

# The Importance of Cadastral Procedures for Sustainable Development

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## ABSTRACT

This paper states that cadastral systems are necessary for sustainable social and economic development. This does not mean that all land in for instance developing countries need to be registered in a land titling system. In most developing countries, traditional land tenure provides security of tenure for existing land use without the need for land titling. However by applying cadastral procedures on cases, when investors are seeking land for new development or other activities that will change traditional land use, the procedures can both safeguard the traditional interests and investors interests for land titles and mortgages. It is therefore important to develop appropriate cadastral procedures and a cadastral organisation with capacity to implement the procedures, even though not all land will be registered.

Such cadastral procedures should define an independent cadastral authority with the responsibility to investigate cases, balance the involved public and private interests and make decisions. The procedures should be participatory and transparent.

The most important cadastral development today is to develop such kind of legislation and build capacity within a cadastral organisation to be able to carry out the cadastral procedures.

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The importance of a cadastral system for sustainable development is well documented in a number of international statements and declarations, see for instance the Bathurst declaration 1999. A cadastral system is then very much seen as a land information system, which to be really efficient needs to cover most of a nation's area. However, many cadastral systems also in developed countries are not covering the whole territory of a country. Maybe the degree of coverage in the international discussion has been overemphasised compared to other aspects of a cadastral system, such as the cadastral procedures. Perhaps the procedures are even more important for the success of a cadastral system than its coverage? This paper discusses a number of issues regarding cadastral procedures.

## WHAT IS A CADASTRE

FIG has adopted a statement on cadastre 1995. This statement has the aim to clarify that a cadastre is first of all a land information system to provide information about rights, use or values on land. It is usually (but need not always be) parcel-based. This means that the important information carrier in the system is a piece of land, which it for some reason is meaningful to keep separated from other pieces of land. The usual reason is that someone claim ownership or some other rights on this piece of land. The purpose for which the cadastre has been established has first of all been for land administration by governments (taxation and control of land use and distribution of land rights). The second most important purpose has been to provide security of tenure for the land owner/user, for the land market, for investments and as working capital (mortgaging). The third growing need of a cadastre is to provide land information for sustainable management of the land resources in a perspective of environmental concern, both from governments and land users.

The statement also clarifies that the cadastre is not only an information system, but also a process. It can include the processes of adjudication land rights, of distributing/ allocating land rights, of solving disputes around land use rights, of determining appropriate land use, of controlling land use, of facilitating land markets and of controlling the development on land markets. The procedures needed to control these processes and to make them transparent and participatory are essential parts of a cadastral system.

Cadastral systems world-wide are designed in many ways, some more effecient than others. The FIG statement on cadastre is designed in such a way that it can accommodate all types of systems from different jurisdictions, Common law, Roman law, Germanic law, Nordic law, Islamic law, Chinese law, Socialistic law and all types of traditional law regimes. Within this context, rules and regulations exist, which are very different. This is to be understood such as the cadastre can be designed to suite any law family and traditions. It is as a concept (as it has been expressed in the FIG statement on cadastre) not linked to any particular law regime. It can perfectly well handle ownership issues as well as more limited user rights and it can

handle rights that are located to a specific area and more unlocated rights, which can not be shown on a map.

## **DEMANDS ON CADASTRAL SYSTEMS**

One aim of a cadastre is to provide security of tenure. This is done through the registration of rights to land use. The registration will include both the person who has the right and a description of the right, usually including a map in order to be able to localise the right. The right can also be marked on the ground and these marks can be described.

However, in many jurisdictions, security of tenure can exist without a formal cadastre. Most traditional land tenure systems in developing countries provide security of tenure for its inhabitants. Many land registration system lack access to maps to support the registration. The demand for security of tenure can usually not alone motivate heavy investments in cadastral system to cover large areas of a country. The demand for a cadastre will come when the security of tenure is threatened in some way, through migration, demands on land for development purposes, land grabbing, dissolution of the traditional regime, or through demands on investments in better land use.

Countries need economic development and thus need to attract investments. This is especially true for developing countries. One of the most important sectors for investments in many countries is agriculture and other types of efficient land use. Capital needs to be brought in from abroad. This will not happen without a cadastral system, which can provide security of tenure for these investments. The investor needs security for his investment. He also needs to finance his investments through financial institutes, which in turn will demand security for the credit provided. Also indigenous people who like to develop, entrepreneurs need access to security of tenure and for mortgages in order to be able to attract capital (compare the *Mystery of Capital* by Hernandes de Soto). Obviously, there is an urgent need for development of cadastral systems in many countries to promote economic development.

Land markets are usually regarded as more efficient on allocating land resources to best possible economic use than traditional land tenure systems. In order to function well, with low risks and low transaction costs, land markets need cadastral systems to provide reliable information to the actors on the market. However, cadastral systems will not create land markets. When economic development in an area is reaching such levels, when demands on a more efficient land market occur, the time will be ripe to introduce cadastral systems.

Economic development, investments etc can create conflicts between investors and traditional land users, Modern governmental administration can come into conflict with traditional leaders authority and also into conflicts with local communities. Often much money is involved and temptations for corruption occur. Cadastral systems can be demanded in order to establish more transparent procedures and to allow for solving interest conflicts of this kind to the benefit for all parties.

Demands on social justice will also create demands on the establishment of cadastral systems. Women's rights to land and property are usually protected by modern legislation and

constitutions in many countries, while in many countries practice is governed by traditional law in case of divorce or decease of the husband. Traditional law does usually not protect women's rights in the same way as modern legislation. Cadastral systems will improve the possibilities for women to protect their rights according to the modern legislation. Cadastral systems will allow the establishment of procedures for fair land allocation, prevent land speculation, protect ethnic minority interests etc. One consequence of sicknesses like aids is a demand to provide for proper registration of property to protect children's access to heritage after their parents.

Governments need to formulate and implement land polices in order to promote economic development, create efficient physical infrastructures and protect environment. Governments also need income and taxation of land and property is one important way for governments to generate income. For this, information on land, its potential and use is needed. But not only information, the governments need tools, which will enable them to take initiatives to implement polices and to monitor the compliance and the effects of the policies. The procedures in a cadastral system are in many countries part of a system to implement land policies of different kinds.

## **DEMANDS ON CADASTRAL PROCEDURES**

The cadastral procedures are the rules and regulation that governs how a registration of a new right or a change in any existing right should be registered in the cadastre. These rules and regulations are very important for the efficiency of the cadastral system. Even though a cadastre not necessarily is covering a whole country with information, the cadastral procedures may well apply to the whole territory. The most well-known of this approach is perhaps the sporadic land titling, which means whenever a transaction occurs, there will be a need for registration of the property in a land titling system.

Typical cadastral procedures relate to titling, adjudication, allocation, subdivision, mutation and consolidation.

The cadastral procedures may encompass a number of different interests. These interests can be characterised as private or public interests. Private interests are connected to the person, who might be an individual, a company, a group or tribe or any other juridical constellation who can acquire rights and obligations. Public interests are those mainly connected to governments, either local or central, or to international governmental organisations, like the European Union.

The private interest, represented by any person, is the one who usually is driving cadastral procedures. This person will take an initiative, for instance to buy a piece of land from another person in order to invest and develop in a house, a business, a rural farm etc. If he cannot buy a particular piece of land, he might try to acquire access through any other type of rights, for instance a leasehold, a servitude or even in some circumstances through compulsory acquisition. He might also want to use the property as collateral for a credit in order to raise money for the investment. Obviously, in this case, the cadastral procedures need to be able to handle an application from this person, verify his right to apply for the

activity, involve all other stakeholders that in some way are affected by the application in the process, balance the different interest against each other in accordance with a set of rules, and finally deliver a decision, which can gain legal force. This decision will in principle include a number of sub-decisions, for instance about the permissibility of the action, the actual design of the change, possible compensation for losses or damages and about the time for access to the changed circumstances.

Private interests are also already established land use rights in the area. These must be investigated and the investigation must clarify that the application will not interfere with existing registered or not registered rights (e.g. traditional tenure) in the area. If such rights exist, the procedure should include measures to solve differences in opinion and to support agreements on compensation in money or through constructions of roads, water facilities, schools or health centres as appropriate.

Public interests are connected to land policies or to sector policies for environment, rural or urban development etc. The public represented through a local or central government has many interests in a cadastral procedure. The formulated policy might try to influence the cadastral procedure among others in the following:

- the *size* of the parcel (can relate to optimal economic size for a specific use, e.g. a farm or a site for residential purpose, or for social justice, environmental concern, concern about public investments in infrastructure etc.)
- the *use* of the parcel (of importance for economic optimal use of the land, environmental and social concerns, neighbourhood relations). The optimal use of land can often be studied through land use planning, which can be a separate process, or a process that is integrated in the cadastral process.
- the *shape* of the parcel (optimal economic use, public infrastructure, environment and neighbourhood relations)
- who is *owning* the parcel (optimal economic use through skilful managers, social justice and relations)
- the *price* for the parcel (cost for public investments, cost for using the parcel for production, housing or business)

But the public interest can not only rely upon the decision-making procedure in cases initiated from private person. In certain circumstances governments need to take initiatives, for instance to acquire land or other rights for public use, or to involve the private land owner for instance in a land consolidation procedure to minimise damages of a road or railway construction or to improve protection of the environment. For these cases the governments need to have the right to take an initiative and apply for a cadastral procedure.

Other public interests can be to collect land taxes. In this case some kind of valuation of the land will be necessary.

Cadastral procedures should be formulated in a cadastral law. The law should define an independent juridical authority to be in charge of the procedure. The regulations should

safeguard transparency, and participation from all stakeholders. These regulations should among others include the following:

1. Application
2. Demands on the parcel from general point of views (purpose, long-term and stable use, access to necessary facilities, water, way etc.)
3. Public interests demands (environmental, public infrastructure, rural and urban policies, cultural)
4. Private interest demands (economic, social, neighbourhood)
5. Cadastral Authority (independent, juridical authority, investigator)
6. Participation, meetings and decision-making (transparency)
7. Valuation and compensation
8. Access and construction of joint facilities
9. Finalisation and possibility to appeal to higher authority
10. Registration of the final result.

## **CONCLUSION**

Cadastral systems are important for sustainable development of land management. Cadastral systems should be developed for different jurisdictions in order to solve important land management problems, promote social and economic development and protect environment. Cadastral systems include both rules and regulation and procedures to handle land use rights and is an information system about rights, use and values of land. Cadastral systems are not always needed to protect security of tenure when no real need for this protection exists. This is often the case in large areas of developing countries. Cadastral systems are however often desirable in these areas in order to open possibilities for investments in harmony with existing land use rights. For this it is important to establish and apply appropriate cadastral procedures. It is however not for this purpose necessary to register all land in the area in the system.

Cadastral procedures should be based on law. An independent cadastral authority should be responsible for the procedure. The authority will be responsible for necessary investigations and to apply participatory and transparent procedures.

The most important cadastral development today is to develop such kind of legislation and build capacity within a cadastral organisation to be able to carry out the cadastral procedures.

## **REFERENCES**

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## **BIOGRAPHICAL NOTES**

**Professor Tommy Österberg** is visiting professor in Real Property Formation at the University of Lund and Technical Director at Swedesurvey AB. He is the Swedish delegate to the FIG Commission 7 and has considerable knowledge from work with development of cadastral systems in developing countries.