

The challenges of the future European Cadastre

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Special monographic dedicated to the «1st Congress on the Cadastre in the European Union»

The «1st Congress on the Cadastre in the European Union» was held last May 15 to 17 which formed part of the programmed activities included by the Ministry of Finance inside Spain's turn as presidency of the European Union.

Responding to an initiative set by the Directorate General for the Cadastre of the Ministry of Finance of Spain after taking the opinions of those responsible of the diverse European Cadastre, this Congress saw the necessity to advance towards a major consolidation of activities developed by the different members inside the EU.

The actual situation among the European Cadastres is distinct. Understood like a structural organisation inside the different European public models; its external characteristics are varied. Summarising this, it is possible to show that while the countries in the north of Europe have designed a model close to the Land Registry and serves the Real Estate market, the central and southern European countries however have placed attention and emphasis in other types of uses, especially fiscal issues and instruments supporting other activities such as agriculture without a narrow link to the property guarantee rights. This diversity propitiates that every country has its cadastral offices linked to the Ministry to obtain a predominant benefit from this institution.

With respect to the treatment of the cadastral by the different organs of the European Union, the actual situation regarding the matter is a consequence of the lack of harmony. This situation determines that none of the General Directions have tried to show clear leadership in this matters in a direct way even if there where several who have manifested their interest or at least showed actuation's in an indirect way. Instead, the Direction Generals of Environment and Agriculture showed interest on the cadastre as a useful information system to develop their policies.

On the other hand, the General Direction for the Information Society of the European Commission see and find the Cadastre as an important element uniting within all public information where it should develop the idea of e-Cadastre. In this way, it works to open up to the citizens

public data bases, including the geographic character on what the Cadastre is all about to make it accessible to a major number of people and prepare a direction in this sense. In execution of what was foreseen about *The Action Plan e-Europe: «A Society Information for all»*.

From another point of view, the General Directorate of Regional Policy with important European funding finances initiatives for the development of the Cadastres among the member state when conceiving infrastructures like territorial information necessary for social and economic development in the European regions. While at the same time the General Directorate for Fiscal and Customs Union feels to be affected by the link between the Cadastre and the Fiscal System inside the diverse member states.

As a last general idea or remark in relation with the description of the cadastral situation of the European Union, we should not forget those candidate countries in the integration. In the process of institutional approach prior or preceding to the integration of new states the countries are becoming too many that they are implementing, developing or updating their cadastres, in most cases thanks to the financing and funding of the E.U. This interest came from the need to satisfy three requirements:

- To establish a simple model based on territorial properties that generates income from public institutions especially local governments.
- To advance in the assignment and distribution of the real estate property facilitating the access to the occupants of a real state under the previous model of the socialist economy it was public property, creating an adequate Land Registry.
- Lastly, to create an authentic market within real state, that favours the flow of capital and foreign investment in those countries.

In this scenario, the «1st Congress on the Cadastre in the European Union», has been an interesting debate forum where it showed multiple manifestation and varied ranges of opinions relative with cadastral activity. The massive responses of the convocation that congregated almost four hundred persons from thirty-three countries allowed a wealth of contributions and participation realised in the different seminars and workshops. 57 reported that knowledge gained through the 48 programmed sessions (conferences, seminars, round table, etc.) have produced a great volume of documents that appears highly interesting, that justifies value in itself to give it a widespread review through the CT-Catastro magazine. This is the objective pursued by this special issue in grouping some of the most important work presented in the Congress. ■

Official opening of Congress

RAFAEL CATALÁ POLO

Subsecretary of Finances. Spain

Dear authorities, ladies and gentlemen:

The chance of being here with all of you at the opening session of this «Congress on Catastre in the European Union» offer to me a big challenge I do not want to waste. Besides an excellent reason to come back to such a nice town as Granada really is at the same time it is a unique opportunity to pause in a forum of expertise people about a growing interest issue in the European Union closely related with the use of the stored information in the big public data base and particularly in the Cadastres of the different Member Countries as well as to foresee how this information could and might contribute to the development of the economical activities and to the welfare of the european citizens too.

It is not a novelty the concern of the government bodies of the European Union about how to stimulate the economical development by mean of the dissemination of the stored knowledge in the huge information data bank. It has been set up in different agreements specially the one of the European Council of Lisbon held on 23th and 24th of march 2002, with the statement «Action Plan e-Europe 2002, A society of the information for everyone» which it was endorsed later on by the Head of States and Government in the Feira Summit on june 2000.

The Plan pays special attention to the need to overcome the many barriers still existing in which case they are both cutting down and obstructing the access to the enclosed information in the public data base. On an overall consideration all these factors are limiting the demand of european land information products based on the public information and particularly the ones contained in the Cadastres.

The Cadastre by itself must play a main role in the development of the land information system on an european level because as soon as we can deal with the plot as a work basic unit it allows us to obtain and to handle information on properties and its owners and it has been shown to be highly useful and precise for so many activities either on a public or on a private field of interest.

The current spanish model is a valid example of the several roles the Cadastre can plays which by itself it is its main trait when we compare with other land information systems dealing with specific issues.

So that, in Spain the cadastral information is being used as an element to refer with seven taxes at the local, regional and national level standing out among them the Tax on Property Goods. This tax has provide to the spanish municipalities with an annual income up to 4.200 (four thousand two hundred) millions of euros or its equivalent of 700.000 (seven hundred thousands) millions of pesetas. This fact has been of paramount importance in order to achieve the financial selfsufficiency of the spanish municipalities in nowdays. This tax function explains quite well the appointment of the Spanish Cadastre upon the rule of the Ministry of the Treasury as well as it has been the chief argument pointed out by our Constitutional Court to clearly establish the cadastral competence as an exclusive matter of the Spanish National Administration.

On the other hand, in our country there is a close collaboration between the Cadastre and the Property

Registration Offices by mean of providing and receiving information on the properties to be included in this Public Right Register. The Cadastre provides both a better description and identification of the components of the registered properties. Moreover, the Cadastre is a permanent flow of information for the development of several public investment policies among them I shall mention the design and fulfilment of big equipments, the urban planning, the environmental protection and any other privates and public activities where a precise land information might be a keynote to take into account.

Finally I should not omit the function that the Cadastre is already playing in controlling the public financial help policies like the access to the right of free justice, the grants for housing, the subsidies for scholarships and so on. In all of them the information provided by the Cadastre is basic in order to know the economical capacity of the applicants. In the european context where we are the use of the Cadastral information plays an outstanding role to manage and to control the agrarian deficiency payments to be derived from the Common Agricultural Policy which yearly provides to the farmers with more than 4.800 (four thousands eight hundred) millions of Euros or in terms of local currency nearly 800.000 (eight hundred thousands) millions of pesetas.

This multifunctional use of the cadastral information resembles quite well to that of the other European Union Countries and it is so that several candidate countries to the accession are developing projects aimed to either building up or reinforcing their cadastral systems. Many of these projects have financial support from the World Bank taken into consideration its character of useful basic information for the development of a property market. The European Union is also providing financial support through the PHARE programme.

Seemingly, there is an increasing interest in those countries for the development of efficient tax models to burden the properties. These are to be based on the cadastral information as it will be shown if we have a look to the event to be placed on Moscow next june where a workshop on these matter chaired by the United Nations Economical Comission for Europe will be held. Therefore it is not odd to find among us in this room the Cadastral performers of the candidate countries to be full right EU-members as well as others countries which are undertaking initiatives to adapt its economy to the free market rules. To end up I would not like to forget that the United Nations Economical Comission for Europe in its working paper entitled «Strategies of the Economical Comission for Europe towards a sustainable way of life in the human dwellings on the XXI century» clearly wagger for the Cadastre as a necessary tool to accomplish some of the main initiatives to be applied in order to look for such a sustainable way of living.

Likewise there is an increasing interest in the European Union Bodies for this information land system and as a consequence both technical and political initiatives have been undertaken related with the Cadastre in accordance with the shown interest by the European Member States and by the Accessions Countries too.

As a matter of fact the European Union has been given financial support to projects for the development of cadastral models inside the members states and its usefulness from the environmental, agricultural and tax point of view not to say anything about the important role playing by the Directorate General for the Society of the Information it relates with the strategic trait than the land information plays in what the e-Europe concept does it

mean. It is the existence of a wholly engaged Europe on the new technologies of the information.

Despite all these advantageous characteristics I have described it is surprising to see how the roles that the geographical information system play on an overall consideration and particularly the cadastral information is neither a matter of harmonisation nor a matter of regulation according to european common rules at all.

Although the Cadastre does exist in every European Member State there are so many special features inside them. There is not exist references to permit the coordination of member initiatives not to say anything dealing with an european cadastral model to made capable common guidelines for future projects.

From the flow chart point of view there is not either a Directorate General or any other kind of european office in charge of the coordination and encouragement of the cadastral activity. However from the technical point of view the research work going on in the European Common Research Center at its italian headquarter of Ispra is trying to evaluate in one way or another the new possibilities and the technical tools whose achievements no doubt at all will influence the nearest future regardless not all the Member States Cadastral Heads know sufficiently the basic aims of these research programmes.

What I have described earlier can be undoubtedly to be improved but in the meantime a set of deficiencies are coming to the surface on the three levels I am talking about: Member States, Candidate Countries and European Union Bodies.

At the Member States level the lack of an european cadastral model to refer with it not making easy to bring nearer the cadastres of the different countries and the decision-making policies will certainly affect to the future of its information systems without taking into account the common european view. On the other hand, the development of the national policies with regard to the use of the cadastral information and to spread out it through Internet is leading to unevens in the citizens and in the enterprises on the different countries because not all of them can access to the cadastral information under the same conditions.

With regard to the candidate countries to the accession the lack of an european cadastral model to compare with brings a trouble because their decision-making policies in order to design or to alter its models are taken on a rather risky field because they do not have clear enough whether or not they are going into the right way. We should not forget that this question shows an increasing tendency due to the fact that the enlargement of the European Union from 15 to 27 members it will mean to augment the geographical area from 3.175.000 to 4.240.000 square kilometers and moreover in this one million extra square kilometers we can be able to find out millions of plots whose information must be integrated into a cadastral information system.

Last but not least the lack of a clear leadership inside the European Union on this issue can in some cases to difficult the coordination between the Directorates General and the projects they are carrying out. It could be that some of them lies down in opposition or even in repetition to other projects which are been already underway. So that, we must hopefully to receive the undertaken initiatives by the Directorate General for the Society of the Information aimed to the approval of a Guideline to cope with the challenge how to explore the usefulness of the public sector information. Nevertheless if this Guideline is going to be approved in the way it should be it will meant an important achievement to look forward to in the right way.

Neither harmonization nor common rules are leading to isolated cadastres each other and it does rather difficult for either citizens or enterprises to manufacture a product on an european scale from the current cadastral information to be able to group the territory of every Member States. Therefore, the difficulties to access and to take advantage of this information due to the lack of a whole minimum of common cadastral rules is severely restricting the use of the cadastral information beyond the barriers of each State whatever it might be.

For the time being it seems to me not suitable enough that the citizens and manufactures made in the European Union can move freely in a non-barrier Europa and meanwhile the information contained in the Cadastre of a certain country can not be easily obtained and used unless we tried it in the public office where it is produced despite the fact that the level of technology already offer us the best opportunities ever known to take full advantages of this kind of information.

Moreover, it seems not to be sufficiently justified than the administrations of the diferents Member States have constraints to know the information existing in the cadastre of other member country dealing with citizens and enterprises when it is of importance from the tax point of view. This approach is not longer new from a theoretical point of view and even more it is not a matter of a far-off future in one way or another. Let think as a real example than in Spain there are approximately one and a half million of housings upon the hands of foreigners and out of these figure ninety per cent (90 %) are coming from the European Union with a sustained increasing specially among people who have already retired.

It is so clear that the market exists as well as that the non-barriers Europe has become progressively fully achieved. It binds to the public administrations to accomodate our job guidelines in only one way: to grow up the coordination between the diferents States.

According to this landscape I have just described the proposal of the Directorate General of the Cadastre in order to include this Congress into the Agenda of the Spanish Chairmanship of the Council it makes sense fully and it is timely too.

It makes sense fully because for the first time in the Agenda of a Presidency the question of the Cadastre has been enclosed and this is the category it deserves in order to consider it as a public structure big of information and with such a consideration it escapes from the narrow cartographical and topographical view more in accordance with the last century prospects.

But it is above all a timely issue because it seems that at last there is a clear will beyond the member states to improve this standing I have been talking about. As a proof here we have the mass attendant to this Congress with more than four hundred (400) performers from european, american, asian and even oceanian countries and it has by far exceeded the best expectations of the steering committee.

I do not hesitate if I say that part of the success of this Meeting is due to how the Programme has been drawn together with the carefull selection that has been carried out to choose the lectures to whom I would not like to omit. In the coming days you are going to have the opportunity to listen on live to the best qualified celebrities on the subject talking to us either by themselves or on behalf of the institution they represent about the standing and outlook of the Cadastre in the European Union. Special care has been taking during the elaboration of the Programme in order to

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get an adequate representation of the Member States and the Directorate Generals of the Commission more closely related to this issue and we have wanted to count with the presence of the most important associations from the public, enterpreneurial and experts fields binded with the cadastral activity in Europe.

At last, the programme would not be completed if there were not room to listen the voice of the candidates countries which will be represented by the Working Party for Land Administration of the United Nations Economical Commission for Europe which leadership in the study of this question in the countries with transition economies is clearly recognized.

About the content of the programme it seems specially appeal the proposal to be foreseen for tomorrow with the collective working groups into four seminars going on simultaneously each one focusing on different outlooks of the cadastral performance.

The first seminar will made a full description of the current status of the Cadastre in Europe taking into consideration the main uses we made of the land information meanwhile the second seminar will get into the initiatives to improve the coordination so to broach plentifully the problem I have been taking about earlier.

The seminar dealing with the different existing models inside the European Union for mass valuation of properties and its applications to tax goals take an special interest for the objectives to be achieved for any Minister of the Treasury. I firmly believe that in such a matter apart from conceited considerations Spain has something important to contribute with an efficient system wholly developed for mass valuation of properties taking the market value as an element to refer with.

Last by not least important the seminar entitled «The Cadastre of the Citizens» will allow a better approach to the use the citizens actually do and will do of the cadastral information mainly by the extension of its use through Internet.

When this Seminar goes on it is rather easy to forecast than the new vision of the modern public administrations will come out to point to the citizen and its needs trough adequate strategies for the implementation and development of improvements in the Quality of the provided facilities. By the way, I do not want to pass up to the opportunity to stress that our Directorate General of the Cadastre has been recently awarded with the «Honor for the Improvements in the Management in the Ministry of the Treasury 2001» in recognition to the developed endeavour on this field during the last years and for that reason I would like express to all their civil servants my congratulations as well as my gratitude for all the implications such an honor does mean.

To close this general overview on the Programme I would like to carry out a brief opinion with regard to the event that closure to the Congress. It will be the opening in the near town of Jaen of the exhibition to commemorate the third century of the birth of the Marqués de la Ensenada who was main actor of numerous administrative and political reforms in the so call the Spain of the Enlightenment standing out the elaboration of the first big spanish Cadastre predecessor of the model we have in nowadays.

There are few people in Spain and outside who know the extent and importance of such initiative surely one of the most ambitious one in the eighteen century Europe. I would like only to stress now as a kind of summary that as

a result of the works carried out during five years nearly the seventy five (75) per cent of the spanish territory was into cadastral register and this heap of riches is still at present time the most complete and precise statistical and historical source of information of the spanish eighteen century on an overall consideration. Fortunately such an important task can be found clasified and preserved properly which it will permit us to enjoy of a brief but at the same time a select sample of it in the Exhibition we will be opened on the next friday.

I would not like to lengthen my address because I think it is time to give way to the next lectures all of them highly qualified people of the European Cadastre. Before so I would like to point out to all of you two thoughts:

Firtsly I should remark in a very special way from my own point of view the role the Cadastres is going to play in the nearby future as a creative and conservative bodies of geographical information. Once in so many ways the founded beginner enterprises to develop its activity through Internet usually known as «point.com» enterprises have been taken steps towards the domain overwhelming of the contents it means that the development of the economical activity and also the production by mean of this new interchange and distribution channel must be based in an efficient provision of services as well as added value to their clients. The same reasoning we are forced to do if we are thinking in terms of the Public Administrations because in the economical and political model we can outline on the european horizon the main assignment to be placed by the Public Administrations will be to make easier the own economical activity.

I am firmly persuaded that the European Cadastral Model of the future will be one opened completely to the citizens and available through Internet too. We will be driven straight to it the increasing demand for geographical information to attend numerous necessities of the private sector. So I cheer up you to be ahead to the problem an to command properly the challenge we are facing.

To conclude with a second idea I would be pleased to point an express duty to the Directorate General of the Cadastre as a visible head of the organization of this Congress. An assignement closely related with the historical links between Spain and Latin America.

As all of you know, the Spanish Presidency of the Council of the European Union is bringing up clearly enough the commitment of whole Europe and in a more special way Spain with this area. As a proof there are underway several meetings in such a manner than in one way or another the political, economical and social latin american reality is alive. These meetings will become to the end with the Latin America and Caribbean-European Union Summit to be held the next 17th and 18th days of may.

This Congress cannot to stay behind of this commiment and it has not been so because we have here today among us the representatives of the different latin american countries to whom I very specially express my gratitude for its participation in this event. I am clear the efforts are underway by the Spanish Ministry of the Treasury in order to strengthen and to make easy the cadastral action in Latin America which is a key point for the current time being specially by mean of the different courses are given to the Cadastre staffs due to the coloboration between The Directorate General of the Cadastre and the Institute for the Tax Studies.

For all these reasons I want to end up this address by expressing my will that all the debates to be held here will

be punctually handed over to the Latin American Cadastral Heads and so they were able to use the knowledge to be exposed in this forum in the way they should like. I could not bear in mind any other better content to start with the activities of the «Latin American Cadastral Forum» that will be announced in the coming days by the Directorate General of the Cadastre on the Web site of our Ministry to be used by all the concerned. In doing so I hope there will be a much more solid and lasting links in terms of usefulness between the two geographical areas.

I sincerely hope that the Congress will respond to the expectations have been and I wish you to enjoy the stay at Spain as well as at Granada.

Thank you very much for your attention. ■

Two initiatives for the approximation of the cadastres of member States: the «Declaration on Cadastre in the European Union» and the «cadastre permanent committee»*

IGNACIO DURÁN BOO

Directorate General for the Cadastre. Spain

Despite the growing importance of existing cadastral systems in all EU member States and their constant usage for innumerable private and public needs, including those deriving from the application of EU policies, the Cadastre is not a harmonised activity. There is therefore no common regulation that describes the purpose, minimum content and functions that must be fulfilled by the Cadastre in each member State, in spite of the fact that the EU usually applies community funds to finance and support the creation and development of this Institution in countries applying for membership, as part of the basic institutional structure required for accession by candidate countries.

Numerous initiatives have been carried out in recent years to improve knowledge of cadastres in Europe. A relevant example is the important role played by the Working Party on Land Administration (commonly known by its acronym WPLA), created within the United Nations' Economic Commission for Europe, which is making significant contributions; another example is the activity of EUROGEOGRAPHICS, an organisation formed by Europe's national geographic institutes. However, until now, no

initiative had directly focused on the Cadastre exclusively from the perspective of the totality of member States and its application to the policies developed by the Union.

Addressing this need, the Spanish Government's Official Performance Programme of the Spanish Presidency of the EU Council (in the first semester of 2002) included the initiative proposed by the Spanish Directorate General for the Cadastre to hold the «First Congress on Cadastre in the European Union». The main objective of the conference was to study the role that the Cadastre should play within the EU, and the formulas that could facilitate the approximation of pre-existing national models towards a system containing enough common elements to allow adequate coordination between said models.

In this scenario, the Spanish Directorate General for the Cadastre presented, among other interventions, two specific initiatives to progress in the aim of coordination: the project for a «Declaration of the Cadastre in the European Union», and the creation of a Cadastre Permanent Committee. Both initiatives are described in this Paper. But firstly it is relevant to review, at least in broad terms, the four groups of reasons that led the Directorate General to propose these two initiatives at this particular time:

Technological reasons

All institutions responsible for Cadastre in the member States now have computerised management systems. They all draw up maps in digital formats and update aggregate information using similar technologies. This circumstance, together with the thoroughly researched standardising effect of digital technology, lead us to foresee the communication and exchange of cadastral information between member States in the near future, thus establishing, in practical terms, de facto coordination, the demand for which is growing due to the increasing use of territorial information by European citizens.

On the other hand, the low cost of technology, leading to an increase in the number of consumers of cadastral information, together with the expansion of communication tools —such as XML language— that facilitate dialogue between equipment and systems through Internet, are also important reasons that recommend an attempt at coordination at this time.

Political reasons

The EU will soon undergo significant expansion, both in the number of States and in surface area. Thus, the Europe of 15 countries will become the Europe of 27, representing growth of the Union's land surface by more than one million sixty five thousand square kilometres. This will foreseeably signify the incorporation of several million parcels that will have to be included in the Cadastral register.

Obviously, if Cadastral coordination is already difficult with 15 member States, it will be much more complicated after expansion if we do not work now to define a common Cadastral model.

Regulatory reasons

There have recently been several European regulations in the form of Directives that indirectly define and delimit cadastral activity. A real example of this is the projected Directive under preparation by the Commission, through the Directorate General of the Information Society, to regulate the use by European citizens of information

* While this number of the magazine was printing, on October 14th in the headquarters of the Common Investigation Centre of the European Union in Ispra (Italy) it took place the first meeting of the «Permanent Committee on Cadastre in the European Union», with the participation of the 15 member countries.

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contained in public databases. This will directly affect cadastral systems in the member States given that the very essence of the Cadastre is to provide territorial information.

It is therefore advisable to establish the necessary levels of dialogue between cadastral administration agencies and the various EU Directorates General responsible for preparing these Directives, in order to ensure that the latter have detailed knowledge of the content and scope of cadastral activity in Europe.

Reasons deriving from the growing demand for cadastral information

Without a doubt, this is the most powerful group of reasons. The Cadastre is only good if the information it contains is useful. Therefore the Cadastres of the different member States must all be equally capable of responding to the needs of their respective citizens, so as not to place them at a disadvantage in comparison with the citizens of other EU countries.

The EU itself increasingly requires cadastral information to develop its policies. This is apparent in the construction of a single European real estate market, a concept that is already a reality in Spain, where nearly a million and a half properties are owned by foreigners, the majority EU citizens. In this environment, the deregulation of financial markets would receive a genuine boost from a system that provided access to the European mortgage market, increasing knowledge of the properties subject to this system of guarantees through the information supplied by the Cadastre.

The Union also needs the territorial information provided by the Cadastre to apply its Common Agricultural Policy and to implement active policies for environmental protection. A large part of these functions would benefit significantly if their administrators had access to parcel-level information of the entire EU territory.

The «Declaration on Cadastre in the European Union»

During the Congress on Cadastre mentioned above, the «*Declaration on Cadastre in the European Union*» was presented as a project, with the aim of assembling in a single document, with a programmatic character, the common elements that would allow the definition of a future EU cadastral model. The Declaration lists elements considered essential and which would have the character of common minimums, notwithstanding the fact that the models existing in the different member States may include additional elements of interest for their respective citizenry or administrations.

The Declaration consists of twelve principles or groups of ideas, each addressing a specific aspect (institutional, organic, teleological or instrumental) of the cadastral model desirable for Europe.

These twelve principles are listed below, each with a brief comment.

1. The Cadastre should exist as a system of territorial information throughout the European Union. No member State in whole or in part should lack the necessary information offered by the Cadastre.

If the Cadastre is considered as an institution that benefits citizens by contributing to a country's economic and social development, it stands to reason that its implementation should cover the entire area of the EU. Anything less would represent a model of inequality wherein the citizens of States having a proper Cadastre would be in a position of advantage over those of countries

or parts of countries without access to this information, an inequality that would be unacceptable and contrary to the very spirit of the Union.

As a consequence of this reasoning, member States and organs of the Commission must take special care to ensure that the entire territory has this infrastructure of territorial information, providing the public resources necessary to achieve this goal as soon as possible.

This idea coincides with the perception of the EU as a single territory, undivided by borders or administrative boundaries. Equally, the Cadastre - as a model of representation of this territory - should not be subjected to these restrictions either.

2. Whatever the legal formula adopted in each of the member States for its administration, the Cadastre is by definition an institution in the common interest. Use of the Cadastre should at all times be directed at guaranteeing the exercise of the principles of equality, security and justice for all EU citizens.

For the same reasons outlined previously, the Cadastre should be considered in all member States as a common good, and made available to all citizens equally. Obviously, each member State can provide the organ responsible for cadastral functions with the legal entity that best suits its own policies, including private management models, but this should in no manner signify that the cadastral information administered by that organ lose its character of common property.

Thus, cadastral information should enjoy legal protection in the same way as other goods subject to public usage and service, avoiding in all cases privative or exclusive use.

This idea also implies that the term *Cadastre* in its strict sense can only be used to refer to public systems of territorial information that use the parcel as their working unit. This does not impede the creation and maintenance of other systems of similar or identical characteristics in the private sector, but inasmuch as these are not public in character, they should not be defined as Cadastres.

The ultimate aim of cadastral information is to guarantee the exercise of the principles of equality, security and justice for all EU citizens, thus satisfying some of the basic principles that structure the European Union. The instrumental character of the Cadastre is therefore reaffirmed at the service of the grand ideas that form the nucleus around which the EU is born and develops.

3. The basic object of the Cadastre is the parcel. Those organisms with the capability to capture, distribute and maintain graphic and alpha-numerical information describing the parcel will be considered responsible for the Cadastre in each member State.

The parcel constitutes the basic object of the Cadastre and distinguishes this register from any other system of territorial information. Taken as the physical scope upon which a specific property right is situated, different from the rights existing on neighbouring estates, the parcel offers important advantages as a working element:

— It defines units of space that are manageable and easy to calculate.

— It links the the material element (land) and the legal element (the rights inherent to the land).

— It allows simple analyses based on the attributes assigned to different parcels.

For these reasons, and in order to precisely identify the institutions responsible for cadastral activity in the EU, the Declaration proposes that the public institutions that obtain

and maintain graphic and alpha-numerical parcel information, assume responsibility for the coordination of cadastral matters, thus distinguishing them from other public entities that also create and maintain territorial information systems for other purposes.

As discussed later in the section on the Cadastre Permanent Committee, there are several member States where these functions are divided among different states (Germany's *länder*) or regional or local administrations. Although fragmentation makes the coordination model more complicated, this not detract from the fact that each of these institutions should be considered as the competent Cadastral Administration in their respective territories.

4. Each parcel should have a unique and unalterable identifier to distinguish it from others. Whenever possible, this identifier shall contain elements that permit its exact location by means of an adequate system of geographic coordinates.

The electronic transmission of communication and management of large volumes of data require the existence of standard coding criteria to facilitate their transmission. In the cadastral sphere, these requisites are especially necessary because:

— Criteria for the location and description of estates differ in each member State, and even in different parts of the same State.

— Several public and private entities exist that assign real estate locators (street names and numbers, postal code, etc.).

— These identifiers are modified unilaterally according to the needs of the entities that create them. A clear example is the change of a street name by municipal decision.

To facilitate the location of real estate, each building should have a stable cadastral code or reference, unalterable except in the event of physical modification of the building itself. If this reference is a geocode, i.e. allowing the exact location of the property by means of a system of geographic coordinates, the location system will be much more exact.

It is evident from the foregoing that one of the first activities to be carried out is the definition of a common European model for the assignation of cadastral codes or references using a single criteria for all parcels in the EU.

5. All parcels, and the buildings and installations situated on and under them, must be adequately registered in the Cadastre. This requires definition of data models that include information on ownership, surface and boundaries, agricultural attributes of the soil or crops and environmental characteristics of the parcel, as well as the buildings or installations if these exist.

A European cadastral model must go beyond former descriptions of the Institution which perceived it as a simple land register, ignoring information relative to buildings constructed on or under the land. Today it is absolutely essential, for all types of usage, to know whether or not the land features buildings, and if so, what type of building it is, what it is used for, construction characteristics and dimensions. It is evident that the Cadastre is no longer an exclusively agrarian instrument, but has become a system of information on all kinds of property with much wider objectives.

To apply this idea, European Cadastres must begin to incorporate information on properties that until now were considered exceptional or singular, such as reservoirs and dams, motorways and road networks, nuclear plants and other complex industrial installations, mines, ports, etc.

The entire range of real estate, without exception, should be included in the Cadastre.

Lastly, and as mentioned in other sections of the Declaration, the correct definition of a data model is one of the most critical decisions to be addressed when defining and developing a cadastral model. Excessive ambition will lead to the collection of an unmanageable volume of data and in the medium term to an out-of-date, obsolescent system. On the contrary, the absence of key information means that missing data must be captured outside of the cadastral model, separating the information from the social needs it is meant to address.

Given this criterion, the Declaration contains a generic description of a minimum data model that cadastres of the member States should contain, complemented with additional information referred to in the next principle.

6. Cadastres shall be managed as open databases, therefore, in addition to the information cited previously, they should also be capable of incorporating other parcel data, depending on the needs of each of member State and the EU. Special attention shall be given to information directed at the management of property taxes and territorial planning, and to electronic applications that allow the assignment of property values using mass evaluation procedures.

It is evident that a better coordination of European Cadastres should not go against the member State's own specific needs for territorial information. It is for that reason that there are no limitations (quite the contrary) to each national model developing its own requirements in addition to the minimum common information described in the previous principle.

Nonetheless, the Declaration specifies three areas of information which, although not part of this minimum content, should be further developed in all member States, to facilitate the use of the Cadastre in the application of EU policies. These areas are:

— Use of cadastral information for tax purposes. This requirement derives from the creation of the single real estate market mentioned in the next principle. It is clear that a major element of coordination in the U.E. is the taxation of different economic activities and capacities in order to avoid unjustified inequalities among citizens and companies in different countries. The Cadastre can collaborate fully in the area of real estate taxation, including the control of real estate income.

— With the same criterion, land planning in Europe at the local, regional, national or community levels, should be better supported by cadastral information. In order to do this, the data models of the different national Cadastres must first capture the information needed to facilitate this planning activity.

— Last, but no less important, it is evident that a model of real estate evaluation allowing the assignment of equitable values to all the property in a country and, by aggregation, in the entire EU, would be a powerful tool for the development of different public policies and of the real estate market itself. Some EU countries already have efficient systems of this type, and these should be extended to all existing Cadastres.

7. Adequate coordination is needed between the information contained in the Cadastre and Property Register. The combined use of the Cadastre and property register would promote the peaceful exercise of property rights and other in-rem rights on real estate throughout the EU and would protect and facilitate market trade and investment.

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The European Cadastre should fully satisfy the need for information deriving from the single European real estate market. This requires the adequate coordination of the Cadastre and Property Register and, as a consequence of coordination, that owner rights and *in rem* rights on real estate be protected equally in all member States.

In the medium term, protection should permit the emergence of a real single market both for real estate and mortgages, as well as an effective system of consumer protection for the prevention of fraud in the real estate sector.

The scope of this initiative clearly transcends the Cadastral sphere and directly involves the organs of the European Commission in the task of producing a common regulation to govern the treatment of real estate property through coordination of the Cadastre and the Property Register.

8. Cadastres shall be managed using computer and telematic technologies to guarantee adequate information processing and access, incorporating technologies that promote the development of the Information Society. These resources will ensure the correct coordination of other public administrations that also manage territorial data. This will require the fluid communication of information, improving systems interoperability.

As explained previously, cadastral information systems cannot be conceived separately from information technology. Numerous ideas are being developed in the EU that will affect these systems. Thus, the concept of an Information Society and an e-Europe, characterised by a high degree of access by citizens to the largest possible volume of information in a situation of equality, as a necessary means to achieve the highest levels of social, economic and cultural development, are directly related with the Cadastre inasmuch as it is a system that facilitates this information.

On the other hand, ideas such as e-administration, management of all types of services via internet and the flow of relations between administrations for the benefit of the citizen, require a highly technified and well-communicated European Cadastre, where pre-existing systems can talk to each other easily and quickly.

9. The authorities responsible for the Cadastre in member States will promote the increased use of cadastral information in the application of those policies in their respective countries that should be based on territorial information, and will work together to ensure the use of said information in the application of EU policy. Whenever possible, the creation of new databases will be avoided, when these could be fed by data that already exists in the different Cadastres.

Inasmuch as the Cadastre is clearly a benefit for the citizen with access, it is evident that the public powers in Europe should be committed to the widest possible use of the territorial information it provides. Likewise, any public activity having land as its working element should make use of cadastral information, in its double role as a tool facilitating public activity and as an instrument for development of services to citizens.

Specifically, the Declaration promotes the increased use of cadastral information for the application of European policies. This is an important way to improve the coordination of cadastral systems in the member States, since the common use of the information will determine common development for data capture and processing.

Experience so far has been discouraging, given that EU initiatives in this regard have been scarce, and those few that are known, such as the Integrated System of Administration and Control, defined in the process for reform of Common Agricultural Policy through Directive EEC/3508/92, have never been fully implemented due to the differences between current cadastral models in member States.

Lastly, the growing interoperability of cadastral information systems should contribute to the development of more efficient public administrations, avoiding unnecessary expenditure. In this sense, the Declaration discourages the creation of new databases of territorial information, frequent in the majority of member States, when said information already exists or can be obtained from data contained in the Cadastre.

10. The information contained in the Cadastre of each member State will be available to citizens and companies, with no limitation other than those established by the regulations governing protection of individual privacy and tax-related information. Any tariffs established by member States shall not discourage access to this information.

As previously indicated, the principal aim of European cadastres should be to satisfy the needs of their respective citizens, a satisfaction that can and should be achieved not only through the actions of public administration at its various levels, but also through the services and activities developed in the private sector. Therefore, cadastral information should be easily and quickly accessible in order to facilitate the exercise of private sector activity.

We have already mentioned that the Commission is working on a draft Directive to regulate the access of citizens to information contained in public databases, as a means to drive development of social, economic and cultural activity in Europe. A detailed analysis of this question has been carried out, described in the Green Paper entitled «Public sector information: a key resource for Europe», (COM(1998)585), approved by the Commission on 20 January 1999. This study contains numerous relevant data, for example that between 15% and 20% of the total data required for electronic trade is based on public sector information. In this sense, the European data industry is already considerable, estimated at 433 milliard euros in 2000, i.e. 5% of the European GIP, ahead of both the telecommunications and the hardware/ software sectors. A large part of these data are developed to feed public information systems.

Although many States charge some sort of fee in exchange for cadastral information, the amount of these should not discourage access to this information or make it too expensive.

11. Territorial information will be available to local, regional, national and European administrations. Likewise, collaboration and coordination at all levels of the administration will be sought to maintain and continuously update the Cadastre.

In the vision of a coordinated European Cadastre the need is clear to integrate all public agencies associated with territorial information, both to update and maintain the information and to use the data it contains.

This brings us to systems interoperability, as mentioned in principle 8, meaning the existence of the technological means to achieve real-time communication between different public databases to obtain, through the processing of the information they contain, the adequate and permanent updating and usage of cadastral information.

It is important to remember territorial information is of interest to all levels of the administration, although it is true that knowledge of the territory is simpler in the administrations that are closest to the citizen —local government— which makes their participation in the collection of information highly recommendable. Likewise, the standardised treatment of that information to guarantee adequate levels of equality among citizens, recommends that management and coordination of the cadastral database be handled at the national level. Therefore, the European Cadastre should contemplate the collaboration of all public entities (local, regional and national) to overcome the fragmentation that exists in some member States which gives rise to different models within the same country.

12. For the elaboration and maintenance of the Cadastre in member States, the collaboration of the private sector will be sought. Collaboration will also be sought with the international agencies dedicated to the research and development of public policies directed and territorial administration.

Lastly, the Declaration recognises the advisability of collaborating with the private sector in the elaboration and maintenance of the Cadastres in member States, with a double objective:

— To use public resources more efficiently, by outsourcing to the private sector services that cannot be maintained efficiently within a public structure.

— To thus reduce public expenditure and the size of Administrations, limiting their activity to functions that can be provided more efficiently or with greater legal guarantees by the public sector.

In this regard, the Declaration recognises the important role played by various international institutions, both public and private, in the study and analysis of the cadastral situation in Europe, and encourages collaboration with them, within appropriate limits, to develop increased coordination of the Cadastres in member States.

Cadastre Permanent Committee

The need for the creation of a Cadastre Permanent Committee

The objectives of the «*First Congress on Cadastre in the European Union*» included a proposal to constitute a «*Cadastre Permanent Committee*» and start activities.

This initiative, which aims to establish a permanent forum for communication among those responsible for the cadastre in the different member States, proposes to resolve the present situation characterised by the following circumstances:

— In recent years, the number of international meetings to study diverse aspects of the situation of territorial information in Europe has multiplied; the subject and content of these meetings are frequently repeated. Many conclude with declarations or commitments that produce no practical effect applicable to the public administration of territorial information.

— Significant dispersion of the entities organising this type of activities has occurred. Despite the seminars, conferences and congresses arranged by different organisms, a certain lack of leadership is apparent, causing the crossing over of initiatives. On the other hand, many initiatives are led by researchers, especially in the university sphere, who are not always familiar with the realities of cadastral management. It is therefore rare to find common initiatives that bring together all the institutions in EU

countries that are directly responsible for managing territorial information.

— Many of the European Commission's General Directorates are directly interested in the management of territorial information, and a clear central body to channel and coordinate these interests does not exist. Given the considerable dispersion of competencies at the national, regional and local levels in the member States, Commission representatives recognise the need to identify a single central figure in each member State.

— Clearly visible in this scenario is the existence of a growing group of professionals related with cadastral activity who are skeptical about the possibility of the situation changing, and opposed to any initiatives to bring closer the institutions that manage territorial information in the different European countries.

— Candidate countries awaiting accession to the EU are already requesting references to guide them in the work they are developing to adapt their systems to the Cadastres in member States. However, these references cannot be presented in a coordinated fashion, and therefore in many cases the models that are proposed to them are national models of the member States that collaborate with the candidates. These works are frequently financed with EU funds.

— Lastly, it is evident that citizens and companies are increasingly demanding greater access and availability of public territorial databases. The demand for territorial information is growing and it is more and more frequent to find sectors of economic activity that use cadastral information in their decision making and business management. The growing use of Internet has strengthened this type of demand.

A brief description of the situation of cadastral organisations in the European Union

The functions developed by the numerous public organisations in Europe responsible for cadastre are partially different. Taking the Cadastre as a database of geographical information whose purpose is to describe the parcel and its associated attributes, we can distinguish three groups of situations:

— **Territorial dispersion of competencies governing the creation and maintenance of the Cadastre:** A range of situations exist within the EU, varying from cases where creation and maintenance of cadastral information is the exclusive competency of the State, to others where these functions are distributed among different organisms. Within this range, intermediate situations exist where basic management is the responsibility of the State and in specific parts of the territory, functions are exercised by regional, provincial or local organisms.

— **Functional dispersion of competencies for the creation and maintenance of parcel-linked information:** As well as the above-mentioned situation of territorial dispersion, an added complication is the difference in functions carried out by the different agencies in each country. Thus, at one end of the model we find that the Cadastre directly manages all information related with parcel mapping, coding, surface area, boundaries, identification and description of buildings and installations, crop features, names of owners, environmental characteristics and assigned values. At the other end are the agencies whose sole function is the creation and maintenance of parcel mapping, or those that exclusively provide information to the Property Register. There is no doubt that the range of interests varies in the Cadastres of

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the different member States; from information focused on rural Cadastre to graphic identification of existing buildings, with different emphasis on aspects that allow environmental management or develop tax-related usage.

— **Diverse state of technological development applied in the creation of databases and the diffusion of their contents:** Lastly, differences also exist in technological development applied to the management of cadastral information and its diffusion. From the viewpoint of the creation of the databases themselves, some countries are presently working to capture information on land that had never previously been incorporated into their systems. Likewise, there do not appear to be many countries using orthophotomapping to prepare cadastral maps, while in others, some of the information is still stored in analogical formats. Regarding diffusion, the situation is also unequal: Internet is a specially relevant reference of the level of development in this regard.

These three groups of problems define a varied situation and additional complications affecting future initiatives for common development. It is therefore especially necessary to choose formulas of management and analysis that allow for simplification. True efficiency will require solutions such as limiting the number of key figures per country or identifying a minimum common area of activity where all affected institutions coincide.

Mission of the Cadastre Permanent Committee

The paper presenting this initiative proposed as the Mission of the «Cadastre Permanent Committee»:

«To create an adequate space to promote a greater knowledge of cadastral activity carried out in the EU and member States in order to develop strategies and propose common initiatives aimed at achieving full interoperability among the different European cadastral systems and their users.»

Functions of the Cadastre Permanent Committee

Based on the described situation and Mission, it was proposed that the «Cadastre Permanent Committee» carry out the following functions:

Exchange of information: directors of the institutions that form part of the Permanent Committee will exchange information, either in response to specific queries from other members or by general distribution to all members. In this regard, surveys and questionnaires will be used to improve this information

Diffusion of the opinions of information managers: the Permanent Committee will contribute the opinions of the managers directly involved in the administration of territorial information. This vision will feed a SWOT analysis of the new initiatives compared with existing cadastral data.

Existence of a «single voice» to address EU organs and other public or private entities working on future decisions that may affect present day organisations: One of the principal functions of the Committee will be to study and recommend to the organs of the EU, coordinated proposals on questions that could affect territorial information databases in general and cadastral in particular. This function will be especially important when the subject of debate concerns future European regulation of related matters.

Similarly, the Permanent Committee could play an important role as a single representative body vis-a-vis manufacturers of software and other commonly used products to try to create a more homogeneous demand.

This initiative could also be extended to the study of costs and characteristics of identical products in different member States.

A single body representing the different public administrations in each member State that manage parcel-linked information, to overcome the current proliferation of representatives: Each of the institutions that form part of the Permanent Committee will commit to carry out functions of information and coordination with other institutions with cadastral responsibilities in their respective countries. For this reason, membership in the Committee will require acceptance of a «**Coordination Clause**», as described below. This will endow the Permanent Committee with credibility in the eyes of the supra-national organs it will be relating with, insofar as it will constitute the ideal channel for the transmission of information both upwards and downwards.

Creation of a powerful and up-to-date documentary database reflecting the detailed situation in each of the European Cadastres: One of the biggest problems currently facing anyone wanting to know the status of Geographic Information Systems in the EU is the huge abundance of written material. This hinders analysis, not to mention the identification of the individuals or institutions generating the document and their mission. The Permanent Committee will be equipped with a documentary database to support its own activities and also to allow the diffusion of the cadastral activity carried out throughout Europe.

Special reference to the «Coordination Clause»

The selection of a single representative per country is intended to be a means of coordination also for the national, regional and local institutions not directly represented on the Permanent Committee, since the Committee will only be truly efficient if the number of its members is limited, as continuous expansion would doubtless make efficient management impossible.

Nevertheless, it is recommendable that the voices of all local, regional and national institutions managing information of interest to the Cadastre should reach the Permanent Committee and though it, other supra-national organisms. For this reason, membership of the Permanent Committee implies compulsory acceptance by the institutions represented of the «Coordination Clause», whereby they commit to:

— Communicate to the institutions they deem appropriate, based on the degree of involvement in the management of cadastral information, all matters debated by the Permanent Committee that are of interest.

— Solicit the opinion of said institutions when the matters under debate by the Permanent Committee affect questions within their area of responsibility.

— Elevate to the Permanent Committee the initiatives proposed by these institutions and defend them using the arguments these provide.

Criteria for the selection of members

Because of the different ways the Cadastre is organised in different member States as described previously, it is difficult to identify which single institution should represent its country on the Permanent Committee.

Given this difficulty the organisers of the «*First Congress on Cadastre in the European Union*» propose that each country be represented by the public institution that creates and updates the mapping of existing parcels in the majority

of the country's territory or the body responsible for international representation of such an institution.

Membership of the Cadastre Permanent Committee must necessarily include those EU General Directorates whose functions are related with cadastral activity: agriculture, the environment, development of the Information Society, regional politics and taxation, and last but not least, the Common Research Centre which provides support for multiple initiatives in all these sectors.

It would be also be appropriate to include the WPLA on the Permanent Committee. The work carried out by this group in recent years and their capacity to spread information on the cadastre throughout the whole of Europe rather than just to EU members make their presence highly recommendable.

Lastly, there is no reason why the Permanent Committee should not include representatives of countries whose accession is imminent, although this is a decision that should be debated by the Committee itself.

Based on the foregoing, the organisers of the *«First Congress on Cadastre in the European Union»* proposed membership in the Cadastre Permanent Committee of the following countries: Arbeitsgemeinschaft der Vermessungsverwaltungen der Länder (Adv) (Germany); Bundesamt für Eich- und Vermessungswesen (Austria); Administration du cadastre, de l'enregistrement et des domaines (Belgium); Kort & Matrikelstyrelsen (Denmark); Dirección General del Catastro (Spain); Maanmittauslaitos (Finland); Direction Générale des Impôts (France); Ktimatologio, S.A. (Greece); Netherlands' Kadaster (Holland); Ordnance Survey Ireland (Ireland); Agenzia del Territorio (Italy); l'Administration du Cadastre et de la Topographie (Luxembourg); Instituto Português de Cartografia e Cadastro (Portugal); Ordnance Survey (United Kingdom); Landmateriet (Sweden); Representative of the DG for the Information Society EU; Representative of the DG for the Environment. EU; Representative of the DG for Taxation and Single Customs. EU; Representative of the Common Research Centre; WPLA.

Obviously, membership in the Permanent Committee is voluntary and no institution is obligated to belong. In these cases, another institution would have to be selected in the relative country to exercise this function.

During the second half of 2002 the Committee will be constituted and its first meeting will take place. The initial sessions should be dedicated to define minimum operating procedures and other questions of interest, such as the presence in future editions of representatives of candidate countries. ■

Land information in the EU: situation and perspectives

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It is a well-known fact that a system of registration of private land rights facilitates a crucial feature of a successful

economy. In, for example, UN/ECE (Social and Economic Benefits of Good Land Administration, 1998) is pointed out. «Land registration makes possible quick and sure procedures for creating and securing mortgages. The evolution of a flourishing financial sector, providing loans for development and investment, comes about where land rights are guaranteed. This is because banks and lending institutions can secure their total loan and investment business; by individual mortgage registration, across the many separate properties of a large population of private owners and businesses. Access to mortgage finance makes possible the development and diversification of large and small businesses, so promoting commercial responsiveness to internal and overseas demand. It increases the scope for inward investment. Importantly, it generates employment opportunities that might otherwise be constrained or non-existent. For the homeowner, access to finance makes it possible to improve and develop existing property, so increasing the value of the national housing stock.»

Land information is produced as a result of land registration carried out in courts or government offices in each particular jurisdiction. The information is in a number of countries found in national land information systems, for which a government agency is responsible.

The member states of the European Union have reached very different stages of development when it comes to land registration and processing of land information. In the candidate countries considerable efforts are being put into the establishment of a property market, not least through restitution or privatisation programmes. Many countries have also come quite far when it comes to using IT in land registration and other land related matters. This matrix gives an overview of the type of information available for land in some of the European countries (the countries taking part in the project EULIS, European Land Information Service).

Contribution to economic development and social objectives

Today, mortgage credit is an important part of the EU Internal market for financial services. And so it will remain. Outstanding mortgage loans, totalling 3.4 trillion Euro, account for 40 per cent of bank's assets according to statistics from the European Mortgage Federation. This means that the development of the mortgage market has a determining role in shaping the future internal market for financial services.

There are, however, a number of barriers to an integrated market for financial services. These are being reduced by different measures, such as:

- The introduction of the single currency, which e.g. reduces transaction costs and makes price-comparisons easier, thereby lifting barriers that have prevented customers from shopping cross-border.

- The Internet removes physical distance barriers, and makes it easy for customers to access offers from across the EU, but also for banks and different companies to offer their services without «changing the geographical positions» of their business.

- Further Internal market harmonisation, such as the Code of conduct for home loans signed by the European organisation for lenders and consumers which has also been approved by the Commission, that enhances transparency, reduces legal barriers and stimulates competition.

An integrated internal market for mortgage credit is still a distant prospect. There are divergences between the

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national markets, with vastly different levels of mortgage credit, differences between basic mortgage products, different financing techniques and different property market structures. In addition to this we have the complex legal rules (e.g. concerning executive measures) keep markets distinct, the different tax regimes and the very different cultural behaviours that underpin each market. According to Mr John Mogg, Director General of the Internal Market Directorate, much has to be achieved before we are likely to see any market for cross-border mortgage credit truly emerge. The ambition is however to realise a fully integrated financial services market by 2005, with the consumer emerging as real winner benefiting from a fuller range of services in a more competitive and safer Internal market. Also companies providing services will benefit from a harmonised infrastructure for land information as it will be easier to offer services in other countries.

Active measures are also being taken, such as the Code of conduct for home loans. New innovative technology developments are being used for establishing services that have not existed before, bringing new actors into the markets for both mortgage credit and other real property transactions. Providing land information across borders is another step towards realising the integrated financial services market.

The national solutions for land administration must form the basis for handling of land information with a European approach. However, in some respects harmonised and integrated services must be developed in order to achieve a more efficient financial services market and other benefits. The project EULIS —European Land Information Services— which will be presented more in detail later on during this Congress is dealing with these issues.

One of the goals with the EULIS project is to support cross boarder services for land information, which will widen the real property market. It will be easier to sell and buy properties between members of different countries. It will be easier to discuss a loan based on a mortgage credit with a bank in another country. The competition between banks and credit institutions will be sharpened, which will have positive impacts on the consumers.

Land information and its role in supporting emerging EC policy issues

Land information has an important role in supporting emerging EC policy issues. Reliable and easy accessible land information is one of the basis for the development of the single market, i.e. the free movement in the EU of goods, persons, services and capital. An efficient handling of land information also supports other emerging EC policy issues, such as development and use of European digital content on the global networks and promotion of the linguistic diversity in the Information Society. The cadastral information is also an important part of the national spatial infrastructures and will also be of vital interest in the establishment of a more firm European spatial infrastructure, which just now is being prepared within the INSPIRE initiative.

Improvement of the single market for financial services

In November 1999 the Commission presented a new strategy for development of the single market. The aim of this strategy is to achieve a number of long-term objectives for the single market within a five-year period. One of the

focal points in the strategy is to create a better single market for financial services —services such as lending, savings, insurance and mortgage credit.

Today there are major divergences between the national markets for mortgage credit, which result in difficulties in establishing more open and competitive markets. One of the reasons for this is lack of —or difficulties in finding— adequate land information as a basis for selling and buying real properties or handling mortgage loans in other countries. The EULIS project aims at proposing how an electronic European Land Information Service can be designed in order to promote a more open and competitive European market for real properties and mortgage credit. A more developed single market in this area would function as a driving force for growth and new jobs, while maintaining a high level of consumer protection, e.g. lower costs for mortgage credit.

Improvement of access to and expanding use of public sector information

Land information is of vital interest for the social and economic development of society. The land registration system is the basis that guarantee ownership and security of tenure, provide security for credit, reduce land disputes and guarantee the result of judicial procedures relating to land rights including rights of repossession of land. The land information is also the basis for land and property taxation, urban planning and infrastructure development, environmental management and statistical production.

The EULIS project aims at improving access to and expanding use of public sector information, enhancing content production in a multilingual and multicultural environment, and increasing dynamism of the digital content market. By developing a co-ordinated approach for this public sector information cross-boarder use of land information will be facilitated. Benchmarking and exchange of experiences between the European countries will also contribute to the development of efficient services on the national level.

Efficient use of IT

The computerised land information is generally made available through the efforts of the responsible agency, directly or through distributors/resellers. The use of the information is regulated through, among other things, legislation on public access to government records and privacy. In the most developed countries when it comes to land information systems there is now a very fast process going on concerning services and applications. This development is however restricted to the national level. The possibilities, first and foremost concerning the area of greatest interest for individual citizens, i.e. transfer and mortgaging of a family home, to transact across national borders are however small —mainly because of the high transaction costs. This also contributes to the fact that the number of e.g. financial actors in the national markets, and thereby also the competition, is in fact kept down.

Land law is, and will for a foreseeable future remain so, a national issue, but there is good reason for improving the availability of and access to information in order to, among other things, taking away obstacles that might exist for financial institutions. The European Mortgage Association has also pointed this out. The execution of what the proposed project finally proposes can therefore be seen as a measure to eradicate trade barriers, at the same time as the

possibilities for private sector companies to exploit public information is increased.

Up until now real property transactions have been national in the sense that few actors have worked across national borders. This has meant closed markets, often little competition and the consumers have difficulties when comparing costs etc. Those who have chosen to own real property in different countries have experienced trouble and high costs when attempting to mortgage property situated in another country, as well as when actually buying the property.

The development of Internet banks and telephone banking does however mean that a radical change of the market has started. New opportunities for the single individual to compare conditions, etc. are provided. Many Europeans can now get a loan and borrow money without setting a foot in a bank office. The possibility to get a mortgage for a family home on the Internet already exists. But the problems associated with accessing information about land—such as who is the registered owner or title holder of the property, what encumbrances exist or where the property is registered—still exist. The establishment of a European Land Information Service seeks to address this problem.

The Director of Microsoft Steve Bollmer recently expressed that the IT revolution can be characterised by four steps: 1) The development of the computer, 2) The development of a user-friendly computer (PC, Windows, etc), 3) The introduction of Internet, and 4) The introduction of XML.

Within land information we now face how Internet gradually increases the use of the information. It is of special interest to see is that also new user groups and new applications are growing up.

XML—and its geographical «dialekt» GML—facilitate data transfer and combination of data from different sources. This means, for example, that cadastral information much easier can be combined with environmental information or information of interest for insurance companies.

There is also a strong tendency to move towards object orientation of databases. The existing and coming ISO standards on geographic information (the 19 100 series) are build upon a model driven architecture, which implies an object-oriented approach. The use of object orientation means that information can be used in a more flexible way. We who earlier said that a picture (or map) says more than thousands of words, might now say that thousand words say more than a map.

Enlargement of the EU

An important question for the accession process is to support sound land administration systems. In June last year Sweden hosted a UN-ECE Workshop under the auspices of the Working Party on Land Administration (WPLA). The Workshop was also linked to the Swedish presidency in EU.

One of the outcomes from the Workshop was that the representatives from the candidate countries expressed a strong need in support of the EU providing clear, practical guidance and advice on best practice to help candidate countries meet EU regulations.

The Workshop also noticed interest in the EULIS project, which will support the accession process with regard to the handling of issues related to land administration. Experiences from the project will be of

specific interest for candidate countries in the process of reform and adjustment of their legal system, standards, and technical solutions concerning the handling of land information. By that, it will also be of great importance for the preparations within the accession countries.

Environmental protection

The objectives of the EU's environmental policy are to preserve, protect and improve the environment, protect human health, use natural resources prudently and rationally and promote international efforts to improve the environment. The EU's environmental policy has gradually been strengthened, and the Amsterdam treaty stipulates that sustainable development is a general objective of all Community policies.

The information hold in land registers is already today of great importance for environmental protection and control. The Aarhus Convention and the proposal from the Commission on a new directive on public access to environmental information, which was presented on 29 June 2000, implies that more of the environmental related information should be presented in the land information systems. Examples of this are information about areas created within the Nature 2000 initiative and impact from radon in different areas (with information on real property level). The EULIS project will compare how the existing national land information systems handle environmental related information, and determinate the needs, costs and benefits for improved such information on the European level.

Infrastructure for Spatial Information in Europe (INSPIRE)

The European Sustainable Development Strategy advocates a new approach to policy-making through more coherence in the Community policies. An information base that provides detailed relevant harmonised spatial information for different policy areas and that is commonly accessible is now being regarded to be of significant importance for achieving this objective.

Currently, exploitation of the potential of geographical information is hampered by lack of standards, of data and of a coherent data policy. The INSPIRE initiative address these difficulties. The initiative intends to make available harmonised sources of geographical information in support of the formulation, implementation and evaluation of Community policies. It relates to the base information collected in the member States in order to respond to a wide range of policy initiatives and obligations at local, regional, national, and international level. This information often already exists today, but it cannot be exploited in a broader context because of the fragmentation of the current existing monitoring system definition and implementation.

The initiative intends during the first phase to define a legal framework providing for the co-ordination of the collection and exploitation of geographical information. The framework will be implemented and expanded in further phases, starting with information in support of environmental policies and gradually adding information specific to other sectors, such as transport, agriculture, etc. The cadastral information forms the basis for handling of geographic information in many areas.

The INSPIRE initiative is strongly supported by important actors. For example, a Memorandum of understanding has recently been set up between Commissioners Wallström (DG

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Environment), Solbes (Eurostat), and Busquin (Joint Research Centre).

Eurogeographics and WPLA

I have mainly been talking about issues handled within the European Union. But, of course, a lot of important work concerning land information is also carried out in other forms, not at least within Eurogeographics and WPLA.

Eurogeographics plays an important role today

— To promote and facilitate collaboration and best practice between the national mapping agencies.

— To provide harmonised metadata and reference data for Europe that meets customers' needs for quality, timeliness, ease of access and value for money.

— To work in partnership with others to build an efficient European Spatial Data Infrastructure.

The Working Party on Land Administration (WPLA) is also, as you are well aware of, an active organisation promoting efficient land administration. Guidelines, workshops, seminars and missions are of great interest for all concerned bodies, not at least for the accession countries.

Eurogeographics and WPLA are now working more close together in order to avoid duplication of work and instead strengthen the efforts to bring important issues forward.

Summing up

Land information issues has for centuries being of great importance on the national levels in order to guarantee ownership and security of tenure, provide security for credit and development of land markets, to support property taxation, etc.

Today land information issues are being more and more important also on the European agenda. There are, as I have tried to describe, several driving forces for this. We, who are involved in this process, must therefore find efficient forms for handling the collaboration and development needed. I therefore warmly welcome this initiative from Spain to arrange the first formal EU Congress on land information and I am convinced that the outcome from this meeting will be of great importance for the future developments. ■

Candidate countries expectations from an European cadastral model

BENGT KJELLSON

Chairman UN/ECE Working Party on Land Administration

Throughout the world governments seek social stability and sustainable economic performance for their countries and their people. Countries with different histories, cultures and environments share common aspirations for certainty and for growth. A framework of land and property laws that

recognise the rights and duties of the individual, but also the shared concerns of the wider community, is essential if these aspirations are to be realised.

No country can sustain stability within its boundaries, or economic development within the wider world, unless it has a land rights policy that promotes internal confidence between its people, its commercial enterprises, and its government. Recognising that land is the source of all wealth lies at the heart of good government and effective public administration. States that prosper promote widespread and secured private ownership of land as a foundation of social and economic policy.

For nations to unlock that wealth requires effective systems of cadastre and land registration. Good systems of registration promote an active land market and productive land use. It makes possible the security of tenure and the development of a mortgage market on which a functioning economy depends. Thereby investments, for example into the housing sector, are encouraged.

The United Nations' Economic Commission for Europe (ECE) was the first international organisation which defined and addressed the issue of land administration in Europe in a comprehensive manner. The Meeting of Officials on Land Administration (MOLA) was set up as an ad hoc group of experts under the auspices of the ECE Committee on Human Settlements in February 1996. In 1999, the ECE granted a standing status for MOLA and transferred it into the Working Party on Land Administration.

The Working Party, and before that MOLA, aims at promoting land (real property) administration through security of tenure, establishment of real estate markets in countries in transition and modernisation of land registration systems in the market economies of western European countries. It has gained an extensive experience in promotion of privatisation and effective real estate markets through the support of modern cadastral and land registration systems in the ECE region.

The organisation soon after its inception developed into an effective network of land administration officials in Europe. A number of workshops, meetings with donors and lending organisations have been organised, guidelines and policy papers prepared. The Working Party also operates by sending expert missions to the ECE countries to render policy advice and recommendations on national programmes on land market development, cadastre and real property registration. These activities have been implemented in response to a high demand from the ECE member states.

One of the topics dealt with by the Working Party during the last year has been the enlargement of the European Union from a land administration perspective. From this, and other activities by the Working Party, a few conclusions concerning a European Cadastral model and expectations from candidate countries can be drawn.

The Working Party on Land Administration

The foundation

The main aim of the Working Party is the improvement and promotion of land administration in the ECE region. This is achieved through the promotion of privatisation and effective real property markets by means of modern cadastral and land registration systems. A special focus is put on security of tenure and the establishment of real property markets in the transition countries of eastern and central Europe. But the work of the Working Party promotes co-operation and exchange of experiences

between all countries of the ECE region. Therefore the modernisation of cadastral and land registration systems in the market economies of western Europe is also promoted by the Working Party.

The work undertaken by the Working Party is very much based on the Guidelines on Land Administration, elaborated by MOLA and adopted by the ECE in 1996. These guidelines, which have been translated into a number of languages and used extensively for policy decisions in transition countries, uses the term land administration to describe the process of recording and disseminating information about the ownership, value and use of land and its associated resources.

According to the Guidelines, land administration thus includes cadastre, land registers, land consolidation, valuation and land information systems for a sustainable management of land resources. These processes include the determination of rights and other attributes of the land, the survey and description of these, their detailed documentation and the provision of relevant information in support of real property markets.

The structure

After having started as an ad hoc meeting under the auspices of the ECE Committee on Human Settlements in 1996, the Working Party was —as a measure of the importance of the work undertaken— established by the Committee as a standing body in 1999. The ECE region covers the whole of Europe as well as North America.

The Working Party holds a general assembly (or —using the UN terms— a session) every second year. The second session was held in November 2001 in Geneva. At such a session administrative matters are dealt with, and the work program for the following two years is adopted. In addition to that, in-depth discussions relevant to the representatives of ministries and top level management of land administration organisations taking part, are held. At the second session in 2001 these discussions focused on institutional and economic aspects of public/private partnerships and on how to provide an open access to land information whilst protecting personal privacy.

The Terms of Reference for the Working Party are adopted at the sessions. The current Terms of Reference for the Working Party states that the aims of the Working Party are to improve and promote land administration in the ECE region. It shall assist the ECE Committee on Human Settlements in implementing activities on housing reforms and land-use planning. In particular, the Working Party will focus on privatisation through security of tenure and the establishment of real estate markets in countries in transition.

The Working Party works in the following areas:

- Basic land management legislation (legal rights in real property including ownership; registration of real property, ownership and mortgages; transfer of ownership; security of ownership; adjudication of land rights and resolution of disputes; land-use restrictions; etc.).

- Land administration measures (real property formation; land registration, cadastral mapping; real property valuation; etc.).

- Land information systems (real property register; land register; assessment data; land-use data; cadastral maps; etc.).

- Organisation and management issues (institutional matters; management; financing of operations; data policy and pricing of services and cost recovery requirements;

development of professional skills; privacy; citizen participation; etc.).

The current Terms of Reference can be found in Annex 1.

At the sessions a Bureau is elected. The Bureau acts as a management board for the Working Party during the time until the next session. The present Bureau consists of experienced, senior representatives of land administration organisations in Armenia, Finland, Germany, Greece, Lithuania, the Netherlands, Romania, Russia, Slovakia, Slovenia, Sweden and the United Kingdom. The Bureau works in close co-operation with the Secretariat of the Human Settlements Committee in Geneva.

Being a body under the Human Settlements Committee means that the work of the Working Party should support the policies and activities of the Committee. The close links between e.g. the Working Party's focus on security of tenure and the Committee's work on housing policies make this a very natural place for the Working Party in the UN and ECE structure.

In addition it should also be said that the activities of the Working Party are open to all countries in the ECE region, and that there is no system of membership or fees. This, on the other hand, also means that the work is entirely based on the voluntary input from all participating organisations, e.g. when it comes to arranging workshops.

Using this very open UN structure, the Working Party has become a unique forum and networking facility, mainly for senior government officials from cadastre and land registration organisations. In fact, the Working Party is the only existing, regular meeting place for such officials representing the technical (cadastral surveying) and legal (land registration) sides of land administration.

The Working Party is involved in many activities, but it is mainly by organising workshops, land administration reviews and producing guidelines, inventories and studies that it is active.

Workshops

Since the inception of MOLA, at least two workshops have been held every year. These workshops, which have been organised by land administration organisations in transition countries as well as in western Europe, have covered a long list of subjects (often more than one at each workshop). This list includes subjects such as:

- Definition and numbering of objects in cadastres and land registers

- Land markets

- Modern cadastre and land registrations systems

- Managing and developing effective land registration and cadastral services

- Public/private sector relationships in the establishment of land registration systems

- Safety mechanisms in creation of real estate markets

- Protecting rights

- Land consolidation

- Valuation methods

- Title registration systems and real property markets

Sometimes workshops have been more country-oriented, focusing on the special circumstances of a particular country or region. Such workshops have for example been held concerning land administration in the Baltic States, Albania and Armenia.

The next workshop is scheduled to take place in Moscow on June 28-29 2002, the subject being Mass valuation systems for real property taxation purposes.

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In June 2001, a workshop was organised in Sweden on the subject of EU accession from a land administration point-of-view, which of course is of special interest for this Congress.

Following UN procedures, every workshop closes with the adoption of conclusions and recommendations based on what has been discussed. These are not binding but are useful starting points for ECE countries as well as for the participating land administration organisations.

Land administration reviews

The Working Party undertakes reviews of specific countries when asked to do so. This means that a small team of international experts undertakes a study of certain land administration aspects in accordance with a request made to the ECE. Such a study is often intended to constitute part of the basis for policy decisions, or for discussions with various donor organisations or lending institutions.

So far, land administration reviews have been carried out for Albania, Armenia, Georgia and Kyrgyzstan. Another review is scheduled to take place in Russia later this year and in Lithuania next year.

Guidelines on Land Administration

In 1993 ECE first launched the initiative to strengthen land administration capabilities, mainly for countries in east and central Europe. A seminar on reform of real property, land registration and cadastre took place in Copenhagen, Denmark. To follow up the seminar, workshops were organised in Austria, Croatia, Hungary, Latvia, the Netherlands and Romania. At the same time the Committee on Human Settlements established a task force to prepare the Guidelines on land administration. Professor Peter Dale led the task force.

The Guidelines are mainly written for senior governmental staff and politicians engaged in land administration issues. The aim is to out-line the benefit of having a relevant and reliable land information system in place.

The Guidelines identify the factors that should be taken into account in developing the legislation, organisation, databases and maps, as well as the funding mechanisms, required to implement and maintain a solid land administration system, frequently referred to either as a cadastre or a land registration system.

The Bureau of the Working Party is presently considering the need to up-date the Guidelines on land administration.

Inventory of Land Administration Systems

The third edition of Inventory of Land Administration Systems in Europe and North America was published in July 2001. This very comprehensive look at land administration in the ECE region is, as was the previous two editions, based on national reports. These have been put together by HM Land Registry in London.

This Inventory includes information from 49 separate jurisdictions in 42 ECE countries (including Canada). It consists of four parts:

- Organisation and government responsibility
- Land and title registration
- Cadastral and topographical mapping systems
- Land use of recording systems.

Inventory on Key Aspects of Land Registration and Cadastral Legislation

The Key Aspects of Land Registration and Cadastral Legislation was published in May 2000 (once again compiled by HM Land Registry in London). The study includes twelve chapters, concerning subjects like:

- Constitution and legislation
- Statutory powers and the legal status of registered land
- Procedures for registration
- Registrable rights and interests
- Publicity and freedom of information.

It includes information from 43 separate jurisdictions in 36 ECE countries.

Inventory of Land Administration Projects

The Austrian national cadastral and mapping authority, Bundesamt für Eich und Vermessungswesen, keeps and updates Documentation on International Land Administration Projects in Europe on the Internet. The Documentation presents individual countries from the aspect of government institutions, description of projects and their implementation agencies. It is available at www.bev.gv.at.

Study on Land (Real Estate) Mass Valuation Systems for Tax and Other Purposes

The latest study that has been published (November 2001) is The Study on Land (Real Estate) Mass Valuation Systems for Tax and Other Purposes in the UN/ECE Member States. The Federal Land Cadastre Service of Russia prepared the study.

The study contains detailed information from 29 different countries in the region, providing answers to 35 questions that were put. It is divided into three parts, dealing with:

- Organisational and legal aspects of mass real estate valuation systems for tax purposes
- Methodical aspects of real estate valuation system
- Real estate tax system

The Survey on Restrictions on Ownership, Leasing, Transfer and Financing of Land and Real Properties

An ongoing study, which will soon be published, concerns different kinds of restrictions that exist in the ECE region. Once again based on national reports, this study is being compiled by The Federal Land Cadastre Service of Russia.

EU Accession from a Land Administration Perspective

A workshop on EU accession from a land administration perspective took place in Gävle (Sweden) 14-15 June 2001. Lantmäteriet, the National Land Survey of Sweden, organised it. The workshop, which was linked to the Swedish presidency of the European Union (EU), was attended by representatives from 33 countries.

At the workshop, a number of countries—both accession countries and other transition countries— presented their views on issues related to the requirements put on land administration as part of the negotiations with the EU. The main conclusions from the workshop were:

- Several countries had experienced difficulties in identifying a single directorate-general (DG) in the European

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Commission with overall responsibility for land administration and considered that this created problems of co-ordination. It was recommended that the European Commission set up a DG or another body responsible for land administration.

— The workshop underlined the fact that the main role of land administration, with respect to EU accession, was to support the free movement of goods, services, people and capital. Observing that the EU had recently been mainly preoccupied with the development of land market and agricultural subsidy programs, the workshop noted that in future the EU should broaden its interest in basic land administration issues.

— In some candidate countries land administration issues were insufficiently recognised by the government as a key element to accession. It recommended that governments should be fully aware of the role of land administration in the accession process.

Individual countries —candidate as well as others— reported on the development in view of the increasing need to take international demands into consideration. The following points illustrate issues reported, as they were at the time of the workshop.

Albania

There is considerable international assistance for land administration issues. The local land administration authority deals with agricultural land, while the Ministry of Public Works supervises urban land activities (urban planning, infrastructure and utilities). Comprehensive work is being carried out on environmental initiatives, valuation and taxation. One of the major problems is co-ordination of international activities.

Some public activities should be transferred to private firms in districts. For example digitisation and data entry should be carried out locally, avoiding transport to Tirana and back again. Contracts with private companies have many advantages compared to state institutions, which are not competitive with their fixed prices and lack of flexibility in meeting specific interests and needs.

Bulgaria

In the context of EU accession, Bulgaria has asked for a 10-year transition period to abolish all restrictions on the acquisition of land by foreign physical and legal entities and security of their rights in land ownership. The Government priorities have been the development of farms, the establishment of a land market and the creation and maintenance of a cadastre and real property register.

Latvia

One of the priorities of the National Programme for the Integration in the European Union has been to establish an infrastructure of legal registers for the development of a land market, to ensure easy and quick access to information from the land register (landbooks) and to integrate different registers. The need to amend legal provisions to ensure the equal treatment of Latvians and EU citizens has resulted in the Ministry of Finance being given a mandate to prepare a concept for a new law on land transactions.

Lithuania

With respect to the EU integration programme, Lithuania foresees the implementation of the following tasks to improve its land administration:

- The full restitution of land and the completion of land reform
- The creation of operational land and credit markets
- The setting up of a «one-stop shop» service for customers
- The further development of public cadastre and real property registers, by integrating available public registers
- Institutional reform
- The improvement of communication infrastructure by introducing more competition in the telecommunications sector.

Malta

There is strong pressure to regenerate the vacant housing stock. Land administration is seen as an instrument to identify redevelopment opportunities and areas for new housing development. There is a strong linkage between land administration on the one hand, and the preservation of the environment and sustainable tourism development on the other. The legislation concerning the acquisition of real property by foreigners is under consideration and revision. At present the Minister's permission is required for the acquisition by foreigners for some kinds of real property.

Slovakia

Although agricultural land is mostly in private ownership, it can not be traded, and the land is farmed co-operatively. Modernisation of the cadastre and land registration system has concentrated on the legal framework, the re-establishment of land and property records, the restitution process and technical infrastructure. This modernisation programme is severely handicapped by the high level of co-ownership and the absence of legal boundary data.

Conclusions of the workshop

The report prepared at the end of the Swedish workshop contains a number of observations and recommendations concerning the accession process, and the relationship between the EU and the candidate countries.

The Workshop confirmed the crucial need for EU candidate countries to receive as much help as possible in establishing sound land administration systems to support economic growth and a well functioning market in land and other real property.

The participants invited the EU to provide clear, practical guidance and advice on land administration issues to help candidate countries meet EU land administration regulations. However, it was also felt by some that such advice could create or lead to unnecessarily detailed regulations. There were different opinions on whether the advice should be specific, or of a more general nature. It was felt that the EU should consult candidate countries and give very serious consideration to the value of introducing documentation, which would offer authoritative help and advice and have a wide application.

Any such EU documentation should endeavour to be positive and helpful. It should provide examples of best practices, drawing on existing authoritative work such as the UN/ECE Guidelines on Land Administration. It would be very important to avoid a prescriptive approach. Rather, candidate countries should be encouraged to adopt the

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most suitable administrative structures for their own circumstances whilst maintaining a focus on the desired outcome.

The participants welcomed the increase in EU activities on land administration. They noted the importance of all aspects, and recommended that the EU should consider a wide range of issues, including legal ones, in their further deliberations on land administration.

Several accession countries had experienced difficulties in identifying a single DG in the European Commission, with lead responsibility for land administration. These countries considered that this creates problems of co-ordination. It was noted that cross DG groups, such as that concerned with geographical information, would be of assistance in rectifying this problem, and recommended that European Commission set up a DG or another body responsible for land administration.

Following presentations from several candidate countries on their activities towards the EU accession, it was noted that some countries are well advanced in creating land administration systems adapted to their own situation, with good practice incorporated into it, to meet the EU entry requirements. The Workshop recommended that other candidate countries should follow this route, and design systems that will meet EU accession requirements.

The Workshop underlined the fact that the main role of land administration, with respect to EU accession, is to support the free movement of goods, services, people and capital. Observing that recently the EU has been mainly preoccupied with development of the land market and agricultural subsidy programmes, the workshop noted that in the future the EU should broaden its interest in basic land administration issues.

There are systems in which the fiscal, physical and legal cadastres are separated to a certain degree, and that there are difficult issues related to their integration. The Workshop recommends that the UN/ECE Working Party on Land Administration should organise a workshop to address this issue.

Several countries in transition stated that the adoption of the principle that foreigners should be able to acquire land without restrictions would result in considerable internal economic and social problems.

The Workshop noted that in some candidate countries, land administration issues are insufficiently recognised by the government as a key element to accession, and recommended that governments should be fully aware of the role of land administration in the accession process.

The participants underlined the importance of including land information issues in the development of the European spatial data infrastructure. The Workshop recommended that the UN/ECE Working Party on Land Administration should take a leading role in bringing experts together in a working group in order to consider the priority actions needed in the development of spatial data infrastructure.

The Workshop also noted that there is a lack of communication in many directions; between the European Commission, candidate countries and donor organisations. It recommended that better communication and co-ordination should be established between:

- The European Commission and candidate countries
- The European Commission and others organisations with an interest in land administration such as the World Bank and FAO

- The different land administration projects within a candidate country

- All organisations active in land administration within a candidate country.

The Workshop recommended that individual candidate countries should appoint a focal point for land administration within the country.

The Workshop acknowledged information from the candidate countries that some land administration projects are not meeting expectations and hence, losing public confidence. The Workshop further noted that it is important to improve co-ordination to maintain public support and called on the parties engaged to address this problem.

The Workshop noted with interest the initiative to develop a European Land Information Service (EULIS) to assist the creation of a pan-European land markets.

A European Cadastre?

The title of this paper indicates that there is—or will be—a uniform, European model for the cadastre. This automatically leads to questions such as:

- What is a cadastre?
- For what purpose shall the cadastre be kept and used?
- Must there be a cadastre in every country?
- Is there a difference between the cadastre and the land register?
- How similar are the candidate countries, and indeed the member states?
- Is the broader term land administration better suited for discussions as this?

The discussions at WPLA workshops clearly illustrates the fact that there are substantial differences between candidate countries, just as there are between the member states. As a result of different history, traditions, economic development, approaches to land reform and privatisation, deregulation, etc. very different models for legislation, organisation, private sector involvement and technical systems have been chosen.

But there are of course similarities, and probably more so than differences. Many of the issues under discussion, from when MOLA was incepted up to now, are very policy-oriented. The approach to public-private partnerships, public access, privacy and division of responsibilities between different ministries and government departments are perhaps the most important ones. But these are also issues under discussion in some of the member states.

If we look at the approach chosen in candidate countries, it is easy to see that these issues concern the need for uniform systems, a simple organisational structure and institutional building are very important. In some of the member states there are very good solutions to study, while other member states have just as long way to go as certain candidate countries. It is very obvious that several member states could gain a lot by looking at a country like Lithuania. Besides having carried out an impressive land reform, introduced the necessary legislation, established a competent and functioning land administration organisation and developed the basic information infrastructure, the country is now into what can only be called a second wave of development.

This includes improving the legislation, establishing links between information of different kinds and refining

the organisational structure. I would say that the fact that State Land Cadastre and Register is part of the EULIS project is something that says a great deal about what not only Lithuania but also other candidate countries have achieved in a short time.

Conclusion

This leads me to the conclusion that there is no such thing as uniform expectations on a European cadastral model.

Speaking partner

Instead I think it is true first of all to say that the candidate countries have had reason to expect a more distinct response from the European Commission concerning land administration issues during the negotiation process. As was obvious at the Gävle workshop many found it difficult to locate a speaking partner concerning land administration issues, and the demands that would be faced. One very concrete example of this is of course the rights for foreigners to acquire land.

Uniform approach

Secondly, I think that issues concerning public access, privacy, service levels and standards for the provision of information are areas where organisations in candidate countries as well as in many member states lack a uniform approach. The fact that technology, and the possibilities that the Internet provides, is the main driving factor for today's development puts many of the candidate countries well ahead of certain member states. I think that the large differences in the land administration sector between the member states, which e.g. makes the integration of the mortgage market so difficult, has been somewhat of a surprise for many.

Practical co-operation

I have mentioned standards for service and as an example of areas where expectations are quite high. Initiatives such as INSPIRE and EULIS, which have been taken during the last twelve months, are examples that something now is happening.

It is my belief that such very practical projects, together with ongoing and planned activities by WPLA concerning public access and privacy, cadastral objects and identifiers, and public-private partnerships—hopefully in collaboration with EuroGeographics— will lead to more uniform approaches on specific issues across Europe.

A consumer-driven European model

Such practical co-operation will make it easier for organisations, and their customers, to benchmark activities, putting best practices more in the open for others to follow. This more customer-driven approach to achieving what might be called a European land administration model is what I think candidate countries as well as member states can look forward to.

WPLA will certainly be part of that development. Through our regular activities the Working Party will be providing a meeting-place for the whole land administration sector. It will also, e.g. in partnership with EuroGeographics, contribute policy-oriented materials based on the needs among participating countries as well as results from very concrete discussions at the workshops.

Annex 1

Terms of reference of the working party on land administration

1. The Working Party on Land Administration operates under the auspices of the ECE Committee on Human Settlements.

2. According to the ECE Guidelines on land administration (ECE/HBP/96), land administration refers to the process of recording and disseminating information about the ownership, value and use of land and its associated resources. Land administration includes, inter alia, cadastre, land registers, land consolidation, valuation and land information systems for a sustainable management of land resources. Such processes include the determination of rights and other attributes of the land, the survey and description of these, their detailed documentation and the provision of relevant information in support of land markets.

3. The Working Party aims at improving and promoting land administration in the ECE region. It contributes to the comprehensive approach of the Committee on Human Settlements in its activities on housing reforms and sustainable spatial planning. In particular, it will focus on privatization through security of tenure and the establishment of real-estate markets in countries in transition. These activities will also assist ECE activities on the environment, facilitation of trade, foreign investment and industrial development. They are also necessary for agricultural development. The activities of the Working Party will promote cooperation and the exchange of experience among all countries of the ECE region.

4. The Working Party works in the following areas:

(a) *Basic land management legislation* (legal rights in real property including ownership; registration of real property, ownership and mortgages; transfer of ownership; security of ownership; adjudication of land rights and resolution of disputes; land-use restrictions; etc.);

(b) *Land administration measures* (real property formation; land registration, cadastral mapping; real property valuation; etc.);

(c) *Land information systems* (geo-spatial data infrastructure; real property register; land register; assessment data; land-use data; cadastral maps; etc.); and

(d) *Organization and management issues* (institutional matters; management; financing of operations; data policy and pricing of services and cost-recovery requirements; development of professional skills; privacy; citizen participation; etc.).

5. It cooperates and determines its activities in close contact with other international governmental and non-governmental organizations active in related fields, such as the United Nations Human Settlements Programme (UN-Habitat), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), the European Commission, the International Federation of Surveyors (FIG), the International Centre of Registration Law (CINDER), the European Umbrella Organisation for Geographic Information (EUROGI) and EuroGeographics. It promotes cooperation and facilitates direct contacts with international organizations and programmes that fund land registration and cadastre projects in countries in transition, such as the PHARE and TACIS programmes of the European Union, the European Bank for Reconstruction and Development and the World Bank, and it encourages partnership among the public and private sectors in managing land resources for sustainable development. ■

Cadastre in Europe. Actions to improve the situation of the Cadastre among the accession countries

JERÓNIMO MIRÓN PÉREZ

Agronomus Engineer

Area Head, Rustic Inspection

Regional Management of the Cadastre in eastern Andalucía. Spain

The decision to join a supra-national organisation with the peculiarities of the European Union, whose organisation and operation are based on Treaties and on rulings that have the force of law in its member States, implies a profound revision and reform of the country's own legal order, of the regulation of different sectors of its economy, and of its institutions. In short, the *acquis communautaire* must be assumed as a whole, and national legislation reformed to the extent necessary to adapt to this commonwealth in areas considered «harmonised» in the Eurorepan Union.

The examples of national regulations arising directly from community rulings are numerous, and encompass the majority of social and economic activity. Free circulation of people, goods and capitals, together with the requirements of an advanced and competitive market economy demand, for example, common regulations in matters of customs and immigration, harmonised regulation of capital markets, communications or energy, respect for shared commitments in matters of environmental protection, and harmonised penal and fiscal legislation (implementation of VAT). Extreme cases of harmonisation are the sectors that have achieved a truly common policy: agrarian policy, in place almost from the beginning of the European Community with its regime of subsidies, and more recently, monetary policy, with the introduction of the Euro.

As we will see later, the Cadastre as such is not included as a matter for harmonisation in the European Union, although it may be included indirectly to the extent that the policies which are based on cadastral information are harmonised. In most of Europe there is a direct relationship between the Cadastre and the Land Register, and since property regimes and their systems of guarantees are the exclusive competency of national jurisdictions, a process for the harmonisation of Registers, and consequently of the Cadastre, has not occurred. There is no European model of Register nor a regulation to govern it in a unified way, although obviously the Register as an institution is in all cases dedicated to guarantee real estate property rights, one of the basic pillars in a market society. With regard to the Cadastre, there is no model to which candidate countries must adapt, although they must have a system of territorial information that as a minimum allows the spatial location of property, or entities to receive certain community aids.

Candidate countries. How the need for cadastre arises

Twelve countries are presently considered as candidates accession to the EU and are negotiating there incorporation as of 2004 (although negotiations with Bulgaria and

Romania are in earlier phases). These countries are classified as follows:

- **Countries whose economy is in transition:**

| | |
|-------------------------------------|-----------------|
| — Central and Eastern Europe | — Baltic |
| Bulgaria | Estonia |
| Slovakia | Letonia |
| Slovenia | Lithuania |
| Hungary | |
| Poland | |
| Czech Republic | |
| Romania | |

- **Countries with a market economy:**

Cyprus
Malta

The sum of these countries will add a little over a million square kilometres and one hundred million inhabitants to the more than three million square kilometres and 380 million inhabitants of the European Union. Growth is less in economic terms, adding only 430,000 million euros to the Unions GDP (currently nearly 9,000 billion euros). Gross per capita income of the new members (in terms of parity of buying power) is 10,444 euros, compared with 26,800 in the current member States.

We should also mention a group of eastern European countries that have not yet been considered as candidates for adhesion, but which are the subject of different EU aid policies: Albania, Bosnia-Herzegovina, Croatia, Macedonia and Yugoslavia. Also, there is Turkey, a country that has been a *de facto* candidate for many years, and the countries within the European Economic Space (Iceland, Norway and Switzerland) which, although not members of the Union, share the majority of its policies and whose respective legislations have been harmonised to a large extent to the *acquis communautaire*. Thus, it is frequent to talk of Europe in general when we really refer only to the area of the European Union, due to the influence of th EU on the continent as a whole, whose polcies only exclude Bielorussia, Russia and Ukraine.

It is evident that the status of each country has a direct affect on the length of the road to harmonisation of legislations and accession to the European Union. Cyprus and Malta are countries with a well-established market economy which in principle do not require major legislative reforms. The rest of the candidate countries are emerging from socialised economies and, although all have completed their respective political transitions, their evolution towards a market economy has been unequal. One must remember that the former European communist regimes were not homogeneous, and that private property or activities characteristic of a market economy were allowed in different measures. The Yugoslavian republics were the most flexible, while the Baltic republics were part of the Soviet Union for nearly seventy years. It is also true that reform is more difficult and complex in the larger countries than in the small ones.

In the countries of central and eastern Europe, the Cadastre is evolving in tune with reform policies in diverse sectors. The Cadastre is not an end in itself, but rather a means, a basic infrastructure of society that supports different social and economic purposes. In these countries, the need to reform or create a Cadastre is basically linked to the process of de-nationalisation, privatisaion or restitution of real estate (mainly lands) to new owners who purchase them or previous owners or their descendants whose property had been socialised. The economic aim sought is to create a real estate market, which must be backed by a

system that guarantees property rights, leading inevitably to the implementation of the Land Register. The cadastre is basically the essential graphic support of the Land Register, and the recipient of the enormous changes in the property of land inherent in the process of privatisation.

Other policies exist that also require the Cadastre to accomplish their objectives, principal among which are land policies (provision of infrastructure and environment), fiscal (introduction of real estate taxation) and aids to the agricultural sector. These last are focused directly on the subsidy control system applied in the Common Agrarian Policy of the EU.

In summary, the need for a modern Cadastre is evident, and candidate countries seek a model to follow. They naturally look to the European Union, where they find that, in the first place, Cadastre is not harmonised in community; the European Commission does not include an organ responsibility for cadastral affairs; and different cadastral models exist in the member States. Consequently, these countries evolve towards their own cadastral models, based fundamentally on:

1. **History.** The Cadastre is rarely an absolute novelty in a country. Prior to the communist regimes in central and eastern Europe, these countries possessed more or less evolved systems of Cadastre and Land Registration that to some extent have been preserved. The characteristics of those former systems in many cases determine the characteristics of the new systems which must now function in a market economy. Thus, countries such as Slovenia or the Czech Republic have recently developed Cadastre-Register systems based on parcelary topographic maps and on the *grundbuch* of the old Austrian Register, which was never abolished, just temporarily abandoned.

2. **National needs.** The structure of the Cadastre is defined according to the purposes it is meant to satisfy, but mainly as a graphic support of the Land Register and to support the process of real estate privatisation or restitution.

3. **Available technology.** This is no different from what is available in western Europe. It is more a question of selection or technical optimisation than of availability. In any event, the technical solutions adopted in different countries are fairly similar.

4. **The cadastral model in the collaborating country.** As we will see later, candidate countries are receiving considerable technical and financial assistance from member States, both in the form of EU projects and bilateral activity. This includes collaboration by official entities, universities and companies, and there is a natural tendency to «export» the model applied in the collaborating country.

Cadastral models in the member states of the EU

As explained previously, a single cadastral model does not exist in the European Union, each country originally applied whatever model it preferred, and the *acquis communautaire* does not require reforms of any kind. Recent reforms in the Cadastral-Registration systems in some countries have been done independently, to satisfy domestic objectives and needs.

Chart 1 briefly summarises the characteristics of the Cadastre and Land Register in the member States of the EU. These systems can be classified by the following concepts:

1. **Administration responsible for Cadastre.** Throughout the European Union, the Cadastre is

considered an instrument of economic policy in the national interest and consequently, its competency corresponds to the country's central administration, except in the case of Germany where responsibility resides in the *länder* (federal states).

2. **Responsible Ministry.** Ministerial responsibility for the Cadastre is largely related to the principal use for which the Cadastre was conceived. In countries where the origin is mainly fiscal (Belgium, Spain, France, Italy and Luxembourg), cadastral responsibility resides in the Ministry of the Finance. A second important group of countries is formed by those where the Cadastre is governed by ministries such as Agriculture, Environment or Territory (Greece, Finland, Holland and Portugal). The third group is formed of countries such as Denmark and Sweden, with highly independent cadastral organisations related to a Ministry (Housing and Environment, respectively). In Austria, cadastral responsibility corresponds to the Ministry of Economy, while in Ireland and the U.K. a cadastre as such does not exist, but rather a highly autonomous institution (Ordnance Survey) responsible for national cartography and geodesy.

3. **Relation of the Cadastre to geodesy and «general» cartography.** In this regard, EU countries divide into two almost equal groups: those having a single geographic and cadastral institution (Austria, Denmark, Finland, Luxembourg, Portugal and Sweden) and those with separate institutions for cadastre and general cartography, which includes the larger countries (Germany, Belgium, Spain, France, Greece, Holland and Italy). As mentioned, Ireland and the U.K. have an exclusively geographic institution.

4. **Identification of real estate.** All EU countries have a parcel-based cadastre (except Ireland and the U.K.) and therefore have a single identifier for each parcel, equivalent to what in Spain we call *referencia catastral* (cadastral reference).

5. **Type of cartography.** All countries are in the process of completing the change-over from conventional to digital cartography using different processes, from simply scanning conventional maps to the generation of new vectorial maps based on orthophotography.

6. **Relation with the Land Register.** The majority of EU countries opt for the registration of rights, which are guaranteed in almost all cases. This means that the Registrar examines the documents that sustain the right being registered. Only in a few countries of the Latin tradition (Belgium, France and Italy) is the Register a mere collection of deeds.

With regard to the effect of registration, two main groups exist. Basically in germanic countries, the Register confers legal status to the right of property: the right does not exist if it is not registered. This is the case in Germany, Austria, Greece, Holland, Ireland and the U.K. In the rest, the main effects are publication and protection from third parties. Naturally, registered rights prevail over unregistered rights.

All Registers in the EU use (or will use in the immediate future) cadastral mapping. The type and intensity of use in each country depends on the type of registration defined in the respective legal base, which also affects the degree of integration between the cadastral and registration institutions. There are four different situations:

a) Integration in the same institution or co-existence as separate organs depending on the same administrative entity. This is the case in Belgium, France, Holland, and

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Italy and will be the case in the near future of Greece. Integration in these countries has mostly occurred in recent years.

b) Cadastre and Register are independent institutions, but share the same database. This is the case in Austria, Finland and Sweden

c) Cadastre and Register are different institutions which exercise the formal communication of updates to their respective information (in very different degree, frequency and intensity). This is the case of Germany, Denmark and Spain.

d) A formal relationship between Cadastre and Register cannot exist because the Cadastre does not exist. Ireland and the U.K. use only the cartography contained in their respective Ordnance Surveys.

In summary, an important degree of integration exists, unrelated to a given registration model or to a specific geographical area, to the extent that half of the countries in the EU store cadastral and registration data on the same database.

Before completing this review of the different cadastral models within the EU, two additional aspects should be mentioned:

— Basically two original models of cadastral system exist in Europe, partially related with systems of land registration. In the central European model (beyond the area of the germanic *grundbuch*), Cadastre emerges as a graphic basis of land registration, to the effect that physical changes must be reflected in the Cadastre and legal changes in the Register, maintaining a perfect parallel. In the latin model, the Cadastre emerges as a fiscal instrument, to collect land taxes. In this case, the registration of rights is not obligatory and initially does not have a cartographical basis, therefore parallelism does not exist until the reforms carried out recently in some countries.

— When reference is made to the Cadastre in Europe, it is almost always to a parcel-based Cadastre of land, which does not make a formal distinction between rural and urban land and which only in a few countries contains a true cadastre of buildings. In fact, in some countries the Cadastre of buildings is the responsibility of different ministry or administration than the general cadastre. In the case of Finland, the building cadastre is the responsibility of the local authority.

Cadastral models in candidate countries for accession to the EU

The cadastral models currently in force in central and eastern European countries have all been recently created or reformed following the political and economic transition processes initiated in 1990. Development has not been based on guidelines from the EU, but their designers have had the opportunity to evaluate and compare systems in force in other European countries and to adopt those elements that best satisfy national needs. As we shall see, the models adopted by these countries present significant differences, which can be analysed in the same way as for member States.

Chart 2 gives the characteristics of the systems of Cadastre and Register in the twelve candidate countries.

1. **Administration responsible for Cadastre.** In all cases, cadastral responsibility resides in the country's central administration.

2. **Responsible Ministry.** Contrary to the situation in the EU, in none of these countries the Ministry of the

Finance has competency over the Cadastre, given the non-existent fiscal aspect. On the contrary, the new cadastres in these countries emerge with a multi-purpose vocation and tend to adhere to generalist ministries or those whose purpose is to provide service to the rest of the public administrations. Thus, in four countries (Cyprus, Letonia, Poland and Romania) the Cadastre pertains to generalist ministries, such as Interior, Administration or Justice. The largest group of countries relates cadastral responsibility with ministries associated with territory: Environment, Agriculture or Land Administration: this is the case of Bulgaria, Slovenia, Estonia, Hungary and Lithuania. In the Czech Republic and Slovakia, the Cadastre is an autonomous agency directly dependent on the prime minister, as clear sign of its role as a basic service to the entire administration. Malta does not have a cadastral institution.

3. **Relation of the Cadastre with general cartography and geodesy.** Almost all countries feature a single institution which covers cadastral and geographical functions. Only Bulgaria has separate institutions.

4. **Identification of real estate.** Except for Malta (and for the time being, Cyprus) all candidate countries have a parcel-based cadastre and therefore a unique identifier for each parcel.

5. **Types of cartography.** Like their EU counterparts, candidate countries are all in the process of completing the change-over from conventional to digital cartography or creating new, previously inexistent cartography in a digital format.

6. **Relationship with the Land Register.** A large majority of candidate countries have a register of rights. As for the type of registration, there is the same division as in EU countries. In seven (Cyprus, Slovakia, Slovenia, Estonia, Hungary, Poland and Romania) registration confers legal status to the property right, while in the rest, registration provides protection from third parties.

Integration of the Cadastre and Land Register is greater in these countries, mainly due to the fact that in several cases *ex novo* institutions have been created to introduce a system of Cadastre and Land Register. Because the initial priority is to consolidate the guarantee of property rights and to strengthen the real estate market, the principal function of the Cadastre is precisely to serve as a territorial support to the Register. In this situation, it is easy to see why a single institution has been created.

Thus, in the majority of cases (Cyprus, Czech Republic, Slovakia, Hungary, Letonia and Lithuania), Cadastre and Register are housed in a single institution. Slovenia is presently in the process of unifying its cadastral and registration databases. Only four countries, although these are the largest in territory (Bulgaria, Estonia, Poland and Romania), maintain the classic separation between the two institutions.

To summarise, it can be said that there is a greater homogeneity between the cadastral models of the candidate countries than between member States of the EU, based on the unification of geographic and cadastral institutions and on the degree of integration with the Land Register. The Register can not be conceived without cadastral cartography, except in the case of Malta, where maps are provided by the interested parties.

Lastly, it should be noted that the Cadastre in these countries is of land and in very few cases of buildings, which can pertain to a different ministry (in Romania, the Ministry of Public Works and Transport).

Comparison between cadastral systems in member states and candidate countries.

Chart 3 gives a numeric comparative summary of the situation of member States and candidate countries with regard to some of the concepts analysed in the two preceding sections.

The foregoing allows us to reach certain conclusions and to identify some predominant tendencies in the process of modernisation of European Cadastres.

The **conclusions** are the following:

— Cadastral systems are more homogenous between candidate countries than between member States.

— Candidate countries have a greater facility to adopt new systems, since they start out from situations where Cadastre and Register did not exist or were not used. Their long history of regimes that limited private ownership has required the revitalisation or creation of a new system of Land Register based on Cadastre. It is precisely the two most atypical countries in the group (Cyprus and Malta) which already had market economies.

The **tendencies** showing through in the process of modernisation can be identified in part by their institutional aspects:

— Cadastres tend to depend on generalist or territorial ministries, as a sign of their multi-purpose function. However, it should be noted that Cadastres created for fiscal purposes and dependent on Finance Ministries (Belgium, Spain or France) are adapting flexibly to new usages and services based on cadastral information.

— A strong trend for unification of geographic and cadastral institutions, and of Cadastre and Land Register, is evident.

And on the other hand in **technical aspects**:

— The vocation of the Cadastre has necessarily become multi-purpose, as a basic infrastructure in the service of the administration's diverse policies and as a supplier of products to citizens and companies.

— Cartography, today and in the future, is digital. One speaks of geographic information systems, land information systems or land administration systems.

— The trend in land-related databases is to interconnect and centralise, in accordance with the concept of data warehousing. The tendency is for the country's cadastral institution to be responsible for constructing, maintaining and centralising the database, which feeds others pertaining to public administrations.

Modernisation of the cadastre in candidate countries

The countries applying for integration in the EU have made significant efforts to modernise their Cadastres since these are key to the privatisation process and to construct of a reliable system of property registration that guarantees the right to real estate property in a market economy environment.

Chart 4 shows the main projects conducted in recent years (many still under execution) and the international cooperation they have received both multi-laterally, basically within the EU Phare programme and the World Bank, and bilaterally, from public and private institutions in third countries.

Bulgaria and **Romania** have still not completed the real estate privatisation process and both countries are developing costly integrated Cadastre-Register projects financed by the World Bank. The Phare programmes carried out in these two countries have focused on evaluation tasks

in the first phases of construction of the Cadastre and Land Register, key elements in the principal objective of guaranteeing a real estate market.

The projects carried out in the **Czech Republic, Slovakia and Hungary** have focused on objectives related with a more advanced system of Cadastre and registration. These have mostly been technological projects for automation and digitalisation of a pre-existing Cadastre and for connection between databases. All three countries have developed intense international collaboration, both bilateral and multi-lateral, through the EU Phare programme. A sign that the objectives go beyond the primary aims of Cadastre and Register (to guarantee real estate property) is the project to develop real estate taxation in the Czech Republic or to connect land usage databases in Slovakia.

The projects for integration of databases, together with other technological projects, also dominate the initiatives underway in **Cyprus**, a country that is transforming its cadastral system, although obviously not because of a privatisation process which has been the case of other countries emerging from collective property regimes.

Slovenia is developing an interesting strategy of joint and simultaneous modernisation in parallel of the Cadastre and the Land Register, with the objective of integrating their databases. International assistance is in the form of two inter-related projects: technical assessment through the Phare programme, with the participation of Spain, and project execution heavily financed by the World Bank. In addition to the Cadastre-Register system, these projects include other aims characteristic of an advanced concept of Cadastre: the construction of an agrarian information system, the creation of a building cadastre and the taxation on real estate.

Cadastres in the Baltic Republics have evolved very rapidly, going in a short time from projects for cadastral construction to others characteristic of advanced cadastral systems, with special emphasis on territorial information systems (LIS). **Estonia** is conducting an important project for agrarian reform, financed by the World Bank and supported by a TIS based on orthophotography. In **Letonia** another project for rural development, financed by the World Bank, contains sections on Cadastre, and projects for urban cadastre and real estate taxation. **Lithuania** is currently placing special emphasis on to the accessibility of cadastral data, in the framework of development of the information society.

Poland is the largest and most populated candidate country, and alone represents 40% of the group. It is a country with a significant agrarian sector and the most interested in developing projects to control agrarian subsidies through the Cadastre, in accordance with the Integrated Administration and Control System Management and Control of PAC Subsidies. This is in addition to projects for coordination between Cadastre and Register similar to those in other countries in the area.

To conclude, regarding the **principal areas addressed by projects for modernisation of the Cadastre** developed and presently under execution, these are mainly technological, for example:

- Generation of digital cartography. Development of territorial information systems in their different versions (geographic, territorial or administration).
- Creation or completion of the cadastral map.
- Connection of Cadastre and Register databases.
- Computerisation of the Land Register.
- Access to databases via Internet.
- Generation of orthophotography.
- Definition of data exchange formats.

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This list of the principal aspects addressed by modernisation projects is completed with the following projects:

- Real estate taxation.
- Cadastre of buildings.
- Control of agrarian subsidies through the Cadastre.

The extent of **international cooperation** can be divided into three groups:

a) Execution of projects financed by the International Bank for Reconstruction and Development (World Bank).

The three largest (Bulgaria, Poland and Romania), together with Slovenia, have obtained financing from the World Bank for specific projects for the integration of Cadastre and Register. The projects in Estonia and Letonia address rural development and agrarian reform with a cadastral component.

b) EU Phare Programme.

This programme, whose objectives, characteristics and priorities are explained later, has sponsored projects focused mainly on development of territorial information systems, information technology, improvement of Cadastres or Land Registers and agrarian evaluation.

c) Bilateral cooperation.

This has focused primarily on topography, cartography and the construction of territorial information systems. The countries that have most assiduously collaborated with candidate countries are Switzerland, Denmark, Sweden, UK, Belgium, Holland, Letonia, U.S. and Canada, through both public and private institutions.

The EU Phare programme

The objective of the programme is to grant economic aid to candidate countries in eastern and central Europe. It was created in 1989, initially to support the political transition in Hungary and Poland, and from 1994 it is the financial instrument of the pre-accession strategy for Bulgaria, Estonia, Hungary, Letonia, Lithuania, Poland, Czech Republic, Romania, Slovakia and Slovenia. It also offers aid to Albania, Macedonia y Bosnia-Herzegovina.

As well as being the principal instrument for financial and technical cooperation in the Central and Eastern European area it is oriented, since Agenda 2002, to the preparation of candidate countries to accession. It grants

subsidies as a structural fund to favour economic development and also co-finances projects in collaboration with the World Bank, the European Bank of Reconstruction and Development and the European Investment Bank.

The priorities of the programme are the strengthening of institutions in candidate countries and investment to adapt national regulations to *acquis communautaire* and to restructure key sectors of the economy. As we have seen previously, regulations governing Cadastre and the Property Register are not harmonised in the EU, however the Phare programme provides assistance on these matters. This is because the EU considers the Cadastre to be a basic infrastructure in the service of modernisation of key areas of the economy.

The economic relevance of the Phare programme is shown in **Chart 5**, which gives the amounts of Phare-financed contracts in each country in the period 1990-2000, as well as the budget assignments for 2001 and 2002. Calculation, for each country, of the amount of Phare finance per inhabitant, shows that the smaller countries (Baltic Republics and Slovenia) have benefited most from the programme in relative terms.

Finally, although figures corresponding to Phare projects focused specifically on Cadastre are not available, it is worth mentioning that most of the Phare budget is used for training projects, and that projects on Cadastre and Land Register are included in the sections for agriculture and environment, which have received, altogether, financing of over 1,100 million euros in the period 1990-2002.

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