:

Member, Hungarian Society of Surveying, Mapping and Remote Sensing 1971-

Member, Chamber of Juridical Expert 1990-

FIG, Commission 7 Hungarian delegate 1995-

Chair, FIG, Comm. 7 working gr. on Land markets 1998-2002

Chair, FIG, Comm. 7 working group 1. 2002-2006

Chair elect, FIG, Comm. 7 2007-2010

## **CONTACT**

András Oskó  
Budapest Land Office  
Sas u 19  
1051, Budapest  
HUNGARY  
Tel. + 36 1 354 2967  
Fax + 36 1 354 2952  
Email: foldmeresv@foldhiv.hu