

## **Land Markets and e-society INTERNATIONAL TRENDS AND THE SITUATION IN GREECE**

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### **SUMMARY**

In the first part of this presentation, experience and good practice principles derived from the research related to the emerging needs in developing land markets and the impact on the e-society is presented, according to the recent UN/ECE WPLA publication “Land Administration in the ECE Region, Development trends and main principles”, and the personal experience of the author.

In the second part, the author’s research is reported classifying the recent general land market improvements related to land management, land administration issues and major land-related reforms in Greece. The level of effort together with the main barriers that hinder the programs for the implementation of e-society and electronic services in land administration and land market in Greece are mentioned. Some proposals for future initiatives in the field are given.

### **1. INTRODUCTION**

The market-based economies, the liberalization of trade, and several other factors like the technological developments in ICT (Information and Communication Technologies) have raised the need for developing spatial information infrastructures within the European region. Registration of property rights and development of modern Land Administration Systems are broadly recognized as the most critical factors for the development of land, real estate and housing markets, and finally for achieving a sustainable economic development that will successfully meet local and international requirements and needs of both the public and private sectors, and the citizens they serve.

Land administration or land information systems should integrate a wide range of data, information and knowledge in order to achieve effective and consistent decision-making in land management issues while maintaining sustainable development principles. These systems include, among other things, data, organizations, standards, technological processes, laws, policies, regulations related to property rights, valuation and land and real property taxation.

Easy and equal access to this infrastructure should be guaranteed for all people; and regulations on land related to land ownership, land use rights, land value, and land taxation should be transparent and consistent. Such systems reduce the risk to investors and mortgage lenders, resulting in lower interest rates charged for credit thereby supporting the development and operation of land markets and the growth of market-based economies.

Recent international experience (UN/ECE WPLA, 2005) shows that in order to prepare the necessary conditions for land markets to meet current needs (also the needs of e-society), attention should be given to several critical issues, such as:

- Legal definitions and regulations for the registration of land ownership and rights, restrictions and obligations on land should be available.
- Availability of digital, interoperable, and updated data sets with common spatial reference is required.
- Quality controls must be embedded in the design of a land administration system.
- A land market is affected by legal or financial restrictions on rights to use the land, and by any other development or utility provision restrictions. Attention should be given to the fact that such rights can seriously affect any land development project; therefore they are of similar importance to the ownership rights.
- Planning, developing and operating a land administration system should be accomplished according to the priorities and needs of the country and its land market.
- Operations of a land administration system should be transparent with secure, speedy, low cost and easy access to all land market participants. A business-oriented approach and Internet services should be encouraged in order to achieve sustainability of the system and cost-effectiveness in its operation and maintenance. Performance indicators must be applied to measure the cost and time of services provided, and as a result, user satisfaction.
- In order to add value to the above basic information concerning ownership, value, and use of land, relevant records should be integrated either by having one organization responsible for their maintenance, where possible, or through linking data from several organizations by electronic means. The latter approach seems to be more realistic, especially in countries with long established organizations, or in relatively large countries. Coordination among institutions involved in land policy is critical to success.
- Stable, transparent and fair land taxation systems based on frequently updated automated mass valuation methods should be established. Reduced human involvement is encouraged to eliminate corruption, duplication and error. Valuation agencies should cooperate closely with land administration agencies to assess value through a technical process; assessment should not be applied variably in order to achieve predetermined taxation levels.
- Emphasis and financial resources should be dedicated to improving public awareness of the social and economic benefits of e-governance, and to improving capacity-building related to the emerging requirements of e-society in legal, economic, and technological issues. In addition, land-related public institutions should develop new competences in acting in a network to serve the land market. Wide international cooperation is needed in that field.

Governments are key players in the land market not only as regulators and providers of land market infrastructures but also as owners of significant amounts of land. In that capacity, they should not enjoy advantages over other land market participants (UN/ECE WPLA 2005).

## 2. MODERN LAND MARKETS AND E-SOCIETY

The two major objectives of the registration of deeds or titles are the security of land ownership, and the support of the land market.

Through that process land and real property can be mortgaged according to its estimated market value and can create new capital, that can be further invested either for housing and real property improvement purposes or for any other activities both for the benefit of the owner and for the general economic development of society.

Loans secured by mortgages constitute a large part of the credit market in many economies. Efficient land and real property markets are fundamental components for market-based economies. International experience (UN/ECE WPLA, 2005) recognizes that the following preconditions are necessary for a land market to work efficiently:

- *A detailed legal framework for all operations must be enacted so that all dealings will be safe and secure;*
- *Codification of all forms of statutory restriction that may apply to land is needed;*
- *Specifications of restrictions and obligations on land in addition to property rights should be registered to serve the land market;*
- *Regulations must be in place to ensure stability and transparency in transactions, provide easy access to the market for all participants and to keep the transaction costs low;*
- *Land market participants must include landowners, tenants, representatives of third party and minority rights, and corporate bodies, such as banks and lending institutions;*
- *Land market objects (land, buildings, etc) and the mechanisms by which these objects can be traded (sold or leased) must be clearly defined;*
- *Fundamental facilities like mortgage and credit access, and stable and transparent real property taxation should be offered;*
- *Clear, consistent and environmentally sustainable land policies should be applied;*
- *Speedy and reliable access by the public to land and property information must be ensured;*
- *Registration of housing should be given first priority by Land Administration Agencies; Informal Settlements should be given the highest priority (de Sotto 2000) by mechanisms and procedures that will speedily introduce them into legality through land registration and will discourage the creation of even more informal settlements;*
- *When building or re-engineering a land administration system attention should be given to the national and international financial structures and requirements in order to encourage foreign investment (assuming that foreign investment is considered desirable);*

- *There is a distinction between the creation of mortgages, the holding of mortgages and the administration of payments or foreclosure;*
- *Land registers should be kept up to date; it is essential that lenders should not be affected by unregistered encumbrances.*

In most countries there is much to be done in the political, legal, administrative, economic, and technical field to improve the operation of land markets according to good practice experience.

Yet, technology is progressing rapidly and dealings with land cannot remain unaffected by the general development of electronic commerce. In most countries, the main aim for the time being is to lay the foundations for a future e-conveyancing.

Effective electronic management of spatial land administration data is of great importance for a significant number of parties involved in Land and Real Estate Markets, such as:

- **National Government.** e-Land Administration and e-Land Market can provide reliable information and statistical data to support governmental decision-making in all kinds of land reforms and apply consistent land management and land policy decisions; reduce administrative procedures; provide more transparency in all land related public agencies; reduce public expenditures; reduce bureaucracy; reduce corruption and disputes between the state and other land market participants such as landowners, corporate bodies, citizens, minorities; facilitate the development of the land market by allowing easy and equal access to information to all; increase investment in land by improving the quality and reliability of data and services provided, and finally improve the national economy.
- **Local Government.** Electronic procedures can improve cooperation and efficiency in spatial planning and regional development in good land and natural resources management by applying and monitoring land use and zoning regulations and in better development of state owned land. And it can eliminate conflict between land policies that are administered centrally and locally; it can eliminate redundancies and serve towards adding value to the existing land-related information; it can improve public-private partnership models, and it can develop reliable provision of services to entrepreneurs and citizens within the local authority level.
- **Companies, corporate bodies, banks, etc.** Equal, easy, reliable, and low-cost electronic access to information related to land ownership rights, loans, mortgages, market opportunities, development regulations, land taxation, and land use restrictions is a major and essential requirement of the business sector. Entrepreneurs, banks, credit and funding institutions, and others will be able to improve their products and services.
- **Citizens.** Introducing e-governance to the land market gives greater empowerment to the citizens and promotes democracy, transparency, and social stability. It facilitates equal access to information and housing through mortgage financing; easy citizen

mobility; low-cost property transfers; property development and owners' revenue increase; fair taxation, and security of private property value by improving consistency in state land policies, etc.

International experience shows that in most countries several challenges remain to be dealt with, such as:

- Major changes in the operating environment of public employees will include among others: further improvement of quality of customer-orientated services; capacity building to improve employees' ability to serve through electronic communication; rearrangement of digital data sets (creation of base registers and standardized identifiers) (Kokkonen, 2004; Burmantje, 2005) for the improvement of services and a consolidation of collected information;
- The role of registrars, notaries, solicitors, surveyors and agents who participate in the land transfer process may be altered or simplified;
- The procedures for land and property transfer may be modified to take advantage of new technologies;
- Major institutional, structural, legal, managerial and political changes are required. Legislation (affecting rights to access, change of data, e-signature, etc), security and privacy of personal data, and content, quality and availability policies should be developed on a national and international level to ensure consistency. The technology is evolving rapidly yet there are still some fundamental basics which will not change quickly. Cadastre and related professions, with their long history, respond slowly to the changing needs of society (Stuedler, 2004). E-service developments should be applied on a step-by-step approach to avoid any risks.

### **3. LAND ADMINISTRATION INITIATIVES AND THE LAND MARKET IN GREECE**

This chapter deals with the development of public administration related to information about ownership and use rights, restrictions, and valuation of land in the Hellenic state since these issues are interrelated and have a large influence on the land market. Other factors not within direct government control affect the land market as well. Examples of these are: geography, topography, international events, economic conditions and so on.

Since the establishment of the new Hellenic state in 1825, several land management initiatives concerning information about land ownership, use, and value were instituted. Some of these focused on economic growth and some other on environmental protection.

A very brief review of some major initiatives is attempted here; some more detailed analysis is given by example. The developed land policy has been based mainly on initiatives at high ministerial level. Among offices, the Ministry for the Environment, Physical Planning and Public Works plays a leading role. The coordination for an applied land policy depends on the Ministerial Board and is ruled by the legal framework introduced each time by the responsible Minister and voted by the Hellenic Parliament. Yet, the coordination and monitoring of thousands of projects executed by ministries, utility companies, public

agencies, and local authorities is practically impossible and people are repeatedly disturbed; this is a very common problem in many countries (Breemersch 2002; Potsiou et al 2002).

Unfortunately, many of the major initiatives are characterized by:

- Costly and time-consuming administrative and legal procedures;
- A lack of integrated approach and coordination among land related agencies;
- A lack of continuity in case of inter-governmental changes;
- A lack of continuity in a stable and consistent governmental land policy;
- A bureaucratic approach in applying so many and complicated types of land-use regulations and restrictions, that in fact it is practically impossible for the public authorities to monitor the environmental changes and control land development.

A valuable example is the case of the new Athens airport project, which was originally started forty years before its completion. The area was selected but the project lay dormant for many years due to land expropriation issues or simply due to governmental reorganization (change of Minister). As a result of that delay, in the words of the Minister of that time, Greece was unable to serve in the Southeastern European and Asia Minor region as an important transportation center. The airport project was finally accomplished according to the deadline of the 2004 Olympic Games in Greece which forced all stakeholders and decision makers to cooperate and achieve their targets.

The construction of the Olympic infrastructure in Greece is in fact the best example of good practice in the country's history, concerning coordination and time-records achieved, together with major necessary legal changes in the land management procedures (Potsiou et al, 2005).

### **3.1 Privatization of Land and Land Consolidation**

According to information derived from the Hellenic literature, in 1825 the total size of the free land of Greece was 4,751,600 ha and its population counted 986,731 citizens (census 1848), since the liberalization of the Hellenic nation was realised gradually. The state-owned land was then estimated to be 1,000,000 ha. The first governmental initiative in land management was to privatise land through an auction sale of 14,500 ha to individuals (9,133 titles); much of the rest of the state-owned land was rented to individuals. Squatting on state-owned land by citizens in position of power or influence of that time was reported to increase to 20-30%. An attempt for free privatisation of state-owned land to support the poor (0,1 ha per person) was made by the Law of 20.02.1848. This initiative involved approximately 28,000 ha, involving 280,000 titles.

By the Law of 16.10.1856 some more state land was given to individuals under the agreement to change the existing wild olive trees into a productive state and to return to the state half of this land, after using it for 12 years. In the years 1864 (London Convention) and 1881 (Constantinople Conference), the size of the country was increased due to historic gradual liberalization of the Hellenic nation. Privatisation of land was continued in a similar way that gave the wealthy the opportunity to consolidate land and to create large estates. By 1882 the total of the privatised land (by Laws 1835, 1836,1871) was estimated to be 314,650

ha (Rokos, 1980). Due to a general public disapproval against large manors that belonged to the very few wealthy families in 1911, a major rural land expropriation and redistribution project was initiated. After that, the average size of a rural land parcel became 0.8ha.

In 1913 (Bucharest Convention) more of the Hellenic national land was integrated to the mainland of Greece. In 1914, by the Law ΓΣΒ/1907, to support the local poor and the Greek immigrants who came to Greece from Bulgaria, Romania, and in 1923, by a similar initiative to support Greek immigrants who came to Greece due to Asia Minor disaster, more state-owned land was distributed and more large private manors were expropriated.

Significant land privatisation was accomplished through major technical improvements e.g. drainage of lakes (Giannitson, Ehinou, Kopais) and the use of the Axios river delta.

In total the Ministry of Agriculture has privatised 2,200,000 ha of rural land and plots in 2,500 rural municipalities. All this privatisation of rural land has created original titles of ownership. Yet, most of these titles are accompanied with draft surveying plans whose boundary materialization in the field is difficult or even impossible today. In addition the well-established real situation of those rural land-parcels in the field differs or is simply transposed from their location according to the privatisation plans. Later, in 1998, this fact created a major problem during the compilation of the cadastral surveys for the new "Hellenic Cadastre" Project.

Also, the Ministry of Providence has privatised approximately 140,000 houses and 26,000 urban real properties to support immigrants. These titles were accompanied by highly accurate surveying plans, at a scale of 1:200, with reliable boundary identification.

To solve the problem of fragmentation of rural land and its use, and in order to improve agricultural production, rural land consolidation projects were enacted in 1953 in Greece through the creation of rural partnerships. In addition, similar consolidation procedures were applied in urban areas to rearrange small urban plots and to support specific urban planning needs for development and recreation purposes in the area. So, land consolidation projects in Greece can be classified into:

- voluntary or obligatory, and
- rural or urban.

Legislation for urban land consolidation includes the Legal Decree of the 17.07.1923, the Law 947/1979, Law 1337/1983 and its following amendments. Urban land consolidation procedures follow a logical progression: governmental decision, formation of obligatory building partnership, cadastral survey of the existing situation, compilation and approval of urban plan, real property valuation, application of the urban plan in the field and distribution of the new plots to the members of the partnership, and liquidation of the partnership. Urban and rural land consolidation processes create new ownership titles.

Legislation for rural land consolidation also includes Law 647/1977. Before the beginning of the Hellenic Cadastre project in the mid '90s, approximately 1,450 rural land consolidation projects had been accomplished in Greece, which covered areas of approximately 800,000 ha

(since rural land consolidation projects are still being compiled, today it is estimated to be 1,000,000 ha). They created 350,000 ownership titles, and were scattered in several municipalities. These projects were supported by cadastral maps at a scale of 1:5,000, and covered approximately 20% of the agricultural land of Greece. During the specific cadastral surveys of that time the adjudication process did not include an investigation of the original existing titles.

Rural land consolidation procedures are extremely long and laborious. They include: governmental decision; formation of a consolidation committee; formation of a valuation committee; cadastral survey of the existing situation before land-consolidation; compilation of new cadastral tables and maps showing the new arrangement of land parcels and owners; public suspension of the new plans and tables; objection submission; disputes resolution; cadastral data amendments and new suspension; new objection submission; new disputes resolution; new cadastral data and informing of those affected; objections and resolution; compilation of the new final cadastral map and data; determination of new land parcels in the field; end of land consolidation; legal control by governmental agencies; approval of the results; publication in the governmental gazette; new titles issuing; and registration of new titles to the System for the Registration of the Transfers and Mortgages (Badekas, 1984).

Lessons learned from such adjudication procedures were useful for the compilation of the strategic plan of the “Hellenic Cadastre” (HC) project in 1995. A positive impact was that all disputes resolutions are made by administrative committees and do not follow a judicial procedure; that concept was also adopted for the HC (Potsiou et al, 2001). A negative impact was the adoption of a similar complicated and time-consuming adjudication process through several circles of objection submission, cadastral data amendments, and the involvement of numerous costly committees for the disputes resolution in the HC, a nation-wide project. That development led to a significant delay and cost increase of the project within 5 years.

As happened with the titles and plans created from the privatisation of rural land, titles and cadastral plans created through rural land consolidations are also not consistent with the real situation in the field. The reason is that there are no monuments for the determination of rural land-parcel boundaries in the field. This also created a major problem during the compilation of the new cadastral surveys.

Ten years after the beginning of the HC, lessons learned helped to:

- Simplify the complicated adjudication procedure for the HC, and
- Reconsider the possibility of integrating available cadastral data created through such projects, especially through urban land consolidation.

Since there is still a need for more land consolidation in Greece, both in urban and rural areas, to improve environmental conditions, development purposes, agricultural reforms, and land markets, it is important that simplification also of land consolidation procedures should be given high priority.

### 3.2 Registration of Ownership Rights and Mortgages

A deed system was established for Greece in 1853 according to the French model, the “Transfers and Mortgages Registration System”, for the security of land tenure and the support of the land market and is still in operation under the responsibility of the Ministry of Justice. It consists of 397 offices, including 18 public and 379 private offices. This system is an early example of good practice in the field of public-private-partnership.

The Dodecanesean Cadastre for the islands of Rhodos, Kos and Leros (1926-1929), and the two cadastral offices in the vicinity of Athens (1943) were for many years the only approach to an operational cadastre.

In the period 1970-1974 a nation-wide Cadastre project was enacted; digital cadastral tables and cadastral maps in analog vector form of a scale of 1:1,500 (urban areas) and 1:5,000 (rural land) were accomplished for 2,870,000 ha (5,800,000 land parcels), 22% of the jurisdiction. The project was finally abandoned and left unfinished.

SEVERAL OTHER ATTEMPTS THROUGH THE YEARS TO CREATE NATION-WIDE RECORDS FOR “SPECIFIC PURPOSE” OR “LAND-USE” CADASTRES SUCH AS THE REGISTRATION OF FOREST-LANDS OR THE REGISTRATION OF VINEYARDS HAVE ALSO BEEN UNSUCCESSFUL.

In 1995, a nation-wide project for the establishment of the Hellenic Cadastre was enacted by the Ministry for the Environment, Physical Planning and Public Works (Potsiou et al 2001). This major initiative is expected to improve the security of land tenure (by transforming the existing deed system into a title system) and to serve as a modern spatial information system to facilitate sustainable development, land market and national economy.

During the first phase of this project (1995-2001) major fundamental issues were dealt, such as: compilation of the strategic plan, arrangements with the Ministry of Justice and Registrars, administrative issues, basic legal framework, commissioning of cadastral surveys (A and B Pilot and 1<sup>st</sup> Main programs), additional legal framework, evaluation of the strategic and business plan, funding issues and evaluation of the progress of the project by EU.

A brief classification of the conditions that caused a significant time delay and cost increase to the project shows that:

- In 1995 there was a lack of reliable statistical data. Existing urban areas were proved to be 30% larger than what was estimated according to the National Statistical Service of Greece during the 1991 census. Legal rights were proved to be 70% more numerous than those estimated
- There was a need for additional necessary work, such as: the compilation of forest maps of a total cost 10,000,000 € (prices 2001); the mailing of all cadastral data to each owner; updating and maintenance of the cadastral data by the contractors during the compilation period

- The extremely costly and time-consuming objection examination process by the administrative committees, and the thorough legal approach of this procedure
- Several issues related to land-use regulations and restrictions were found to affect land ownership and needed careful decision making

The second phase of the HC project (2003-2006) includes changes to the project's strategic and business plan. These are included in the "Revised Operational Plan" to be co-financed within the Community Support Framework III (50% by the Hellenic State, 50% by the EU) named "Data and Information Technologies Infrastructure for the Development of a Modern Cadastre".

In parallel, the necessary planning was made for establishing the technical infrastructure, which will support the procedures for the establishment and operation of the HC:

- the Hellenic Positioning System "HEPOS project" for the establishment of a network of 100 geodetic stations measured by GPS through out the Hellenic jurisdiction;
- the project for the compilation of true orthophotos at a scale of 1:1,000, in all urban areas and orthophotos at a scale of 1:5,000 for the rest areas;
- the implementation of Internet technology in land administration procedures, so far information services are provided through the website;
- the digitization/ integration of existing cadastral data (data provided by urban land consolidation, rural land consolidation, land privatization, Dodecanesean Cadastre, etc);
- the determination of the coastal zone by using orthophotos and LIDAR;
- digitization of titles registered in the "Registration of Transfers and Mortgages" offices.

There was no more financing for new cadastral surveys, priority was given to the completion of the on-going cadastral surveys commissioned during the first phase of the project. Some other activities that take place during this phase include:

- preparation of additional legislation to improve the HC procedures: Laws 3127/2003, 3212/2003 and 3208/2003;
- operation of 76 Transitional Cadastral Offices (2005 data) (cadastral surveys are finished in 36 municipalities);
- 21 more offices must be established. For that to happen the rest of the on-going cadastral surveys must be finished;
- additional new legislation is being submitted to the Parliament for the necessary amendments to simplify the adjudication process;
- new cadastral surveys are planned to be commissioned in the major metropolitan regions of Athens and Thessaloniki, partially financed by the state and partially self-financed through the registration fee;
- remaining legislative anomalies from the past which caused instability, informalities, and major problems to the HC are still under research and consideration

More attention should be paid in supporting and serving land market, especially where land market is not working efficiently due to informalities and illegalities. Cadastre brought these

land market problems into light. Government should work towards parallel initiatives to solve these problems, as promised.

It is also noticed that the dual system operation (transaction and mortgage offices and cadastral offices) during the transitional compilation period creates bureaucratic delays during the transactions and causes public dissatisfaction; these conditions should be improved.

The possible implementation of high registration fees, according to the property value and not according to its tangible benefits, may also affect land market negatively. An example could be the parallel legalization of pending informalities that could give some good reason for the owners to pay the fee. Cadastre should be planned to be a tool to serve equally both the prosperity of the individuals and land market participants, and the state. This will continue to be an interesting challenge in the near future.

### **3.3 Land-use Maps and Land-use regulations**

Unfortunately the legislation that rules land-use rights and restrictions in Greece is complicated, old, and confusing even among the local experts. Several authorities have interacting responsibility on applying regulations and restrictions on land-use, resulting to a very difficult and obscure situation. Entrepreneurs and investors in land usually have a difficult time before making any serious decision. There are numerous failed investments that prove not only the need for an expensive and time-consuming experts' support, but also demonstrate an inconsistency among land-related agencies and policies.

In addition there is a serious lack of spatial planning and zoning regulations in Greece. Since the 1990's the Ministry started producing General Urban Planning Maps in many municipalities for the determination of land use and urban regulations. Also, the compilation of spatial planning studies to apply zoning regulations has recently started for the 13 Prefectures of Greece (one study per Prefecture). These projects are not expected to finish quickly, and the current situation varies among different municipalities referring to the available information and the level of digitization of this information.

Despite the existing problems (informal buildings cannot be registered, mortgages, and transferred legally), due to the urgent and increasing need for housing and the comparatively higher land values in areas within a formal urban plan, land market interests are high even in areas without a formal urban plan. The significant informalities that exist in areas without urban plan and the applied policies to control such informalities seriously hinder the efficient operation of the land market. It is estimated that approximately 1,000,000 informal housing units exist in Greece (Karavassili, 2004).

Cadastral surveys in such areas can collect the missing information. A legal reform is necessary to speed up the legalization mechanisms for unregulated land in these areas, and relieve the land market of such informalities. So far this is achieved slowly only through urban land consolidation procedures. It also requires affordable housing policies and public administration improvements to minimize the problem. In order to improve the national

economy there is a need to unlock the land market, and avoid similar problems in the future (Potsiou et al, 2006).

So far there is no planned coordination of the HC project with such initiatives. Even the land-use categorization for the registration of existing uses in the HC is not consistent with the urban and spatial planning use categorization. In addition, general cadastral concepts and theories for improving the land market and establishing legality are unfairly “distorted” to fit the old legal framework, resulting in a system of little or no value for such areas.

The relevant urban planning legislation is complicated and confusing even for the responsible public employees; it is estimated to be 20,000 pages. A project named “e-urban planning” for applying electronic services in urban planning offices is at the stage of commissioning. It will digitize the very basic existing urban planning legislation and regulations, unify the used forms and procedures and provide information on the web.

### 3.3.1 Registration of vineyards and olive tree fields

In parallel to the HC land-use parcel recording, in the rural areas has been successfully accomplished in Greece by the Hellenic Ministry of Agriculture. The orthophotomaps production was commissioned to the private sector offices. The project was produced to meet the needs of the Common Agricultural Policy (CAP) in Europe.

IN THE PERIOD 1996-1997 ALL ARABLE LAND WAS RECORDED. BETWEEN 2000-2001 ALL OLIVE TREE FIELDS (800,000 HA) AND VINEYARDS (165,000 HA) RECORDS WERE COMPLETED. THE REST OF RURAL LAND WAS RECORDED USING VERY HIGH RESOLUTION SATELLITE IMAGES BY 2003 (PANAYOTOPOULOS ET AL, 2005). THE LAND-USE PARCELS REFER TO THE IDENTITY DATA OF THE FARMERS CULTIVATING THOSE FIELDS, BUT NOT TO OWNERSHIP; SO THE SIZE AND SHAPE OF THE PARCEL IS DETERMINED BY ITS LAND-USE AND THE TENANT’S RESPONSIBILITY AND IT IS NOT IDENTICAL WITH THE OWNERSHIP-PARCEL.

These digital inventories are supposed to be kept updated regularly (every 5 years) by using high-resolution satellite images. Yet the procedure for their update is currently blocked due to administrative and judicial anomalies in the process for the commissioning of the work to the private sector.

Despite the fact that this agricultural registration is a land-use parcel and not an ownership parcel spatial information system, the HC project and the CAP project can be coordinated together and can contribute to the establishment of the Hellenic NSDI and the efficient operation of both the sales and rental rural land market. Although this coordination was not planned from the beginning, the Ministry for the Environment, Physical Planning and Public Works has recently reconsidered this approach.

### 3.3.2. Registration of Forest-Lands

Despite the fact that the Hellenic nation has made all legal and administrative steps to protect and administer forest-lands in Greece, registration of forest land is still pending and its early completion is not likely.

The first Forest public service in Greece was established in 1836, reorganized in 1843 and in 1877 its responsibility was transferred to the police and the financial tax office. In 1893 it was transferred to the Ministry of Finance. A major step was made in 1917 with the establishment of the Forest University School and the transfer of responsibility to the Ministry of Agriculture. The first forest code was enacted in 1929, which constituted the basic legal framework. In 1976 by Law 248 “About the recording and registration of forest-lands tenure, determination of forest-lands boundaries, and protection of public forest-lands” a “nation-wide registration of Forest-Lands” project was started. This project after recording an area of 400,000 ha (300,000 ha of them in the region of Attika) at a scale of 1: 5,000 was left unfinished.

During its compilation, the number of disputes submitted to the courts was so large (20,000), they were practically impossible to be processed.

Due to their significant importance for the major problems still pending today within the HC, some of the basic causes for this failure are mentioned below:

- It was an ambitious project for an integrated recording of both land-use and ownership rights in the forest-lands of Greece, with very time-consuming procedures.
- There was inefficient technological, and technical support available during its compilation period, but the greater lack of support was in the legal area.
- A lack of personnel in the priority area of Attika, which had already well-developed land market, increased the problem.
- There was little public acceptance for this project due to a lack of identifiable gain for the public;
- Serious problems arose from the boundary determination of the areas included a cadastral survey, the determination of the public or state-owned forest-land and the adjudication process, the procedure of disputes submission and their examination that had to be judicial only, the inefficiency of technical specifications, and the bureaucratic and inconsistent organizational structure.

It is obvious that the state’s definition of “forest-land” and the accompanying restrictions in land-use affected seriously the long established private rights, and thus the land market. This resulted in an immense number of appeals to the court.

Law 998 in 1979 repealed the above Law 248/1976. According to the Law 998 of 1979, the definition of a “forest-land” became even more unrealistic and included also areas which were “forest-land” in the past but had been destroyed by fire or their land-use had been illegally transformed. That regulation was retroactively valid even for the period before the Constitution of 1975. Among others, this Law determines the photo-interpretation techniques, using aerial and terrestrial photo in order to record the “forest-lands”, and defines as “forest areas” also those areas that are actually pasture, bushy, or rocky land.

Since then, successor governments have followed economic policies concentrated on land development and have not attempted to affect seriously the land market interests.

In 1998, the Law 2664 for the Hellenic Cadastre included the compilation of forest maps by using the oldest series of aerial photos that had a full coverage of the Hellenic jurisdiction in 1945, and the later series of 1996 which were used for the cadastral surveys; this means that registration of 1998-2001 has recorded as “forest-lands” all areas, which had been considered as forest-lands (according to the definition of the Law) in the periods 1945 and 1996. For a second time in history, this new initiative ignores all the well-established land market activity, and the development interests in the area.

According to the existing legislation and the definition included, the total of “forest-lands” in Greece is estimated to be 8,410,000 ha (64% of the jurisdiction). Most of this belongs to the state.

Statistical data derived from the progress analysis of the Hellenic Cadastre project (Technical Chamber of Greece, 2005) indicates that the land disputed by the Hellenic State, according to the declarations submitted so far by the Ministry of Agriculture and Forest Divisions are:

- 48.3% of the total land under cadastral survey so far,
- 2.5% refers to urban land parcels.

In 2003, the new Law 3208/2003 among others, attempted to improve the situation by slightly changing the conditions which define the “forest-lands” and refer to density (from 15% to 25%) and a minimum area size of 0.3 ha, and defines the cases where the state should not claim ownership rights. Still major problems which arise from the definition of the “forest-land”, remain unsolved. Recently there has been a governmental announcement for a possibility for a future change of the definition of “forest-land” to be included in the change of the national Constitution. Proposals and discussions about the changes in the Constitution can only start in the Hellenic Parliament during the term of the new government, after the elections of 2008. In the meantime the compilation of new forest maps will continue according to the existing legislation.

As expected, such disputes and problems will continue to exist, appeals will continue to accumulate, and the land market will be affected seriously. Due to the HC such major legal or land-use regulation inconsistencies are being brought into light and the government promised to try to solve such problems.

Some proposals made by governmental agencies are:

- To allow the owners of land and real property in dispute to buy the land for a price estimated as a percentage of its market value.
- To legalize informalities due to building regulations by applying high taxation or penalty.

These measures are going to support land market and national economy only if legal regulations will not be conflicting to the existing ones and if applied penalties are affordable and realistic. After all, such legal reforms should had happen much earlier by the state. It is not fair to punish individuals for long governmental delays in updating the legal framework to meet the real needs of land market. Otherwise the expected economic benefits will never be realized and the problems will remain pending.

### **3.4 Registration of Land-value. Real Property Taxation and Mass Valuation**

Until 1985, land tax values in Greece were estimated by “the system of comparative data”, which was based on existing data about taxes paid according to agreed prices for similar properties in the neighboring areas. In most cases, this procedure was a compromise between declared value by the owner and the value decided by the tax collector. The system was very subjective depending on personal agreements and gave power to the individual tax inspector, providing for corruption. For obvious reasons the system has been met by significant public mistrust.

In 1985, the government introduced the Hellenic Real Estate Mass Valuation System, which was first implemented for buildings (Objective Building Mass-Valuation), and later, in 2000, for land (Objective Land Mass Valuation) (Potsiou et al, 2002). The estimation of valuation is made taking into consideration the basic characteristics of the property, the urban planning data (floor area ratio), and economic data (zone value, marketability, plot value, etc). Until recently, the calculation of valuation is expected to be made by the taxpayer. The Ministry of Finance supplies citizens with necessary information: proper forms, maps containing various zones, parameter tables, etc. The system is updated every two years.

Since 1997, the Ministry has started a project to create a database with all necessary information referring to the real estate property. When the HC project was started (1995) there was a strong governmental determination not to coordinate it, or to link it by any means to land taxation activities, due to the public disapproval of the past land taxation policies. As a result the opportunity to create common data specifications was missed.

Today, the Ministry of Finance has established Internet services for citizens. Taxpayers can find all necessary information on the website, submit their tax declarations through the Internet, and also have communication services. Statistical data are also available. The system has more than 1,000,000 users. The Ministry of Finance has already prepared a project for the creation of a Real Property Database in Greece, which will record approximately 20,000,000 rights through 2,400,000 declarations. The project is at the stage of commissioning and its cost is estimated to be 6,600,000 € plus VAT ([www.ggps.gr](http://www.ggps.gr)). It is going to be financed 75% by EU and 25% by the Hellenic State, and is expected to finish by the end of 2006. These data have no spatial geo-reference, they will be based only on the personal declarations of the taxpayers, yet it is considered to be a significant contribution to information collection and management. Coordination and negotiations have been in place between the HC project and the Ministry of Finance so that data collected will be compatible.

Despite the many positive initiatives in improving land taxation in Greece, there are still some problems that affect the real property market negatively:

- Besides the sporadic land taxes (paid each time for transaction, inheritance, donation, etc), and the annual land taxes, which so far are estimated through the mass-valuation system, land owners must to pay extra taxation on land:
  - When their total real property value is higher than a fixed price;
  - When the total value of their residence/s is higher than a fixed price;
  - To the local authorities;
  - The VAT during the accomplishment of first transaction after construction;
  - For increased value of their property through years;
 These land taxes are not always applied with transparency and following scientific methods. An example is the estimation of the VAT, which is applied to the land value and the construction value instead of the construction value only. Another example is the estimation of the increased value of the property which does not take into consideration the effect of inflation.
- Recently the government changed the Law for the Hellenic Real Estate Mass Valuation System, by reintroducing an increased role for the tax inspector in parallel with the mass valuation system. This renews the opportunity for less transparency in the dealings of the tax offices.

#### 4. CONCLUSIONS

Restrictions on land use and ownership have not in the past been transparent and consistent. The experience in Greece in recent years has demonstrated a movement to create interoperable data processing toward cooperation and coordination between land-related agencies of government.

Greater focus should be brought to the needs of land markets that require reliable information concerning

- Ownership and restrictions on ownership,
- Actual and permitted uses, and
- Valuation and the rate of taxation.

This information must be accessible if it is to support the land market recognizing first that these are services by the state in support of the citizens, and second that an efficiently operating land market is in a position to return significant revenue to the state.

Coordination and simplification of land use regulation, cadastral data and valuation data are essential to good land administration. Transparency –meaning easy access to data and systems by all participants – is essential for the public trust which in turn serves the land markets. E-Government also brings to light inconsistencies in these systems. Technical inconsistencies may be corrected by technological advances in equipment and standards. Legal inconsistencies are more difficult to deal with, requiring political acceptance and legislation reforms in many cases.

But fair and equitable taxation, applied consistently over time, is also required not only for the confidence of landowners but also as an encouragement to transactions in land ownership and development. A healthy, vigorous commerce in land will generate an ever-greater

revenue stream for the state. A property-based taxation system in a free economic system is a stable source of revenue for the state but must not be made a burden on commercial activities in land.

As these good land administration systems develop the state may be increasingly confident to deregulate state-claimed land. The state can know that by putting more land in the hands of the public, more transactions in land will be encouraged. The result will be an increased revenue source at the initial sale, during development of projects, through repeated sale of land and buildings, and through a perpetual source of income for the state. But as land is deregulated the state must realize an increased responsibility for environmental concerns both in the imposition of controls and in the monitoring of land use by electronic linkages of information.

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She also works as private surveying engineer as consultant mainly in cadastral, photogrammetric and urban planning studies. Since 1986, she worked at the Lab. of Photogrammetry of NTUA, teaching photogrammetry, cadastre and cartography and participating in research programs.

1998-2001 chair of WG3.1 of FIG Com3 (organized the Athens 2000 FIGCom3 annual meeting)

2001-2003, 2003-2005, 2005-2007 elected member of the Bureau UN-ECE WPLA

2001-2004 chair of WG3.3 of FIG Com3

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