Sustainable Land Governance

This paper provides the concept of land administration systems for dealing with rights, restrictions and responsibilities in future spatially enabled government. Readers may recall the first part of the paper in November 2009 issue. Here is the concluding part.

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Property restrictions

Ownership and long term leasehold are the most important rights in land. The actual content of these rights may vary between countries and jurisdictions, but in general the content is well understood. Rights to land also include the rights of use. This right may be limited through public land use regulations and restrictions, sectoral land use provisions, and also various kind of private land use regulations such as easements, covenants, etc. Many land-use rights are therefore in fact restrictions that control the possible future use of the land. Land-use planning and restrictions are becoming increasingly important as a means to ensure effective management of land-use, provide infrastructure and services, protect and improve the urban and rural environment, prevent pollution, and pursue sustainable development. Planning and regulation of land activities cross-cut tenures and the land rights they support. How these intersect is best explained by describing two conflicting points of view – the free market approach and the central planning approach.

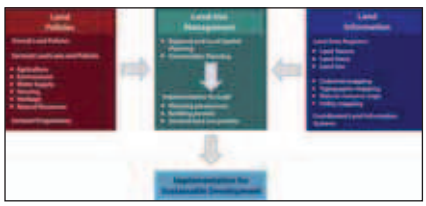

Fig. 5 Integrated land-use management for sustainable development (Enemark, 2004).

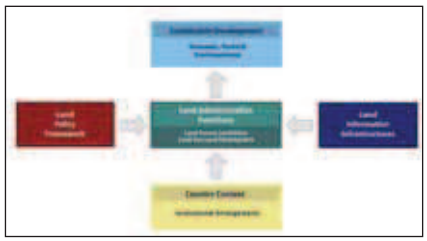

Fig. 6 The Land Management Paradigm (Enemark, 2004)

The free market versus the central planning approach

The property rights activists, most of them influenced by private ownership viewpoints, argue that land owners should be obligated to no one and should have complete domain over their land. In this extreme position, the government opportunity to take land (eminent domain), or restrict its use (by planning systems), or even regulate how it is used (building controls) should be non-existent or highly limited. Proponents argue that planning restrictions should only be imposed after compensation for lost land development opportunities is paid (Jacobs 2007).

Throughout the European territory, another view appeared. In this, the role of a democratic government includes planning and regulating land systematically for public good purposes. Regulated planning is theoretically separated from taking private land with compensation and using it for public purposes. In these jurisdictions the historical assumption that a land owner could do anything than was not expressly forbidden by planning regulations changed into the different principle that land owners could do only what was expressly allowed, everything else being forbidden.The tension between these two points of view is especially felt by nations seeking economic security. The question however is how to balance owners' rights with the necessity and capacity of the government to regulate land use and development for the best of the society. The answer to this is found in a country's land policy which should set a reasonable balance between the ability of land owners to manage their land and the ability of the government to provide services and regulate growth for sustainable development.

Environmental concerns

Environmental policies should emphasise that economic growth can be achieved simultaneously with improvements to the environment. Industries must be able to absorb - constructively and economically - environmental considerations into their development. Policies may be based on the "polluter pays principle" which is internationally recognized. Enterprises should be located at a site causing least possible pollution and should adopt the measures necessary to prevent pollution to the greatest possible extent. These principles are the basis of recent global/ national carbon trading initiatives.

Informal development

Informal development may occur in various forms such as squatting where

vacant state-owned or private land is occupied and used illegally for housing or any construction works without having formal permission from the planning or building authorities.

There is no simple solution to the problems of preventing and legalising informal development. The problems relate mainly to the national level of economic wealth in combination with the level of social and economic equity in society, while the solutions relate to the level of consistent land policies, good governance, and well established institutions. Guidance for solutions can be found in the concept of integrated land-use management as presented below with a focus on the means of decentralisation, comprehensive planning, and public participation. Although some occurrences of illegal development, such as in post conflict situations, may be difficult to stop, many other forms of illegal development could be significantly reduced through government interventions supported by the citizens. (Enemark and McLaren, 2008).

Integrated Land-Use Management

Integrated land-use management is based on land policies laid down in the overall land policy laws including the cadastral and land registration legislation and planning and building legislation. These laws identify the institutional principles and procedures for the areas of land and property registration, land-use panning, and land development. These laws identify the objectives within the various areas and the institutional arrangements to achieve these objectives through permit procedures, information policies, dispute handling, and so on.

Importantly, a mature system of comprehensive planning control needs to be based on appropriate and updated land use data systems, especially the cadastral register, the land book, the property valuation register, the building and dwelling register, etc. These registers need to be organized to form a network of integrated subsystems connected to the cadastral and topographic maps to form a national spatial data infrastructure for the natural and built environment.

Property responsibilities

Property responsibilities relate to a more social, ethical commitment or attitude to environmental sustainability and good husbandry. Individuals and other actors are supposed to treat land and property in a way that conform to cultural traditions and ways of good ethical behaviour. This relates to what is accepted both legally and socially. Therefore, the systems for managing the use of land vary throughout the world according to historical development and cultural traditions. More generally, the human kind to relationship is to some extent determined by the cultural and administrative development of the country or jurisdiction.

This relates to cultural dimensions as described by the Dutch scientist Gert Hofstede, especially the dimensions of: Uncertainty avoidance, that is the preference of structured situations over unstructured or flexible ones; and Power distance, that is the degree of inequality among people accepted by the population (Gert Hofstede, 2001). These cultural dimensions determine the social and ethical behaviour of people also in relation to the way land can be hold and used within a given culture. Systems of land tenure and land-use control therefore vary throughout the world according to such cultural differences.

Social responsibilities of land owners have a long heritage in Europe. In Germany, for example, the Constitution is insisting on the land owner´s social role. In general Europe is taking a comprehensive and holistic approach to land management by building integrated information and administration systems. Other regions in the world such as Australia creates separate commodities out of land, using the concept of "unbundling land rights", and is then adapting the land administration systems to accommodate this trading of rights without any national approach (Williamson and Wallace, 2007).

Land governance

Arguably sound land governance is the key to achieve sustainable development and to support the global agenda set by adoption of the Millennium Development Goals (MDGs). Land governance is about the policies, processes and institutions by which land, property and natural resources are managed. This includes decisions on access to land, land rights, land use, and land development. Land governance is basically about determining and implementing sustainable land policies.

Land governance underpins distribution and management of a key asset of any society namely its land. For western democracies, with their highly geared economies, land management is a key activity of both government and the private sector. Land management, and especially the central land administration component, aim to deliver efficient land markets and effective management of the use of land in support of economic, social, and environmental sustainability.

The land management paradigm as

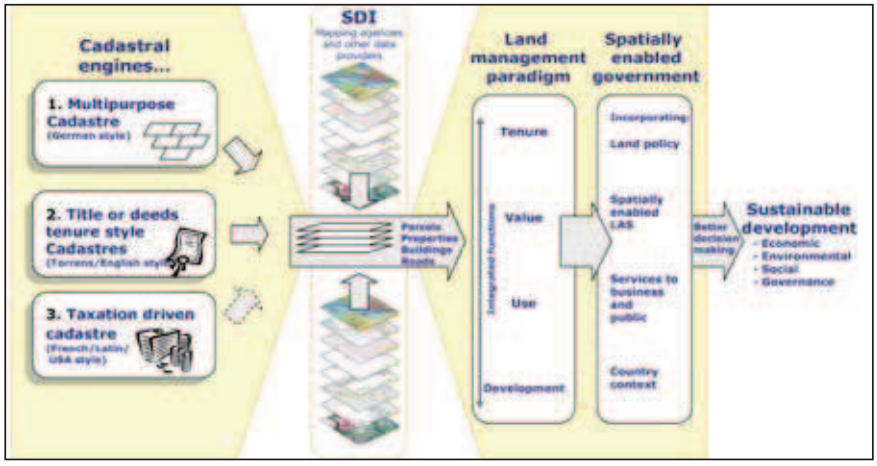

Fig. 7 Significance of the Cadastre (Williamson and Wallace, 2007)


Single data
Multiple use
Land, Water & Ocean Studies
23.5 m
LISS III Sensor
NRSC Data Centre
National Remote Sensing Centre
Phone: +91(40)2388 4422, 4423, 4425
Fax: +91(40)2387 8158, 8664
Email: sales@nrsc.gov.in
Website: http://www.nrsc.gov.in

illustration in Figure 6 allows everyone to understand the role of the land administration functions (land tenure, land value, land use, and land development) and how land administration institutions relate to the historical circumstances of a country and its policy decisions. Importantly, the paradigm provides a framework to facilitate the processes of integrating new needs into traditionally organised systems without disturbing the fundamental security these systems provide. A Land Administration System designed in this way forms a backbone for society and is essential for good governance because it delivers detailed information and reliable administration of land from the basic foundational level of individual land parcels to the national level of policy implementation. And the system includes all rights, restrictions and responsibilities.

Spatially enabled government

Spatially enabled government is achieved when governments use place as the key means of organising their activities in addition to information, and when location and spatial information are available to citizens and businesses to encourage creativity.

Google Earth is good example of providing user friendly information in a very accessible way. We should consider the option where spatial data from Google Earth are merged with built and natural environment data. This unleashes the power of both technologies in relation to emergency response, taxation assessment, environmental monitoring and conservation, economic planning and assessment, social services planning, infrastructure planning, etc. This is related to institutional challenges with a range of stakeholder interests. This includes Ministries/Departments such as: Justice; Taxation; Planning; Environment; Transport; Agriculture; Housing; Interior (regional and local authorities); Utilities; and civil society interests such as businesses and citizens. Creating awareness of the benefits of developing a shared platform for Integrated Land Information Management takes time and patience. The Mapping/Cadastral Agencies have a key role to play in this regard. The technical core of Spatially Enabling Government is the spatially enabled cadastre.

Significance of the Cadastre

The land management paradigm makes a national cadastre the engine of the entire LAS, underpinning the country's capacity to deliver sustainable development. The role of the cadastre as the engine of LAS is neutral in terms of the historical development of any national system, though systems based on the German and Torrens approaches, are much more easily focused on land management than systems based on the French/Latin approach.

The cadastre as an engine of LAS is shown diagrammatically in Figure 7. The diagram highlights the usefulness of the large scale cadastral map as a tool by

exposing its power as the representation of the human scale of land use and how people are connected to their land. The digital cadastral representation of the human scale of the built environment, and the cognitive understanding of land use patterns in peoples' farms, businesses, homes, and other developments, then form the core information sets that facilitate a country building an overall administrative framework to deliver sustainable development in a country. The diagram demonstrates that the cadastral information layer cannot be replaced by a different spatial information layer derived from geographic information systems (GIS). The unique cadastral capacity is to identify a parcel of land both on the ground and in the system in terms that all stakeholders can relate to, typically an address plus a systematically generated identifier (given addresses are often duplicated or are otherwise imprecise). The core cadastral information of parcels, properties and buildings, and in many cases legal roads, thus becomes the core of SDI information, feeding into utility infrastructure, hydrological, vegetation, topographical, images, and dozens of other datasets.

Good governance

Governance refers to the manner in which power is exercised by governments in managing a country's social, economic, and spatial recourses. It simply means: the process of decision-making and the process by which decisions are implemented. This indicates that government is just one of the actors in governance. The concept of governance includes formal as well as informal actors involved in decision-making and implementation of decisions made, and the formal and informal structures that have been set in place to arrive at and implement the decision.

Good governance is a qualitative term or an ideal which may be difficult to achieve. The term includes a number of characteristics e.g. as identified in the UN-Habitat Global Campai n Urban Governance. The characteristics or norms are as follows (adapted from FAO, 2007):

- Sustainable and locally responsive: It balances the economic, social, and environmental needs of present and future generations, and locates its service provision at the closest level to citizens.
- Legitimate and equitable: It has been endorsed by society through democratic processes and deals fairly and impartially with individuals and groups providing non-discriminatory access to services.
- Efficient, effective and competent: It formulates policy and mplements it efficiently by delivering services of high quality
- Transparent, accountable and predictable: It is open and demonstrates stewardship by responding to

questioning and providing decisions in accordance with rules and regulations.

- Participatory and providing security and stability: It enables citizens to participate in government and provides security of livelihoods, freedom from crime and intolerance.

- Dedicated to integrity: Officials perform their duties without bribe and give independent advice and judgements, and respects confidentiality. There is a clear separation between private interests of officials and politicians and the affairs of government.

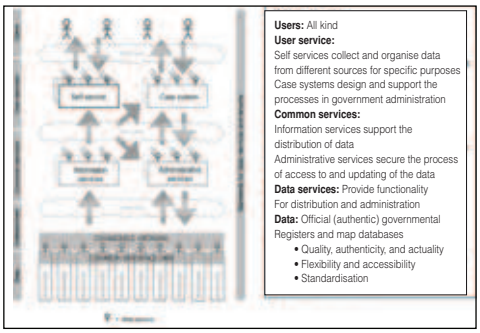

Fig. 8 The Danish concept for service-oriented IT-architecture

Once the adjective "good" is added, a normative debate begins. In any case, almost all kind of government includes a spatial component. In other words: Good governance and sustainable development is not attainable without sound land administration or - more broadly – sound land management.

Good e-Government

"E-Government" refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government (World Bank website). These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

E-government is about changing how governments work, share information, and deliver services to external and internal clients. It harnesses information and communications technology to transform relationships with citizens and businesses, and between arms of government. Benefits can include reduced corruption, increased transparency, greater convenience, higher revenues, and lower costs. But these benefits do not result solely from the use of information and communications technology. Instead, e-government initiatives should be part of broader reforms to improve public sector performance in:

Delivering services to citizens. E-government can benefit citizens by reducing delays, consolidating multiple services under one roof, eliminating the need for frequent visits to government offices, and containing corruption. In addition, publishing rules and procedures online can increase transparency.

Delivering services to businesses. Businesses often face significant administrative roadblocks when interacting with government. Rules can be made transparent and consistent across departments. Transaction costs for both businesses and government can be reduced. And government can benefit from more efficient revenue collection.

Increasing efficiency. E-government can lead to higher productivity. Governments can cut staff or redeploy workers in more productive tasks. Da ta captured by an electronic system often enables more frequent and accurate data sharing across departments, closer monitoring of employee productivity, easier identification of pressure points for delay and corruption, and improved compilation of historical data that can be mined for policy analysis (World Bank, 2004) .

Knowledge management in e-Government

The concept of Knowledge Management is about optimising the use of the basic asset of any organisation namely knowledge. Knowledge Management is basically an integrated approach to managing the information assets of an organisation/ enterprise. These information assets may include databases, documents, policies, procedures, or just knowledge stored in the individual's heads. Knowledge Management, this way, is just common sense. However, in reality, the state of knowing or having access to the right knowledge at the right time is a real and important business advantage.

However, in relation to e-Government knowledge management is then basically about designing and implementing suitable spatial data infrastructures or, more particularly, it is about designing and implementing a suitable IT-architecture for organising spatial information that can improve the communication between administrative systems and also establish more reliable data due to the use the original data instead of copies. In Denmark, such governmental guidelines for service-oriented architecture e-government are recently adopted.

The key elements are: (i) Flexibility and accessibility which facilitates decision-making at all levels, (ii) Quality, authenticity and actuality due to direct access for reading and updating in the basic databases, and (iii) Standardisation through homogeneously selection of communications and exchange standards such as XML etc. This is currently being applied in the area of land administration through close cooperation between the agencies and stakeholders involved.

Final remarks

No nation can build land management institutions without thinking about integration of activities, policies, and approaches. Technology opportunities provide additional motivation. Careful management of land related activities on the ground are crucial for delivery of sustainability.

Land administration systems, in principle, reflect the social relationship between people and land recognized by any particular jurisdiction or state. Such a system is not just a GIS. On the other

hand, Land Administration Systems are not an end in itself but facilitate the implementation of the land policies within the context of a wider national land management framework.

Land administration activities are, not just about technical or administrative processes. The activities are basically political and reflect the accepted social concepts concerning people, rights, and land objects with regard to land tenure, land markets, land taxation, land-use control, land development, and environmental management. Land administration systems therefore need high-level political support and recognition.

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