



**Economic and Social  
Council**

Distr.  
GENERAL

HBP/1999/2  
16 June 1999

ORIGINAL : ENGLISH

---

ECONOMIC COMMISSION FOR EUROPE

COMMITTEE ON HUMAN SETTLEMENTS  
Meeting of Officials on Land Administration

WORKSHOP ON MODERN CADASTRE AND LAND REGISTRATION SYSTEMS

Report prepared by the delegation of Germany in cooperation with the secretariat

Introduction

1. The Workshop on modern cadastre and land registration systems took place in Bonn (Germany) from 11 to 12 March 1999. It was organized by the Surveying and Mapping Agency of North Rhine-Westphalia.
2. Representatives of the following countries participated: Albania, Armenia, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States of America. Representatives of the ECE secretariat also took part.
3. Mr. F. W. Vogel, Head of the Surveying and Mapping Department, Ministry of the Interior of North Rhine-Westphalia, opened the Workshop.
4. Mr. F. Rokahr delivered a welcome address on behalf of the Working Committee of the Surveying Authorities of the States of the Federal Republic of Germany.
5. Ms. C. von Schweinichen, ECE Deputy Director, made an introductory statement on ECE land administration activities.

6. Mr. H. Onsrud, Chairman of the Meeting of Officials on Land Administration, reported on its results and its ongoing activities, particularly the programme of workshops and expert missions.

7. The following participants were elected chairpersons and moderators: (a) session I: Mr. H. Onsrud (Norway), chairperson; Mr. V. Teetzmann (Germany) and Mr. T. Bogaerts (Netherlands), moderators; (b) session II: Mr. J. Manthorpe (United Kingdom), chairperson; Mr. H. Brüggemann (Germany) and Mr. A. Overchuk (Russian Federation), moderators; (c) session III: Mr. H. Graeff (Germany), chairperson; Ms. B. Lipej (Slovenia) and Mr. P. van der Molen (Netherlands), moderators.

8. The following experts presented basic reports:

(a) Session I: Mr. K. Thöne (Germany), Mr. P. Creuzer (Germany), Mr. A. Drees (Germany); Mr. V. Kislov (Russian Federation) and Mr. W. Zimmermann (Germany);

(b) Session II: Mr. E. Jäger (Germany); Mr. H. Brüggemann; Mr. J. Manthorpe; Mr. J. Wolters (Denmark); Mr. M. Thurner (Austria) and Mr. G. Muggenhuber (Austria);

(c) Session III: Mr. W. Irsen (Germany); Mr. W. Lindstrot (Germany); Mr. K. Mattiseck (Germany) and Mr. P. van der Molen.

9. On Friday, 12 March, a technical visit took place at the Surveying and Mapping Agency of North Rhine Westphalia.

#### CONCLUSIONS AND RECOMMENDATIONS

##### Session I: Transformation in privatization and reorganization of real estate

10. Privatization and restitution of land, including formal adjudication and registration, are still progressing slowly in many countries in transition. Measures should be taken to speed up the process.

11. Recommendations:

(a) Governments should formulate and adopt basic strategies for land administration initiatives and projects, which should include clear deadlines and budgets. The strategies should also define priorities in respect to the types of users of land administration services, data, and regions within a country. Cost-benefit analyses should be used although the benefits of good land administration to society are not always easy to express in monetary terms;

(b) Investments in land administration should be user-driven. Governments should give priority to measures aimed at securing private ownership and property rights by facilitating the development of a land market through the efficient transfer of land (conveyancing), land lease, and the use of real property as collateral (mortgaging);

(c) The data content of registers should in the first phase be limited to that needed for the development of a land-market, which requires a flexibly defined precision in surveying and mapping of boundaries, according to the needs of the users. Registers and maps could be improved at a later stage, as needs occur;

(d) Frequent changes to land administration laws have hampered the progress of privatization and restitution in many countries in transition. Governments should consider measures to stabilize the legislation, at least to allow the first phase of privatization and restitution to be completed;

(e) Co-ownership of real estate, resulting from the restitution of property to the former owners' heirs, causes major problems in many countries. Therefore, legislative measures should perhaps be considered to establish an initial land register without the complete registration of all owners;

(f) A clear definition of the real property objects to be used in cadastres and land registers is a prerequisite for the establishment of these registers, and for a functioning land market in particular.

12. Land administration activities in many countries in transition seeking membership in the European Union had to a large degree focused on rural areas, whilst the major economic activities are mainly taking place in urban areas and large cities. The reason is the EU requirements for data on the agricultural sector. Moreover, land titling for smallholders is increasingly considered as an important factor to promote sustainable land use.

13. Recommendations:

(a) In setting priorities in privatization and registration of real property, the needs and problems of urban areas should be fully taken into consideration;

(b) In countries with a large rural population it may be justified to focus mainly on the implementation of rural land registers and cadastres.

14. There is still a need to better coordinate land administration projects.

15. Recommendations:

(a) Countries in transition should establish appropriate inter-ministerial committees or permanent bodies to ensure adequate commitment to concerted and well coordinated actions in the planning and implementation of land administration projects;

(b) International lending and donor institutions should take action to ensure better coordination of projects financed by different institutions, organizations and companies;

(c) The ECE Meeting of Officials on Land Administration should

continue the practice of inviting donors and recipient countries to its meetings so that they can share experiences and discuss measures for better coordination.

16. The training of land surveyors in many countries in transition is still focused mainly on geodesy, mapping and other technical skills, but contemporary land administration requires professionals with knowledge of legal matters, land administration and management in general.

17. Recommendations:

(a) Countries in transition should consider designing curricula (also for post-graduate training) that include legal, administration and management issues;

(b) Training is a vital element of land administration projects, in particular in countries in transition, and it should be undertaken preferably before projects are started;

(c) Countries should document and share experiences about successful as well as unsuccessful projects. The Meeting of Officials on Land Administration could play an important role in disseminating such information.

18. The private sector can play an important role in land administration and public-private partnership should be developed. It is a general trend in Europe that private surveyors and private surveying firms are given a greater role in land administration. The role of the public land administration agencies should be thoroughly studied to ensure an optimal public-private distribution of responsibilities and partnership. It was noted that public agencies normally play an important role in data maintenance, but that data distribution as well as value-added services could well be undertaken by the private sector. It was also reported that in Germany, for example, licensed private surveyors can exercise public authority on behalf of the Government. The need for the public sector to develop capacity in using tendering for outsourcing was strongly underlined.

19. Recommendations:

(a) Professional associations should play a significant role in developing and implementing standards, quality assurance routines as well as systems and arrangements for licensing individual surveyors and companies;

(b) There should be public and private sector cooperation in developing standards for surveying, mapping and other appropriate elements in land administration.

#### Session II: Development of modern cadastre/land registration system

20. It is evident that, whatever the degree of land administration development in the ECE member States, new technology plays a major role in the organization, technology processes, types of products and customer access

to information. In well-established land administration systems in market economies, initial data conversion from paper records (or old computer systems) to modern systems is a difficult task and a major investment. In countries in transition, where new systems are being introduced and established, new technology could greatly assist the creation of land rights records and cadastral maps.

21. Whatever the contribution of technology to improving management and service delivery, the most important consideration remains the integrity of the land administration system, its place in supporting the constitution of States and its contribution to social stability and economic development.

22. Data exchange and linkage between public institutions holding different registers can yield considerable benefits. It is a great advantage for citizens and for businesses to have one-stop on-line access to public information about land. The modern telecommunication networks facilitate both: networking of decentralized databases, as well as remote access to information held in centralized databases. Access through the Internet already plays an important role in facilitating access to land information, and this should be taken into account by countries in developing their register systems.

23. To maximize the potential for improved management and services in member States, a number of issues should be reviewed, taking account of the successes and constraints already evident from experience or that can be expected in the future:

(a) The importance of knowledge transfer between land administration institutions in the ECE region;

(b) The importance of the ECE member States' cooperating in adapting the new technologies;

(c) The value of technical standards, mainly those established by the Comité européen de normalisation (CEN) and the International Organization for Standardization (ISO);

(d) The importance of considering the legal implications of new technologies, in order to have the optimal benefit of the technological development in land administration;

(e) The potential for using modern technology to link different databases to provide an integrated service to end-users;

(f) The need to establish and maintain coherent metadata about land information held in different databases and by different institutions;

(g) The potential impact of the European Commission green paper on access to public data, which may restrict access to personal information.

24. Recommendations:

- (a) The Meeting of Officials on Land Administration could undertake studies on:
- (i) The impact of new technology on land registration and cadastre development;
  - (ii) The need and the possibilities for standardization in land administration;
  - (iii) Access to information, including a clarification of the impact of the EC green paper;
  - (iv) The potential of using the Internet for land registers and cadastres;
  - (v) The role of private partners in supporting the work of land administration institutions;
- (b) The Meeting should include information on standards in land administration on its Internet site.

Session III: Modern survey technologies and techniques for the real estate cadastre

25. The global positioning system (GPS) provides a precise and low-cost technology for land surveying and the establishment of a geographic information system (GIS). Several countries use photogrammetry and orthophotos in establishing cadastral maps, in particular for rural areas, but it was also reported that these techniques had been used successfully for special tasks in urban areas.

26. Recommendations:

- (a) The selection of land survey techniques, in respect to their geodetic precision, should be based on user demands and economic factors in view of the maintenance requirements;
- (b) GPS is considered to be a cheap, accurate and fast method, in particular for the maintenance of cadastral maps and for establishing reference points for traditional surveying;
- (c) GPS largely reduces the need for permanent reference points and, therefore, provides a significant cost reduction;
- (d) For massive establishment of cadastral maps, as well as for privatization and restitution in countries in transition, photogrammetric mapping, and in particular orthophoto without field survey, is recommended as the most appropriate method for the first step.