



**Economic and Social  
Council**

Distr.  
GENERAL

HBP/WP.7/2005/7  
12 October 2005

ORIGINAL: ENGLISH

---

**ECONOMIC COMMISSION FOR EUROPE**

**COMMITTEE ON HUMAN SETTLEMENTS**

Working Party on Land Administration  
Fourth session, Geneva, 21 to 22 November 2005  
Item 4 of the provisional agenda

**WORKSHOP**

**MULTI-PURPOSE CADASTRE — be INSPIRED**

Report prepared by the delegation of Finland in co-operation with the secretariat\*

**Introduction**

1. The Workshop on the Multi-purpose cadastre – be INSPIRED - took place in Helsinki (Finland) from 1 to 2 September 2005. The National Land Survey of Finland hosted the Workshop. On the morning of 2 September, technical visits were organized to the National Land Survey of Finland.
2. Representatives of the following countries participated: Armenia, Austria, Azerbaijan, Belarus, Croatia, Czech Republic, Denmark, Estonia, Finland, Georgia, Germany, Hungary, Iceland, Ireland, Latvia, Lithuania, The former Yugoslav Republic of Macedonia, Netherlands, Norway, Poland, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, United Kingdom and United States.
3. Representatives from the European Commission and the UNECE secretariat also took part in the Workshop.
4. Mr. Jarmo Ratia, the Director General of the National Land Survey of Finland, opened the Workshop and welcomed the participants.

---

\*The UNECE ENHS Division has been submitted the present document after the official documentation deadline due to resource constraints. The Workshop in Finland was held 10 days before official deadline for documents submission.

5. Mr. Jouni Lind, Special Adviser to the Minister of Agriculture and Forestry in Finland, welcomed the participants and stressed the importance of the register systems as well as the development of their information content and the organisation of the information services. He reported that in Finland there are a number of concrete actions related to the topics of the workshop. Among them, the project concerning the development of legislation entitled Real Estate Conveyancing in Information Society, which has already resulted in the preparation of statutes on the electronic conveyancing of real estate. Another example is the development of the joint utilization of the basic registers of the society and co-operation between the registers, which has already led to the introduction of a new Land Information System (LIS), effective 01 June 2005. A third example is the implementation of the National Geographic Information Strategy, which was approved on 31 August 2004 by the Ministry of Agriculture and Forestry. It anticipated the provisions contained in the INSPIRE Directive proposal and the good progress that has already been made in the implementation of the Strategy.

6. Mr. Kaj Bärlund, Director of the Environment and Human Settlements Division of the United Nations Economic Commission for Europe, welcomed the participants. He pointed out that the UNECE was one of the first intergovernmental organizations which defined and addressed the issue of land administration in a comprehensive manner. He informed the delegations that the fourth session of the Working Party on Land Administration will be held in Geneva from 21 to 22 November this year. It was expected that the Working Party will discuss and agree on its programme of work for the years 2006-2007, which will reflect the priorities in land administration for all UNECE member countries, with a particular focus on support for countries in transition. The Working Party carries out national land administration reviews, which represent a comprehensive analysis of legal, institutional and economic aspects of land administration. These reviews have been implemented in Armenia, Georgia, Russian Federation and Lithuania and this year a review will be carried out of Azerbaijan. Through these reviews, the international experts assist the country concerned to select a modern approach to its land and real property administration system. He also indicated that the cadastral system is the basic infrastructure which supports the different systems in the areas of land-use and land management. Throughout the world, the cadastral concept has developed significantly over the past few decades. During this period these systems, whether developed from a land market or a land taxation perspective, have increasingly played a multiple role, which is essential to economic development, environmental management and social stability, in both the developed and the developing worlds.

7. Mr. Bengt Kjellson, Chairperson of the UNECE Working Party on Land Administration, stressed that it is important for the UNECE to spread its land administration activities to the eastern part of the UNECE region, Central Asia and the Caucus region. He noted also that the INSPIRE initiative is a very important and positive step not only for the EU member states, but also for other European countries. He was pleased to see that the programme of the Workshop contained a close relationship between land-use planning and the cadastre and he suggested that the Working Party should continue to address this issue in its future activities.

8. The Workshop considered the following main themes:

**Session I: INSPIRE – challenges to the cadastre systems**

Chairman: Mr. Heinz König (Austria); Moderator: Ms. Bozena Lipej (Slovenia);  
Rapporteur: Mr. Antti Jakobsson (Finland);

Presentations:

“First steps to develop INSPIRE” by Mr. Wim Devos, Joint Research Center, Agrifish, European Commission;

“The implementation of the National Geographic Information Strategy of Finland as a part of the implementation of INSPIRE” by Mr. Antti Vertanen, Ministry of Agriculture and Forestry of Finland;

“Land Administration in Hungary: impacts of and contribution to the directive proposal” by Mr. Gábor Remetey-Fülöpp, Ministry of Agriculture and Rural Development of Hungary;

“UNECE Guidelines on Real Property Units and Identifiers” by Mr. Helge Onsrud, Norwegian Mapping Authority;

“Standardisation of Land Register and Cadastre Information” by Mr. Esa Tiainen, National Land Survey of Finland;

“The Types of Cadastral Systems in the former Yugoslav Republic of Macedonia” by Ms. Emilija Aleksova and Ms. Marta Telegrafciska, The State Authority for Geodetic Works, the former Yugoslav Republic of Macedonia.

**Session II: Public access to data**

Chairman: Mr. Alexey Overchuk (Russian Federation); Moderator: Mr. Mike Traynor (United Kingdom); Rapporteur: Mr. Antti Kosonen (Finland);

Presentations:

“Survey of the situation in the ECE countries in regard to public access to data” by Mr. Juraj Valis, Geodesy, Cartography and Cadastre Authority, Slovakia;

“Base registers and the principle of access” by Mr. Ahti Saarenpää, University of Lapland, Finland;

“The Norwegian answer: Liberal access to register data within the limitations of the Personal Data Act” by Mr. Tom Slungaard, Norsk Eiendomsinformasjon as, Norway;

“Kadaster-on-line, the challenges, lessons learned and success of the Cadastral online services in the Netherlands” by Mr. Michel Magis, Topografische Dienst Kadaster, Netherlands;

“Access to Information of the Property Registration System” by Ms. Belen Merino Espinar and Ms. Isabel Gonzalez Garcia, Colegio de Registradores de la Propiedad y Mercantiles, Spain;

“Limitations of Public Access to Data in Iceland” by Ms. Margrét Hauksdóttir, The Land Registry of Iceland.

### **Session III: Land-use planning data to be incorporated into the cadastre**

Chairman: Mr. Peter Creuzer; Moderator: Mr. Pekka Halme (Finland); Rapporteur: Ms. Esa Tiainen (Finland);

#### **Presentations:**

“Cadastre as a basis for spatial land-use planning data” by Mr. Daniel Steudler, the Federal Office of Topography, Switzerland;

“The municipalities as producers of land use planning data” by Mr. Matti Holopainen, Association of Finnish Local and Regional Authorities, Finland;

“The relation between spatial planning and cadastre in Slovenia” by Ms. Bozena Lipej, Ministry of Environment and Spatial Planning, Surveying and Mapping Authority, Slovenia;

“The multi-purpose cadastre - a host for land-use planning data?” by Mr. Jörgen Skrubbeltrang, National Survey and Cadastre, Denmark;

“California's Best - The Administration of the California Environmental Quality Act (CEQA) for Private/Public Projects” by Ms. Aniko Sherry, Aniko Sherry International, United States of America;

“Institutional Development of the Cadastre of the Republic of Tajikistan” by Mr. Ramon Umarov, State Land Committee of Tajikistan;

“Support for the establishment of a modern cadastre system in Tajikistan”, by Mr. Åke Olson, Swedesurvey.

## **SUMMARY AND CONCLUSIONS**

### **Session I: INSPIRE – challenges to the cadastre systems**

9. Detailed spatial information is available in Europe to support a broad range of policies. Despite that, widespread access to and use of spatial information is still a problem in Europe. The main problems relate to data gaps, missing documentation, incompatible spatial data sets and services due to varying standards, and barriers to the sharing and reuse of spatial data.

10. A key objective of INSPIRE is to make more and better spatial data available for Community policy-making and implementation of Community policies in the member States at all levels. INSPIRE focuses on environmental policy, but is open for use by other sectors such as agriculture, transport and energy.

11. The main beneficiaries of this proposal will therefore be those involved in the formulation, implementation, monitoring and evaluation of policies at the European, national and local levels. These are public authorities, legislators, citizens and their organizations. However, the private sector, universities, researchers and the media are also expected to benefit.

The European Commission is going to adopt Implementing Rules (IR) which lay down the following:

- (a) Harmonized spatial data specifications;
- (b) Arrangements for the exchange of spatial data.

12. Finland and Hungary indicated the importance of, and need for, a cross-sectoral collaboration on geographic information data at national level and with a clear focus on the INSPIRE process.

13. There is a need to make the national cadastral, mapping information systems and related data understandable in the European-wide context.

14. In view of the economic requirements and data exchange needs, an agreement on common definitions of the basic units on real property and its identifiers should be reached.

15. The Guidelines and other publications of the Working Party on Land Administration should be taken into account while drafting Implementing Rules (IR).

16. Besides the technical matters, the legal aspects are very important for the INSPIRE initiative.

17. The experience of building an integrated cadastral system in the former Yugoslav Republic of Macedonia shows both the importance of the land administration sector for the national economy and the necessity of wide international co-operation with all organisations dealing with land administration.

18. To ensure organizational sustainability within the land administration community, it should be recognised that integration is not an issue of competition, but co-operation.

## **Session II: Public access to data**

19. A survey of the existing situation in the UNECE member countries in regard to public access to cadastral information indicated that:

- All countries had a Data Protection Act;
- The citizens of all countries that responded to the questionnaire have at least a certain degree of access to data collected by the State;
- Access to data in the majority of countries is not free of charge. Only three countries indicated that they have free access to data;
- Few countries have controls to protect personal data from unauthorised alteration;
- Practice in regard to the data access and privacy protection varies a lot among the countries; different approaches resulting from each country's unique history;
- Due to digital registers, authorization to change and/or use data has become more sensitive.

20. In the Nordic countries, there is a long history of legal rights on public access to data, privacy protection and basic registers. In the new digital environment access to basic registers

is mainly a legal question, not a technical or organizational one. In creating new services and information systems, legal aspects should be considered at the very early stage of planning. Data protection is in fact a protection of human rights. That should be taken as a starting point when planning and using basic registers.

21. In Norway, access to data has been very liberal. Even personal data is widely distributed through the Internet. However the Data Inspectorate said, “The fact that information is supposed to be publicly accessible is not the same as if the information can be presented on the Internet without any limitations. Register data should be made accessible only to the extent necessary for relevant demands. One has to make the difference between ‘nice to know’ and ‘need to know’. Systems for information services must be designed so that users can obtain only the data they really need”.

22. In the Netherlands, the use of cadastral information for legal and economic purposes is regulated by law. Users should be involved in developing information services as easy usage and low searching costs are key to increasing the use of information.

23. In Spain, the use of personal data needs either an individual’s permission or could be allowed by a specific act. In real property registry there is more personal information than just the name of the owner. Register information is open, but no direct access to the database is allowed. All data deliveries need approval. Data taken out from a public register could not be integrated in commercial databases.

24. In Iceland, all information of major public interest should be available at the lowest possible cost. On the Internet there is free access to real estate data and aerial photographs (but not to personal information). Access to the basic data on real properties is free, but there may be a charge for additional information. In Iceland, provisions to property owners concerning their own real estate are similar to those in other Nordic countries and have resulted in better services and more detailed information. This means that owners should have access to all the registered information concerning their property.

25. Land Administration Systems should be open systems by nature, if not:

- Property rights will not be protected;
- Real estate markets will not develop;
- Municipalities and the private sector will have difficulties in providing their services.

26. The very existence of a land administration system depends on its ability to provide information to users. If a land administration system does not provide information then there will always be someone else (reliable or not) who will provide it. It is far better that this is reliable and unbiased information coming from national land administration authorities.

27. The question is not “to provide or not to provide information”, but:

- What information to provide?
- How to provide it?
- To whom?
- When? and;
- On what conditions?

28. There has to be a balance between the public's right to know and the right of the individual for privacy.

29. And for all that, there is no single solution, but a move towards the harmonization of services may well correct the current imbalance.

### **Session III: Land-use planning data to be incorporated into the cadastre**

#### *The role of the cadastre in land-use planning and environmental administration*

30. The cadastre, including its an essential legal compound dealing with rights to land, plays an important role in balancing different interests and in the decision-making process. It provides an information framework for the discussion and participation of different interests which deals with the challenges and pursues the aims of sustainable development.

31. This applies in particular to aspects of land-use planning which are part of the environmental protection, administration and co-ordination with private sector partners. The publication of the International Federation of Surveyors (FIG) "Cadastre 2014" suggests the use of use the concept of so called "land objects", instead of the land parcel as a basic cadastral unit. Active involvement of citizens, as well as, enterprises helps to build more efficient e-Government and/or e-Land Management structures, while at present, only governments and public authorities mainly regulate land-use planning. This situation is setting the focus on cost-effective structures of data exchange for wider sharing and better accessibility of cadastral data, with the necessary information transparency.

32. It became clear during the discussions, that the cadastre data in the context of land-use planning should be considered as a key future activity of the Working Party on Land Administration, especially in relation to countries in transition.

#### *Expanding the information contents of cadastre to land-use planning data*

33. Land-use planning deals with different interests and topics in the context of public rights and restrictions on land use, comprising such issues as existing land-use plans, nature and environmental protection, building restrictions, road or street plans etc. It also involves rearrangements of existing rights and restrictions to future rights or new interests in land use. The source data for land-use planning should be available in the common spatial data reference system used for other purposes of the country. This task of the cadastre, to provide a comprehensive and complete information on rights and restrictions on land use, could be implemented gradually.

#### *Legal rights and restrictions on land use*

34. At the first stage, already passed by many countries, the information could be structured and its content expanded from private rights to such public rights and restrictions on land use that are helpful to define the value and to facilitate tradability of land. This is also important for the traditional users of the land register and cadastre (to secure trustworthiness), for fiscal purposes, as well as for collateral purposes to fuel the economic and social development of the country.

35. The concept of land objects with different topics as a basic cadastral unit might be useful for promoting the wider context and addressing the service demands of the cadastre. However attention should be paid to whether the information is only informative or if it really constitutes rights or restrictions.

36. The intermediary stage, as regards the land-use planning data, could include the information on the valid land-use plans, and a spatial index of on-going planning phases or other acts, affecting the possible land use. The latter are important since land-use planning tends to be a long-term activity. Consequently, capability to trace (spatial) changes of such phases or acts is important, especially for the processes of land-use planning. Clearly this requires the updating process to be linked with the operational process of land-use planning or other acts creating public rights or restrictions.

#### *Environmental restrictions*

37. At the next stage, more environmental restrictions could be included, related to such issues as ground-water protection areas, polluted soil areas, areas exposed to flood, landslide or fall of earth or other potential regulation areas, which affect the land using possibilities and value. It could be done in much the same way as in the previous stage, but with more uncertainty about the boundary definitions, completeness and reliability of the information due to weak legal validity.

38. At the same time, the INSPIRE initiative will introduce its own data categories. Thus, more work on the evaluation of user needs is required to justify the financing of the more extensive contents of the cadastre beyond legal land objects. But it is possible that in future new user/application areas of the multi-purpose cadastre may emerge. More extensive information could also be integrated into the cadastre through appropriate spatial data infrastructure or INSPIRE structures, in which the cadastre connection is essential due to its legal context .

#### *Demand for data exchange*

39. In land-use planning, which is generally carried out within hierarchical territorial structures, the use of information from different cross-discipline sources is indispensable. There is a great need for an efficient data exchange to promote co-operation between different administrative and territorial levels, as well as, with private sector partners. This calls for the cadastral data to be shared cost-effectively with the help of data modelling, standardization and integration through interoperability, by means of Internet, e-Government or e-Business applications. Ongoing developments clearly indicate a shift from a multi-purpose cadastre to a multi-use cadastre.

#### *Structural incorporation of land-use planning data into cadastre*

40. In many countries the digital cadastre has already been a basis for management of the spatial elements of different topics affecting the value and use of land. This is true for those countries which originally had a fiscal cadastre. For dissemination purposes, even hyperlinks from the cadastre or its spatial indexes to the data files of land-use planning authorities may be sufficient. However, the multiplicity of organisational and legal relations stresses the importance of structure information (clear content management, metadata and reliable updating practice) in making information more widely accessible. The focus for efficient data exchange



must be data modelling, standardization and an appropriate use of the common spatial reference framework.

41. Consequently the multipurpose cadastre also indicates a cross-discipline cadastre whose transparency due to semantic and service standardization or service-orientated architecture, makes it simple enough to exploit and access the information. A significant change towards coordinated cadastre and information management system is also needed to integrate the cadastre in the other to important data sources such as land-use planning, national base register systems or respective databases. In many countries the cadastre is in itself one of the pillars of IT society.

42. Besides the technical solutions, the legal and organisational aspects may also directly affect the architecture and infrastructure to be implemented. More efficient data exchange with e-services and integrated processes within administration, or self-service in updating, may result in more licensed data providers or certified processes with direct access to the basic data base. This is the futur service-orientated future vision for the multi-purpose cadastre. Organisational interoperability, as well as quality assurance, is required on both sides for cadastre and land-use planning.

*Link to INSPIRE - the spatial management of cadastral data*

43. The records of extensive rights and restrictions could follow the dynamic life of cadastral survey boundaries with remarkable resources allocated. Alternatively the spatial extent of different land objects is based on the common spatial framework which becoming more and more coherent and, with the necessary quality assurance or accuracy definition, could also offer possibilities for decentralization. The process of streamlining the data exchange, following the guidelines of INSPIRE, may be the best way to improve the transparency of basic cadastral data. Nevertheless it is evident, e.g. at the information service level, that the cadastre is necessary to anchor the common spatial framework as regards rights on land and land objects. In this way the cadastre will serve as a reliable resource for INSPIRE and will support its structures.

44. The use of clear accuracy definitions and classifications or certifications for accuracy for entry in the records is preliminary, and it facilitates the transfer of responsibilities to the original data provider. The general conclusion on this issue is that land-use planning data needs to be closely connected to the cadastre or should at least be related to the cadastral data.

45. The cadastre, due to its legal compound, is becoming more and more of a basic infrastructure element for environmental administration as well as land administration and management, and the IT Society. The development of information and communication technology (ICT) is providing further aspects to the ongoing debate on cost-recovery vs. an infrastructure financed basis. The session on land-use planning data offered some examples on this issue:

- (a) In Finland, private landowners are responsible for covering a part of the infrastructure costs when private land is the subject of detailed planning. Infrastructure costs must be covered up to a maximum of 60 percent of the added value created by the plan;
- (b) Denmark offers another example, in the form of a cadastre proof case. When an authority wants a new regulation to be registered in the cadastre, the authority has to pay for

the first registration and for the changing of the topic. But cadastral updating of topics is free for the different authorities.

46. The Workshop concluded that the INSPIRE initiative, land-use planning, privacy and public access to data should be subjects for discussion at the future meetings of the Working Party on Land Administration.