

GSDI AND LAND ADMINISTRATION WITHIN EUROPE

High-level Political Support Needed

Administrative reform within Europe has had a tremendous impact on land administration all over the continent. Geo-Spatial Data Infrastructures (GSDI) may bring further improvements. The authors review land policy, land administration and the role of land information within society, and call for high-level political moves towards information sharing.

Examples of administrative reforms within Europe are restoration of the primacy of politics, reduction in ministerial tasking to core business, and improving the output of public institutions by distance steering, decentralisation and de-concentration of institutions. Other methods of improving output include quality assurance programmes, special service projects, restoring democracy and reestablishment of the constitutional state. Management and organisation of the public sector addresses the problem of how an administration can perform best in terms of effectiveness, efficiency, legitimacy and legality. The measure taken in many countries to realise such aims is privatisation and making large operational units more independent. This forces policymakers to become aware of the operational effects, since they will face the problems of establishing service-level agreement with such an independent institution. The requirements to be met by the institutions will be defined by demands on the part of the citizen and private business for improved service, low prices, good quality product and service, and value for money.

Impact on Land Admin

The impact of these developments may also be observed in land administration organisations, for example in The Netherlands, Sweden, England and Wales, Scotland, Lithuania and the Czech Republic. These organisations are highly independent public bodies but operate under the political responsibility of a minister. In all cases, the main underlying rationale is that if these organisations are expected to meet the requirements of customer satisfaction and cost recovery desired by their governments they need a degree of managerial freedom not possible within traditional government structures. These organisations have much in common, despite operating in different countries. They all pay great attention to formulating keen strategic objectives, strategic use of information technology, appropriate IT-infrastructure and systems, workflow management and re-training of staff, all embedded in regular customer survey, quality assurance and cost-benefit monitoring. And in all cases the new goals have impacted heavily on organisational structure and management principles.

Big Earners or Spenders

Another factor is the relationship between land registry and cadastre. Existing institutional arrangements often stem from historical developments. For example, in France, the Scandinavian countries, Poland, Russia, Slovenia, Croatia, Estonia and Bulgaria land registration is the responsibility of the courts supervised by the Ministry of Justice, while the cadastre comes under another ministry or municipalities. In countries such as Germany, Austria, Latvia and Switzerland land registration is done by special Land Book Offices (â€œGrundbuchâ€™), while elsewhere the cadastre comes under public administration. In Spain and Portugal land registration is carried out by private registrar, supervised by the Ministry of Justice, while the cadastre is a fiscal cadastre under the Ministry of Finance. In countries like Albania, Armenia, the Czech Republic, Greece, Hungary, The Netherlands, Italy, Lithuania, Luxembourg, Slovakia, England and Wales, and

Scotland, land registration and cadastre fall within a single organisation. The advantage here is that the process of registration of land and updating cadastral registers and maps can be executed in one run, without problems involved in continuous mutual transfer of relevant data. The World Bank too recognises these efficiency benefits, although countries where the situation is not â€œunifiedâ€™ normally have in place good arrangements for coping with data transfer.

Monopoly and Economy

A related issue is the financial regime. Land registration is a true public monopoly. As parties in the land market are interested in acquiring secure transfer of real rights, they are willing to pay a good price for land registration. In many European countries the cost-benefit ratio of land registration is therefore markedly positive. However, cadastres in their turn face high costs due to the expense of land surveying and map maintenance, not to mention the costs involved in migration from analogue maps to digital databases. If there are no financial arrangements to cover the expenses of the cadastre with the surplus of title offices, the benefit of the system as a whole is difficult to materialise.

Infrastructure Dynamics

Many government tasks involve a substantial element of collecting, processing and disseminating information as part of the decision-making process concerning persons, legal entities, vehicles, ownership, house rent, leases, land use, housing, constructions etc. Government bodies, needing as they do information for sound execution of their given tasks, pursue these informational activities each for

their own purpose. In fact, it is often a matter of duplication of effort. Municipal departments collect data about persons to be used for welfare or employment policies, land-use planning, land-use and land-market control, social housing policy and local taxes. District and province-level departments collect the same data for overall spatial planning, environmental policies and/or water-management. Central government bodies do the same, e.g. for national taxes, construction of transport infrastructure, census, land consolidation, land reform. In macroeconomic terms this results in unnecessarily high government budgets at the expense of economic growth and GDP. In microeconomic terms it means costs for the householder and less return on investment for the business sector. From a foreign investment point of view, exorbitant financial and administrative burdens put off investors.

GSDI within Europe

Data sharing provides a solution to combat the negative effects of multiple data collection, storage and dissemination. This means that government bodies at all levels use data collected by one of them, eradicating the need for each to spend money collecting it themselves. In fact, this is in our view the main challenge of the concept of data infrastructure, here specified as a "geo-spatial data infrastructure". At European Union level the INSPIRE initiative aims at making available relevant, harmonised and quality geographic information to support formulation, implementation, monitoring and evaluation of Community policies with a territorial dimension or impact. The INSPIRE expert group focuses on a stepwise approach: through standardisation, harmonisation towards integration. A country wanting to embark upon co-ordinated management of government information may look to the big data suppliers with nationwide coverage, the national mapping agencies and cadastres, as the obvious organisations to provide leadership.

Vital Interoperability

Work on information infrastructure in practice reveals that the impact of the concept develops along two lines. On the one hand there is a need for what is called "interoperability", the ability to combine and integrate datasets of differing origin; on the other hand the need for government to reorganise its own datasets, which are generally recognised as being of fundamental importance. At the moment, the Open Geospatial Consortium (OGC) is working hard to generate industry standards. Information operability means that systems know that what is called a 'street' in one information system is the same object that is called a 'highway' in another. Without national agreements on how to deal with this issue, data sharing and integration of data will be difficult. From a political point of view, this means that if data suppliers in any country fail to solve this problem by themselves ("self-regulation"), they should be forced to do so by political decisions. Governments within Europe are developing so-called "authentic (or base) registers". The governments guarantee base registers regarding availability, access, continuity, up-to-date condition, quality and price.

Land and Society

Land administration activity is not an end in itself but facilitates the implementation of land management policies. So the way land administration should work depends on requirements defined by the various instruments at the disposal of government to allow appropriate implementation of its land policy. Unlike many other geographic information systems that provide information about geographical objects and their attributes, land administration systems in principle reflect the social relationships between people and land recognised by any particular community or state. Such a system is therefore in no way "just a GIS". Data recorded in a land administration system has social and legal connotations and is based on accepted social concepts concerning owners, rights and land objects. It is irrelevant whether these concepts are laid down in the law or in unwritten customs. Institutional aspects are of paramount importance. The legal framework for issues concerning land, and the mandates and tasks entrusted to public administration to allow performance of land administration, determine how the system should function. Land policy reflects the way in which a government wants to deal with the issue of land within a framework of sustainable development. Land administration systems support implementation of (the most important) land policy instruments:

- improvement of land tenure security
- regulation of land markets
- implementation of urban and rural land-use planning, development and maintenance
- provision of a base for land taxation
- management of environmental resources.

Focusing on land taxation, a study of European Land Tax Systems in 23 countries revealed that they all levy some sort of land tax. In the majority of cases the countries have a cadastral system for the recording of property-related information.

Problems and Barriers

As far as the legal frameworks of European countries are concerned, quite big changes are necessary to include digital lodgement of legal documents and electronic signatures. Land laws are normally focused on analogue working processes that exclude legal validity of other forms e.g. digital ones. Another legal issue concerns copyright and pricing of electronic data, which seems in conflict with free dissemination of data over the internet. Not many countries have yet effectively solved this problem. The same is true of solving enforcement of standards establishing interoperability.

Regarding operational issues, many European land administration organisations have information systems that have now been in place for ten to twenty years and, although still working well, may be reasonably considered old-fashioned, whilst maintenance becomes more and more complex and the costs thereof higher and higher. This places a heavy burden on IT-capacity and budget. These organisations are now increasingly faced with rapid developments in technology. A technology push towards internet, geo-databases, modelling standards, open systems and GIS, as well as a growing demand for new services; a market pull towards enhanced user requirements, e-governance, sustainable development, electronic conveyance, integration of public data and systems. The impact of all this upon organisational structures and staff skills is not always well understood.

At information level the main reasons for lack of data availability are that data is too expensive, is not usable, there is lack of market transparency, exaggerated expectations of hard and software, limited user rights, exaggerated expectations of personnel and over-complicated ordering, delivery and payment arrangements.

Political Attention

Firstly, political attention pertains to the political decision to embark upon co-ordinated information management within government in order to reap the economic benefits of data sharing and data integration. A system of well co-ordinated base registers is beneficial for government and might also lead to value-adding activities on the part of the information industry that contribute to economic growth. Secondly, this concerns the development of laws that facilitate the use of electronic signatures and recognise the legal authenticity of

electronic documents. Thirdly, the implementation of all this depends on how active the leadership of all involved organisations is in pursuing change management in order to cope with the changes necessary. Politically responsible ministers should place this necessary change high on their agenda.

Further Reading

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- Proceedings FIG Symposium on IT renewal
- Deiniger, K., 2003, Land Policies for Growth and Poverty Reduction, a World Bank Research Report, Oxford Press, 2003.
- GTZ, 1998, Land Tenure in Development Co-operation, Wiesbaden, 1998.
- UN/ECE, 2001, Inventory Land Administration Systems, London, 2001.

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