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Towards a Global Partnership for Capacity Building in Land Administration

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All countries have to deal with the management of land and the people to land relationship. They have to deal with the four functions of land tenure, land value, land use, and land development in some way or another.

This paper provides an overall understanding of land administration in support of sustainable development. The paper also examines the capacity building concept and underpins the need for institutional development to facilitate the design and implementation of efficient land administration in support of good governance and sustainability.

In Western cultures it would be hard to imagine a society without property rights and land-use planning control basic drivers for development and economic growth. However, in many countries, and especially developing countries and countries in transition, the national capacity to manage land rights, restrictions and responsibilities is not well developed in terms of mature institutions and the necessary human resources and skills.

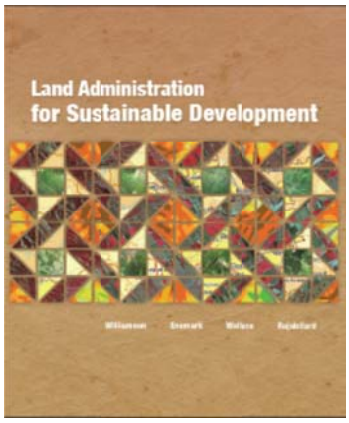
This calls for increased international co-operation towards a global partnership for capacity building in land administration.

1. INTRODUCTION

Imagine a country without any basic administration of land – their key asset. Imagine that tenure to land and property cannot be secured, and that mortgage loans cannot be established as a basis for property improvement and business development. Imagine that the use and development of land is not controlled through overall planning policies and regulations. And imagine a slum area of 250 hectares with more than 1 million inhabitants lacking the most basic occupation rights and without basic water and sanitary services.

Land administration systems (LAS) are about addressing these problems by providing a basic infrastructure for implementing land related policies and land management strategies to ensure social equity, economic growth and environmental protection. A system may involve an advanced conceptual framework supported by sophisticated ICT models as in many developed countries; or it may be through very fragmented and basically analogue approaches that are found in less developed countries.

Until 2008 the developed world often took land administration for granted and paid little attention to it. But the global economic collapse has sharply focused world attention on mortgage policies and processes and their related complex commodities, and on the need for adequate and timely land information. Simply, information about land and land market processes that can be derived from effective land administration systems plays a critical role in all economies (Williamson, Enemark, Wallace, Rajabifard, 2010).



The recent book "Land Administration for Sustainable Development" (Williamson, Enemark, Wallace, Rajabifard, 2010) explores the capacity of the systems that administer the way people relate to land. A land administration system provides a country with the infrastructure to implement land policies and land management strategies. From the origin of the cadastre in organising land rights to the increasing importance of spatially enabled government in an ever changing world, the book emphasises the need for strong geographic and land information systems to better serve our world

An overall theme in the book is about developing land administration capacity to manage change. For many countries, meeting the challenges of poverty alleviation, economic development, environmental sustainability, and management of rapidly growing cities, are immediate concerns. For more developed countries, immediate concerns involve updating and integrating agencies in relatively successful land administration systems, and putting land information to work for emergency management, environmental protection, economic decision making, and so on.

2. LAND ADMINISTRATION SYSTEMS

A Land administration system (LAS) provides a country with the infrastructure to implement land-related policies and land management strategies. But land administration is not a new discipline. It has evolved out of the cadaster and land registration areas with their specific focus on security of land rights. Consolidation of land administration as a discipline in the 1990s reflected the introduction of computers and their capacity to reorganize land information. The UNECE viewed land administration as referring to "the processes of determining, recording and disseminating information about the ownership, value and use of land, when implementing land management policies"(UN-ECE, 1996)..

For the first time, efforts to reform developing countries, to assist countries in economic transition from a command to a market-driven economy, and to help developed countries improve LAS could all be approached from a single disciplinary standpoint, at least in theory. That is, to manage land and resources "from a broad perspective rather than to deal with the tenure, value, and use of land in isolation" (Dale and McLaughlin 1999, preface).

The focus on information remains but the need to address land management issues systematically pushes the design of LAS toward an enabling infrastructure for implementing land policies and land management strategies in support of sustainable development. In simple terms, the information approach needs to be replaced by a model capable of assisting design of new or reorganized land administration systems to perform the broader and integrated functions now required. Such a global land administration perspective is presented in figure 1 below.

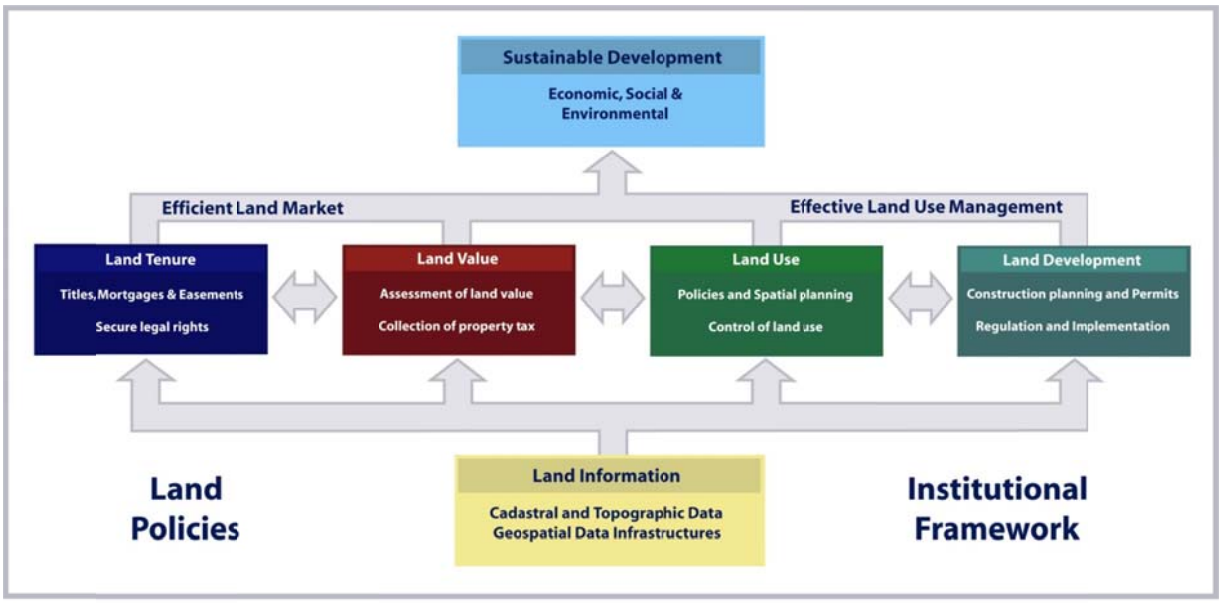


Figure 1. A Global land administration perspective (Enemark, 2004)

The four land administration functions (land tenure, land value, land use, and land development) are different in their professional focus. However, even if land administration is traditionally centered on cadastral activities in relation to land tenure and land information management, modern land administration systems designed as described in figure 1 deliver an essential

infrastructure and encourage integration of the processes related to land tenure (securing and transferring rights in land and natural resources); land value (valuation and taxation of land and properties); land use (planning and control of the use of land and natural resources); and, increasingly important, land development (implementing utilities, infrastructure and construction planning). Inevitably, all four functions are interrelated. The interrelations appear because the conceptual, economic, and physical uses of land and properties serve as an influence on land values. Land values are also influenced by the possible future use of land determined through zoning, land-use planning regulations, and permit-granting processes. And land-use planning and policies will, of course, determine and regulate future land development.

The four functions interact to deliver overall policy objectives, and they are facilitated by appropriate land information infrastructures that include cadastral and topographic datasets linking the built environment (including legal and social land rights) with the natural environment (including topographical, environmental, and natural resource issues). Land information should, in this way, be organized through Spatial Data Infrastructures (SDI) at the national, regional, federal, and local level, based on relevant policies for data sharing, cost recovery, access to data, data models, and standards.

Ultimately, the design of adequate systems of land tenure and land value should support efficient land markets capable of supporting trading in simple and complex commodities. The design of adequate systems to deliver land-use control and land development should lead to effective land-use management. The combination of efficient land markets and effective land-use management should support economic, social, and environmental sustainable development.

4. TEN LAND ADMINISTRATION PRINCIPLES

Despite the uniqueness of local systems, the range of cognitive frameworks about land, and difficulties in transferring institutions, design of robust and successful LAS is possible. The ten land administration statements in figure 2 below set boundaries for designers, builders and managers of LAS to help them make decisions about their local system. Overall, the statements are written with the goal of making establishment and reform of LAS easier. The statements implement the modern philosophy in land administration to develop and manage assets and resources within the land management paradigm to deliver sustainable development. They are universally applicable. Countries at early stages of development will not be able to use the full array of technical options or specialist skills, but they can improve their land management through appropriately designed LAS.

The statements reflect a holistic approach for any LAS, and focus on sustainable development as the overriding policy for any national system, irrespective of whether a country implements property institutions, communal land arrangements, or socializes its land. They highlight the importance of information and participation of people. They set the framework in which the historical development of familiar ingredients, like cadastres and land registries, can be meshed with recent innovations, particularly incorporation of social tenures, new complex commodities appearing in highly organised land markets, and the technical potential of spatial information.

1. LAS	**LAS provide the infrastructure for implementation of land polices and land management strategies in support of sustainable development.** The infrastructure includes institutional arrangements, legal frameworks, processes, standards, land information, management and dissemination systems, and technologies required to support allocation, land markets, valuation and control of use and development of interests in land.
2. Land management paradigm	**The land management paradigm provides a conceptual framework for understanding and innovation in land administration systems.** The paradigm is the set of principles and practices that define land management as a discipline. The principles and practices relate to the four functions of LAS, namely land tenure, land value, land use and land development, and their interactions. These four functions underpin the operation of efficient land markets and effective land use management. "Land" encompasses natural and built environment including land and water resources.
3. People and institutions	**LAS is all about engagement of people within the unique social and institutional fabric of each country.** This encompasses good governance, capacity building, institutional development, social interaction and a focus on users, not providers. LAS should be re-engineered to better serve the needs of users, such as citizens, governments and businesses. Engagement with the society, and the ways people think about their land, are core. This should be achieved through good governance in decision making and implementation. This requires building the necessary capacity in individuals, organisations and wider society to perform functions effectively, efficiently and sustainably.
4. Rights, restrictions and responsibilities	**LAS are the basis for conceptualising rights, restrictions and responsibilities (RRR) related to policies, places and people.** Rights are normally concerned with ownership and tenure whereas restrictions usually control use and activities on land. Responsibilities relate more to a social, ethical commitment or attitude to environmental sustainability and good husbandry. RRR must be designed to suit individual needs of each country or jurisdiction, and must be balanced between different levels of government, from local to national.
5. Cadastre	**The cadastre is at the core of any LAS providing spatial integrity and unique identification of every land parcel.** Cadastres are large scale representations of how the community breaks up its land into useable pieces, usually called parcels. Most cadastres provide security of tenure by recording land rights in a land registry. The spatial integrity within the cadastre is usually provided by a cadastral map that is updated by cadastral surveys. The unique parcel identification provides the link between the cadastral map and the land registry, and serves as the basis of any LAS and the land information it generates, especially when it is digital and geocoded. The cadastre should ideally include all land in a jurisdiction: public, private, communal, and open space.

6. LAS are dynamic	**LAS are dynamic.** Dynamism has four dimensions. The first involves changes to reflect the continual evolution of people to land relationships. This evolution can be caused by economic, social and environmental drivers. The second is caused by evolving ICT and globalisation, and their effects on the design and operation of LAS. The third dimension is caused by the dynamic nature of the information within LAS, such as changes in ownership, valuation, land use and the land parcel through subdivision. The fourth dimension involves changes in the use of land information.
7. Processes	**LAS include a set of processes that manage change.** The key processes concern land transfer, mutation, creation and distribution of interests, valuation and land development. The processes, including their actors and their obligations, explain how LAS operate, as a basis for comparison and improvement. While individual institutions, laws, technologies or separate activities within LAS, such as property in land, a land registry, a specific piece of legislation or a technology for cadastral surveying are important in their own right, the processes are central to overall understanding of how LAS operate.
8. Technology	**Technology offers opportunities for improved efficiency of LAS and spatial enablement of land issues.** The potential of technology is far ahead of the capacity of institutions to respond. Technology offers improvements in the collection, storage, management and dissemination of land information. At the same time developments in information and communications technology (ICT) offer the potential for the spatial enablement of land issues by using location or place as the key organiser for human activity.
9. Spatial data infrastructure	**Efficient and effective land administration systems that support sustainable development require a spatial data infrastructure to operate.** The spatial data infrastructure (SDI) is the enabling platform that links people to information. It supports the integration of natural (primarily topographic) and built (primarily land parcel or cadastral) environmental data as a pre-requisite for sustainable development. The SDI also permits the aggregation of land information from local to national levels.
10. Measure for success	**Successful LAS are measured by their ability to manage and administer land efficiently, effectively and at low cost.** The success of LAS is not determined by complexity of legal frameworks or sophisticated technological solutions. Success lies in adopting appropriate laws, institutions, processes and technologies designed for the specific needs of the country or jurisdiction.

Figure 2. Ten land administration principles (Williamson, Enemark, Wallace, Rajabifard, 2010)

4. LAND GOVERNANCE

All countries have to deal with the management of land. They have to deal with the four functions of land tenure, land value, land use, and land development in some way or another. A country's capacity may be advanced and combine all the activities in one conceptual framework supported by sophisticated ICT models; or the capacity may involve very fragmented and basically analogue approaches. Different countries will also put varying emphasis on each of the four functions, depending on their cultural basis and level of economic development.

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. Land governance covers all activities associated with the management of land and natural resources that are required to fulfill political and social objectives and achieve sustainable development.

The cornerstone of modern land administration theory is the land management paradigm in which land tenure, value, use and development are considered holistically as essential and omnipresent functions performed by organised societies. Within this paradigm, each country delivers its land policy goals by using a variety of techniques and tools to manage its land and resources. What is defined as land administration within these management techniques and tools is specific to each jurisdiction, but the core ingredients, cadastres or parcel maps and registration systems, remain foundational. These ingredients are the focus of modern land administration, but they are recognised as only part of a society's land management arrangements. The land management paradigm is illustrated in figure 3 below.

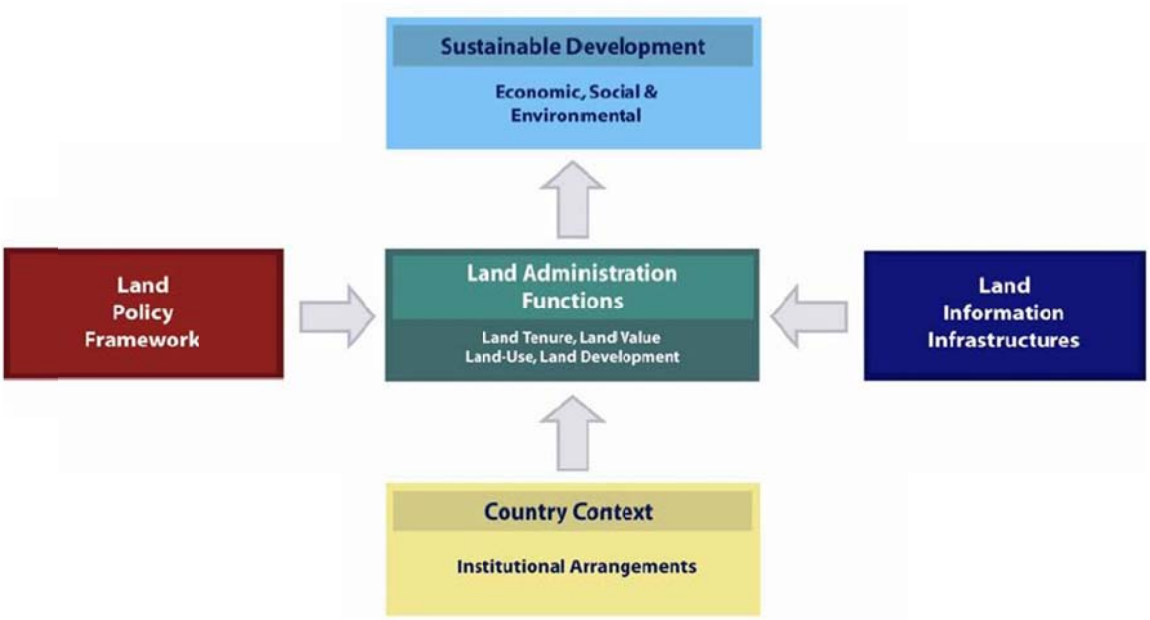


Figure 3. The land management paradigm (Enemark, 2004)

The Land management paradigm 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. While sustainability goals are fairly loose, the paradigm insists that all the core land administration functions are considered holistically, and not as separate, stand-alone, exercises.

Land policy is simply the set of aims and objectives set by governments for dealing with land issues. Land policy is part of the national policy on promoting objectives such as economic development, social justice and equity, and political stability. Land policies vary, but in most countries they include poverty reduction, sustainable agriculture, sustainable settlement, economic development, and equity among various groups within the society.

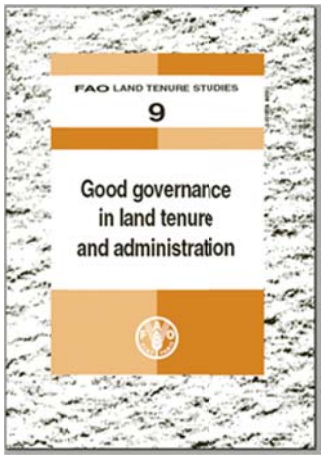
Land management activities reflect drivers of globalization and technology. These stimulate the establishment of multifunctional information systems, incorporating diverse land rights, land use regulations, and other useful data. A third driver, sustainable development, stimulates demands for comprehensive information about environmental, social, economic, and governance conditions in combination with other land related data.

The operational component of the land management paradigm is the range of land administration functions (land tenure, value, use and development) that ensure proper management of rights, restrictions, responsibilities and risks in relation to property, land and natural resources.

Sound land management requires operational processes to implement land policies in comprehensive and sustainable ways. Many countries, however, tend to separate land tenure rights from land use opportunities, undermining their capacity to link planning and land use controls with land values and the operation of the land market. These problems are often compounded by poor administrative and management procedures that fail to deliver required services. Investment in new technology will only go a small way towards solving a much deeper problem: the failure to treat land and its resources as a coherent whole.

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 (adapted from FAO, 2007):



Good governance is:

- *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 implements 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.

Figure 4. Characteristics of good governance (adapted from FAO, 2007).

In short: sustainable development is not attainable without sound land administration or - more broadly - sound land governance.

5. BENEFITS TO SOCIETY

From this global perspective, land administration systems act within adopted land policies that define the legal regulatory pattern for dealing with land issues. They also act within an institutional framework that imposes mandates and responsibilities on the various agencies and organisations. They should service the needs of individuals, businesses, and the community at large. Benefits arise through the land administration systems guarantee of ownership, security of tenure and credit; facilitating efficient land transfers and land markets; supporting management of assets; and providing basic information and efficient administrative processes in valuation, land use planning, land development and environmental protection. LAS 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.

Support for governance and rule of law	The formalization of processes used for land management engage the public and business, and, in turn, this engagement leads to their support for the institutions of government.
Alleviation of poverty	A primary means of alleviating poverty lies in recognizing the homes and workplaces of the poor, and their agricultural land as assets worthy of protection.
Security of tenure	This is the method of protecting peoples' associations with land. It is the fundamental benefit of formal land administration. Ensuring security throughout the range of tenures used in a country helps provide social stability and incentives for reasonable land use. Conversion of some of the rights into property is the core process of commoditization of land needed for effective markets.
Supporting formal land markets	Security and regularity in land arrangements are essential for successful, organized land markets. LAS manage the transparent processes that assist land exchange and build capital out of land.
Security for credit	International financing norms and banking practice require secure ownership of land and robust credit tenures (that is, tenures which support security interests in land) that can only exist in formal LAS.
Support for land and property taxation	Land taxation takes many forms, including tax on passive land holding, on land based activities, and on transactions. However, all taxation systems, including personal and company taxation, benefit from a national LAS.
Protection of state lands	The coherence of a national LAS is dependent on its coverage of all land. Thus management of public land is assisted by LAS.
Management of land disputes	Stability in access to land requires defined boundaries, titles and interests. If a LAS provides simple, effective processes for achieving these outcomes, land disputes are reduced. The system also needs additional dispute management processes to cover breakdown caused by administrative failure, corruption, fraud, forgery, and transaction flaws.
Improvement of land planning	Land planning is the key to land management, whether the planning is institutionalized within government or achieved by some other means. Impacts of modern rural and urban land uses affect adjoining land and beyond. These impacts need to be understood and managed by effective land planning assisted by LAS.
Development of infrastructure	Construction of power grids, gas supply lines, sewerage systems, roads, and the many other infrastructures that contribute to successful land use, require LAS to balance private rights with these large scale infrastructure projects, whether provided by public or private agencies.
Management of resources and environment	Integration of land and resource uses is a difficult aspect of LAS design. Land and resource titles require complicated and mutually compatible administrative and legal structures to ensure sustainability in short and long terms.
Information and statistical data	Each agency needs to appreciate the importance of information generated through its processes for the public, business and government generally. More importantly, everyone needs to understand the fundamental importance of integrated land information for sustainable development.

Figure 5. Traditional benefits of Land Administration Systems
(Williamson, Enemark, Wallace, Rajabifard, 2010)

6. BUILDING THE CAPACITY

Good governance, comprehensive land policies, and sound land administration institutions are essential components for addressing the problems related to land management and land information infrastructures. Both an efficient land market and an effective means of land-use control must be developed as the basic tools for achieving a sustainable approach.

However, in many countries, and especially less developed countries and countries in transition, the national capacity to manage land rights, restrictions and responsibilities is not well developed in terms of mature institutions and the necessary human resources and skills. In this regard, the capacity building concept offers some guidance for analysing and assessing the capacity needs and for identifying an adequate response to these needs at societal, organisational and individual levels.

The term capacity building is relatively new, emerging in the 1980s. It has many different meanings and interpretations depending upon who uses it and in what context. It is generally accepted that capacity building as a concept is closely related to education, training and human resource development (HRD). However, this conventional understanding has changed over recent years towards a broader and more holistic view, covering social, organisational and educational aspects.

UNDP (1998) offers this basic definition: *"Capacity can be defined as the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainable."* This definition has three important aspects: (i) it indicates that capacity is not a passive state but part of a continuing process; (ii) it ensures that human resources and the way in which they are utilised are central to capacity development; and (iii) it requires that the overall context within which organisations undertake their functions will also be a key consideration in strategies for capacity development. Capacity is seen as two dimensional: capacity assessment and capacity development.

- *Capacity Assessment* or diagnosis is an essential basis for the formulation of coherent strategies for capacity development. This is a structured and analytical process whereby the various dimensions of capacity are assessed within a broader systems context, as well as being evaluated for specific entities and individuals within the system. Capacity assessment may be carried out in relation to donor projects e.g. in land administration, or it may be carried out as an in-country activity of self-assessment.

- *Capacity Development* is a concept that is broader than HRD since it includes an emphasis on the overall system, environment and context within which individuals, organizations and societies operate and interact. Even if the focus of concern is on a specific capacity with an organization to perform a particular function, there must nevertheless always be a consideration of the overall policy environment and the coherence of specific actions with macro-level conditions. Capacity development does not, of course, imply that there is no capacity in existence; it also includes retaining and strengthening existing capacities of people and organizations to perform their tasks. The more complete definition offered by the UNDP and also the OECD for capacity development is:

> *"… the process by which individuals, groups, organisations, institutions and societies increase their abilities to: perform core functions, solve problems, and define and achieve objectives; and to understand and deal with their development needs in a broader context and in a sustainable manner."*

Capacity development in society can, in this regard, be addressed at three levels as outlined by UNDP and summarised in (Enemark and Williamson, 2004):

- *The societal level:* The dimensions of capacity at a societal level may include areas such as policies, legal/regulatory framework, management and accountability perspectives, and the resources available.
- *The organisational level:* At this level, successful approaches to capacity building include the role of the entity within the system, and the interaction with other entities, stakeholders, and clients. The dimensions of capacity may include areas such as mission and strategy, culture and competencies, processes, institutional infrastructures, ITC, and professional institutions.
- *The individual level:* This level addresses the need for individuals and groups of people to function efficiently and effectively within the entity and within the broader system. The dimensions of capacity should include the design of educational and training programmes and courses to meet the identified gaps within the skills base and to provide the appropriate number of qualified staff to operate the systems.

Strategies for capacity assessment and development can be focused on any level, but it is crucial that strategies are formulated on a basis of a sound analysis of all relevant dimensions. Often capacity issues are first addressed at the organisational level. Organisational capacity – such as the capacity of the national cadastral agency or the cadastral infrastructure and processes – is influenced by not only the internal structures, and procedures of the agency, but also by the collective capabilities of the staff on the one hand and a number of external factors on the other. Such external factors may be political, economic or cultural issues that may constrain or support performance, efficiency, and legitimacy as well as the whole level of awareness of the values of land administration systems. By taking this approach, capacity measures can be addressed in a more comprehensive societal context.

Capacity development takes place not just in individuals, but also between them, in the institutions and the network they create – through what has been termed the "social capital" that holds societies together and sets the terms of these relationships. Most technical cooperation projects, however, stop at the individual skills and institution building – they do not consider the societal level (UNDP, 2002).

It should also be noted that capacity building is not a linear process. Whatever the entry point is and whatever the issue currently in focus is, there may be a need to zoom in or out in order to look at the conditions and consequences at the upper or lower level(s). Capacity building should be seen as a comprehensive methodology aimed at providing a sustainable outcome through assessing and addressing a whole range of relevant issues and their interrelationships.

Taking the above approach, capacity is seen as a development outcome in itself and distinct from other program outcomes such as building technical and professional competence in certain fields through HRD activities (Enemark and Williamson, 2004).

The importance of capacity development in surveying and land administration at the organisational level was usefully quantified in Great Britain (OXERA, 1999) by research that found that approximately £100 billion of Great Britain's GDP (12.5% of total national GDP, and one thousand times the turnover of OSGB) relied on the activity of the Ordnance Survey of Great Britain. Less exhaustive studies in other European countries have pointed to similar figures. The importance of geographic information continues to grow, with a range of SDI initiatives at local, national, regional and global level, so there is reason to believe that the figures would be increased rather than reduced if the GB study were to be repeated today. With these very significant numbers, as well as the central importance of sound land management, the importance of solid, sustainable organisations in the field of surveying and land administration is clear (Enemark and Greenway, 2006).

6.1 Capacity building in land administration

Land administration is a cross sectoral and multidisciplinary area that includes technical, legal, managerial, political, economic and institutional dimensions. An adequate response in terms of capacity building measures must reflect this basic characteristic that includes assessment and development at all three levels: societal, organisational and individual. In this regard, a conceptual analytical framework is developed (Enemark and Williamson, 2004) that identifies and analyse the relevant dimensions and options to be considered for building sustainable land administration infrastructures in support of a broader land policy agenda. The framework is shown in the diagram below:

Capacity Building in Land Administration		
Level	Capacity Assessment Issues	Capacity Development Options
Societal Level	▪ Policy dimension ▪ Social and Institutional dimension ▪ System dimension ▪ Legal and regulatory dimension	▪ Land policy issues ▪ Land administration vision ▪ Land administration system ▪ Land tenure principles ▪ Legal principles
Organisational Level	▪ Cultural issues ▪ Managerial and resource issues ▪ Institutional issues and processes	▪ Institutional infrastructures ▪ Spatial data Infrastructures ▪ Professional Institutions
Individual Level	▪ Professional competence ▪ Human resources needs ▪ Educational resources	▪ Education and training programs ▪ CPD programs ▪ Virtual programs ▪ Education and research centre

Figure 6. Capacity Building in land Administration (Enemark and Williamson, 2004)

A good overall approach is to look at the four steps that constitute good strategic management: Where are we now; where do we want to be; how do we get there; and how do we stay there (UNDP, 1998). This approach is in line with the broad capacity building concept which aims to assess, develop and sustain as shown in the diagram below:

Capacity Assessment	Capacity Development	Sustaining
• Are the policies on land management clearly expressed? • Is the legal framework sufficient and adequate? • Are the institutions adequate and are the responsibilities clearly expressed? • Are the guiding principles for good management well expressed? • Are the human resources and skills adequate and are the relevant education and training opportunities available?	• Adoption of an overall land policy • Design of a legal framework addressing the rights, restrictions and responsibilities in land. • Implementation of an organisational framework with clearly expressed duties and responsibilities • Adoption of clearly expressed guiding principles for good governance. • Establishment of adequate and sufficient educational options at all levels.	• Instigation of a self-monitoring culture in which all parties, national and local government, NGOs, professionals and citizens, review and discuss progress and suggest any appropriate changes. • Lessons learnt need to be fed back into the process for continuous improvement. • Implementation of adequate requirements and options for activities of Continuing Professional Development (CPD).

Figure 7. The relations between capacity assessment, capacity development and sustaining (Enemark, 2005)

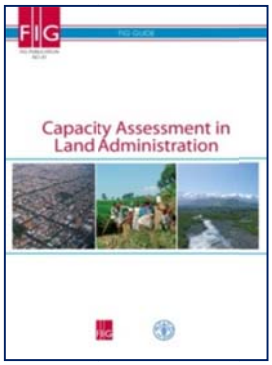
7. CAPAICITY ASSESSMENT IN LAND ADMINISTRATION

The framework presented above relates to donor projects on land reform and the design and implementation of a land administration system to secure rights in land, facilitate an efficient land market, and ensure effective control of the use of land. However, there is also a demand for a framework or some guidelines that will enable the countries themselves to assess the capacity of their systems and identify specific needs for capacity development. These needs may then – within the limited financial resources available – be met by measures of capacity development.

The land administration activity is never an end in itself, but operates within a certain context of land policy, land management and good governance. From a financial point of view this will mean that the investments and costs of a land administration system should be justified by

macro-economic factors (like the importance of land market transactions and industrial and agricultural development towards economic growth) and micro-economic factors (such as land as a collateral for micro credit for households and small businesses on the one hand, and on the other hand paid mortgage interests that underpin the financial institutions).

To put it briefly: capacity needs in land administration are highly influenced by the way governments want to administer the land, and also by the way regulations and organisations are implemented and managed within the country.



Guidelines for Capacity Assessment in Land Administration (FIG/FAO, 2008) are developed to serve as a logical framework for addressing each step from land policy, policy instruments, and legal framework; over mandates, business objectives, and work processes; to needed human resources and training programs. For each step the guidelines pose a number of questions to be considered based on some comments reflecting a best practice approach. For each step the capacity of the system can be assessed and possible or needed improvement can be identified and met also where limited resources are available.

The framework is illustrated in figure 8 below. The basic components include:

- Political objectives and policy instruments with regard to access to land and land related opportunities, and a legal framework that define the private and public status of land in terms of tenure, value and use.
- Mandates allocated to the public administration in order to establish transparent and viable institutions to exercise the legal framework and meeting the needs of businesses and citizens.
- Business objectives, work processes and ICT applications organised to ensure that organisations are capable of meeting the societal demands at lowest possible costs in support of land tenure security, land markets, land use control, management of natural resources, land reform, and other land related social structures
- Managers and employees who are empowered to meet individual demands in terms of skills and professional competence for working efficient and effective and complying with good governance.

Such guidelines are mainly aiming at developing countries as a basis for in-country self-assessment of the capacity needs in land administration. The government may form a group of experts to carry out the analysis, as a basis for political decisions with regard to any organisational or educational measures to be implemented for meeting the capacity needs. It is of course recognised that individual countries are facing specific problems that may not be addressed in these guidelines at all. Hence, the guidelines are meant as a tool for undertaking structured and logical analysis of the capacity needs by posing the right questions rather than providing all the right answers.

Political objectives	**What are the political objectives that relate to access to land and land related opportunities?** Linking land administration systems to political objectives promotes good business focus for land administration organizations, and provides a justification for investments in establishment, maintenance, and good governance.
Land Policy	**Are the political objectives well expressed in the current land policy?** If the way the government wants to allocate the land and the benefits of the land is clear, it provides focus to land administration activities, which will enhance their ability/capacity to fulfil the political objectives.
Policy Instruments	**Which instruments are at the disposition of the government to regulate the land related activities in society regarding Holding rights to land, control of land-use; valuation and taxation of land?** A good link between objectives and instruments provide a good starting point for the clarification of user requirements for land administration systems and thereby the ability/capacity of systems.
Legal Framework	**Does the legal framework provide sufficient legitimization of the government's regulations with regard to Land rights, Land-use, and land value?** A legal framework that legitimizes governmental actions also provides a legally meaningful land administration system, and enhances its use.
Mandates/Tasks	**Are the mandates in place for exertion of land related legal framework? And does the allocation of mandates reflect a well-balanced approach to decentralisation?** The ability/capacity of any land administration system relies on clear mandates. Without a clear and manageable mandate, good performance can never be guaranteed.
Business Objectives	**Are the business objectives for mandated organisations clear and specific? Does the mandate reflect meeting the demands of the customers and other stakeholders?** Are the business objectives for mandated organisations clear and specific?
Work Processes/IT-Support	**Are the work processes for realization of the mandate well defined and manageable? Are the guiding principles for good management clear and understandable at all governmental levels? Are the ICT applications well designed to support the work processes and the business objectives?** Basically capacity is delivered through work processes. Without appropriate attention to work processes, and the structures in which they have to operate, the ability of organizations for a good performance can be questioned.
Needed Human Resources	**Is there a policy in place determining the amount of staff and their required competences? What kind of educational and training resources are currently available?** Assessing and addressing the capacity needs in terms of human resources is of course crucial to the ability/capacity of total the land administration system. Sufficient and adequate educational resources are essential to provide the professional competence required for developing and maintaining appropriate land administration systems.
Training Programs	**What kind of educational development is needed and adequate to address the capacity needs? What kind of professional development is needed and adequate to address the capacity needs?** Land administration systems cannot be developed and sustainable maintained without an adequate and sound educational base. Land administration systems cannot be developed and sustainable maintained without sound professional institutions supporting professional development.

Figure 8. Framework for self-assessment of capacity needs in land administration (FIG, 2008).

8. EDUCATION AND TRAINING

Land administration is basically about people – from politicians, senior professionals and managers, middle managers and administrators, to office staff and field personnel – whether in the public or private sector. In most developing and transition countries the issue of human resources is considered to be the most critical. This is about assessing the need for individuals to function efficiently and effectively within organizations and within the broader system, and it is about addressing the gaps through adequate measures of education and training.

Sufficient and adequate educational resources are essential to provide the professional competence required for developing and maintaining appropriate land administration systems. Therefore, existing programs at university level should be reviewed and assessed against the capacity needs. However, since land administration is a very interdisciplinary area there may not be any adequate educational programs available. A new programme may then be developed and hosted by a faculty providing the right combination of professional and research skills.

Surveying education has traditionally leaned strongly towards engineering. A land management approach to surveying education will, however, need a shift to teaching management skills applicable to interdisciplinary work situations and developing and running appropriate systems of land administration. Surveying and mapping are clearly technical disciplines (within natural and technical science) while cadastre, land management and spatial planning are judicial or managerial disciplines (within social science). The identity of an adequate land administration program should be in the management of spatial data (within natural science), while maintaining links to the technical as well as social sciences.

A future educational profile for land administrators should be composed by the areas of Measurement Science and Land Management and supported by and embedding in a broad interdisciplinary paradigm of Spatial Information Management. Such a profile is illustrated below

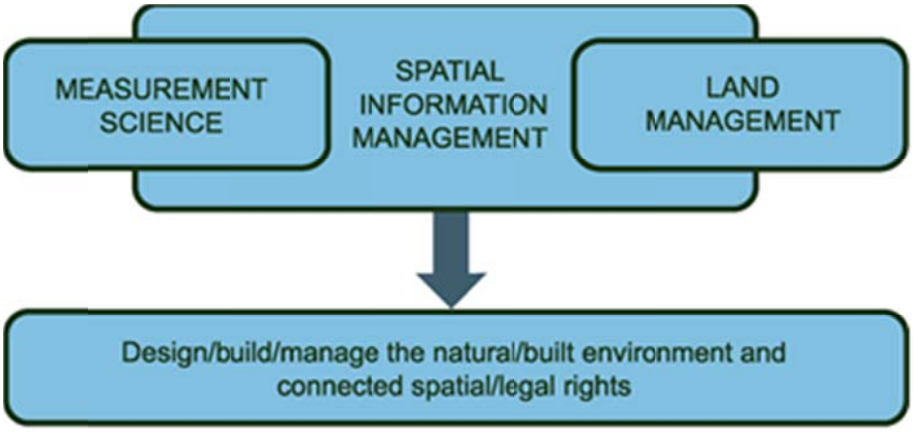
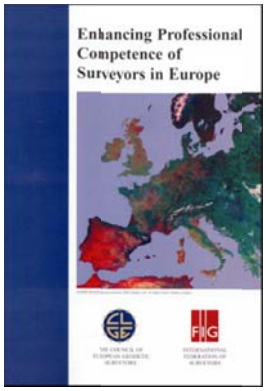


Figure 9. The Educational profile of the future (Enemark in FIG/CLGE, 2001)

The design of in-country programs at diploma, bachelor, and master´s level should consider the immediate short-term needs for well-trained technicians as well as the longer term needs for qualified professionals. Land administration systems cannot be developed and sustainably maintained without an adequate and sound educational base. An overview of educational profiles for land surveyors in Western Europe is provided in the publication on "Enhancing Professional Competence of Surveyors in Europe" (FIG/CLGE, 2001).



The publication provides an overview of surveying programmes in 17 European countries with a detailed analysis of the programmes in 8 selected countries. The analysis focus on the incorporation of four core subjects: Surveying and Mapping; Geographic Information Management; Land Management; and Real Estate Economics. Other subjects such as maths, physics, edp, geology, etc. are also identified. The analysis shows that the profiles of the programmes vary considerably. Rather than looking for a common core curriculum the publication offers to draw from experiences from different country profiles throughout Europe as a basis for enhancing specific country programmes to serve the specific national needs.

Targeted training programs may be designed e.g. at the National Land Administration Agency for enhancing the competence of existing staff and ensure sufficient competence of new staff employed. Such programs should be based on detailed analysis of the profile of the existing staff and the work processes to be undertaken as a basis for assessing the capacity needs to be addressed through the training program. The programs may include a distant training approach at local, regional, national and international level as well as hands-on training at the workplace, and will normally also include a program for training the trainers.

8.1 Professional competence

The term professional competence relates to a status as an expert. This status cannot be achieved only through university graduation and it cannot be achieved solely through professional practice. University graduation is no longer a ticket for a lifelong professional carrier. Today one must qualify constantly just to keep up. The idea of "learning for life" is replaced by the concept of lifelong learning. No longer can "keeping up to date" be optional, it is increasingly central to organisational and professional success.

The response of the surveying profession, and many other professions, to this challenge has been to promote the concept of Continuing Professional Development (CPD) as a code of practice to be followed by the individual professionals on a mandatory or voluntary basis (FIG publication no 15, 1998). The concept may also be applied by public institutions or private companies as a means to ensure on-going professional development.

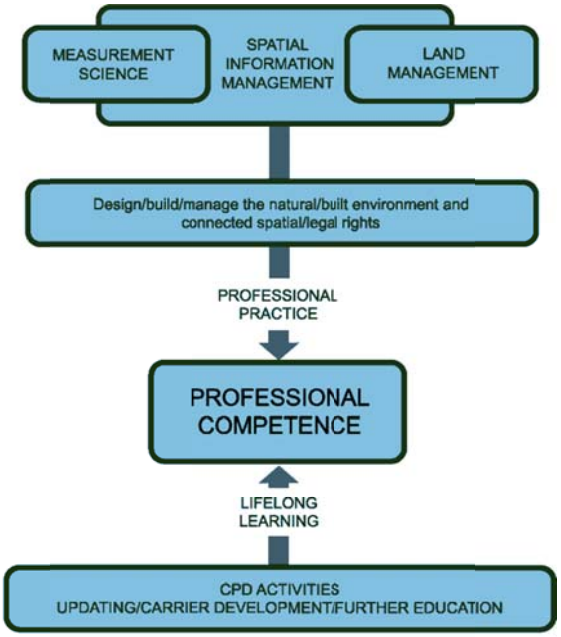


Figure 10. The professional competence model (Enemark in FIG/CLGE 2001)

Furthermore, the individual practitioner should be able to rely on a comprehensive concept for getting his or her professional competence recognised in a regional and global context. There is an attraction in developing and extending such a principle of Mutual Recognition of Professional Qualifications. Mutual recognition allows each country to retain its own kind of professional education and training because the recognition is based, not on the process of achieving professional qualifications, but on the nature and quality of the outcome of that process. In turn this should lead to enhancement of global professional competence of the land professionals (FIG, 2002).

8.2 Professional development and sustainability

A major problem in most land administration projects in developing and transition countries is that the focus is often on the project as such, while the sustainability of the system in the longer term is only sporadically addressed within the project. There is need to ensure sustainability and continuity, and to develop a corporate memory of land administration experience within the country.

It is accepted that appropriately educated personnel and Human Resource Development (HRD) are the keys to sustainability of land administration reform projects. In achieving this objective it is essential to build up resources to support an ongoing HRD strategy and corporate knowledge in land administration. At the same time it is important that a balance is achieved between tertiary education and technical education. Usually technical education is best undertaken by the implementing agency or government technical institutes, while objective policy and technical research and education is better undertaken at a university level.

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A major problem in most land administration projects is that they focus on the project itself rather than the long term. The sustainability of the system is often only sporadically addressed. Ensuring sustainability and continuity and developing a corporate memory within the country of land administration experience are essential for maintaining viability.

Most land administration projects would benefit from establishing a National Education and Research Center in Land Administration as part of any national land administration reform strategy or project. The center should act as an on-going body of knowledge and experience in land administration in the country and use the actual project as a long-term case study and operational laboratory. The center should provide educational programs and supervise the establishment of educational programs at other institutions. The center should interact with international academics and professional bodies to assist the development of local academics (Enemark and Williamson, 2004).

9. TOWARDS A GLOBAL PARTNERSHIP

There is a huge challenge ahead in terms of building the capacity for designing, building and managing appropriate land administration systems in support of sustainable development. This relates especially to many developing and transition countries where the vast part of the population have no access to secure land rights and where land-use and natural resources are not managed in a transparent and sustainable way.

There is a need for developing a global partnership for capacity building in land administration.

Traditionally, land administration projects often have failed to meet the overall objective of building a sustainable national land administration infrastructure. To a large extent, this is because of the complexities involved in addressing national land administration issues. This is not a criticism of these projects — the economic driver has a high priority in developing countries, and only recently has the capacity-building aspect developed into a comprehensive and sustainable methodology.

To address these problems, an equal partnership must be built between doing the project and building the capacity to sustain the project. The past decade of experience delivers a clear lesson: Capacity building must be a mainstream component that is addressed up front, not as an add-on in donor projects related to building and improving land administration infrastructure in developing or transition countries. The same lesson applies to national efforts at building and upgrading land administration systems.

Donors, in general, will often have a long-term vision of what they want to achieve. At the same time, however, they will have to account for the progress of the project to their constituencies and superiors at home. This tends to shape the project in a “manageable” way by using deliverable goals for accountable short-term achievements (such as the number of parcels

registered, number of training courses provided, and so on) while the long-term goals (such as building the institutional capacity, and designing and implementing tertiary educational programs) are more difficult to turn into visible tangible activities. This kind of accounting management will work as a self-justifying system that pumps huge amounts of money into developing countries. At the same time, consultants have a strong interest in maintaining the status quo and have little incentive to criticize the basic system since, if they do, they will risk being replaced by more compliant staff. However, many of the fundamental issues still remain. This is reflected in the new paradigm presented in figure 11 below.

The new paradigm for capacity development is influenced by today's globalized way of knowledge transfer. In developing countries there are often two systems of knowledge and production that exist in parallel: indigenous and modern. When new knowledge is not integrated into indigenous knowledge and production systems, it fails to be useful, despite its potential.

Capacity development is arguably one of the central development challenges of the day, as much of the rest of social and economic progress will depend on it. UNDP offers this understanding of the new capacity building paradigm:

	Traditional paradigm	New paradigm
Nature of development	Improvements in economic and social conditions	Societal transformation, including building of "right capacities"
Conditions for effective development cooperation	Good policies that can be externally prescribed	Good policies that have to be home-grown
The asymmetric donor-recipient relationship	Should be countered generally through a spirit of partnership and mutual respect	Should be specifically addressed as a problem by taking countervailing measures
Capacity development	Human resource development combined with stronger institutions	Three cross-linked layers of capacity: societal, institutional and individual
Acquisition of knowledge	Knowledge can be transferred	Knowledge can be acquired
Most important forms of knowledge	Knowledge developed in the North for export to the South	Local knowledge combined with knowledge acquired from other countries – in the South or the North.

Figure 11. The New Capacity Building Paradigm (adapted from UNDP 2002).

A global partnership for capacity building in land administration should include all relevant actors and stakeholders. The UN agencies such as Wold Bank, UN-HABITAT, and FAO have a key role in setting the agenda to be pursued in a partnership with relevant NGO´s (such as FIG), national aid agencies, lead universities within land administration programs, as well as private software and consultancy companies.

Capacity building and institutional strengthening and sustainability should be addressed up front in all land administration project – not as an add-on; UN-agencies and other organizations (NGO´s) should develop targeted strategies for training and capacity development in key areas of land administration such as institutional strengthening, transparency and good governance, pro-poor land tenure systems; gender equity, etc.; National land administration agencies should initiate capacity assessment and development activities in land administration, and establish training programs to ensure that the relevant competence and skills are available at all levels of management and administration; Lead universities should offer interdisciplinary programs in land administration – to be open also developing countries and funded by national aid agencies; and, finally, global conferences such as WB annual land conferences (see FIG/WB 2010 and Deininger et.al. 2010), FIG working weeks, GSDI conferences, Map World Forum, etc., should be continued…

This global partnership should take the land policy agenda forward in support of sustainable development and the Millennium Development Goals.

10. FINAL REMARKS

The objective of this paper is to build a general understanding of land administration in support of sustainable development and the need for capacity building and institutional development to establish sustainable national concepts in this area. This includes creation and adoption of a comprehensive policy on land development, and a holistic approach to land management that combines the land administration/cadaster/land registration function with the topographic mapping function to control land values and appropriate use of land and natural resources.

This calls for increased international co-operation towards a global partnership for capacity building in land administration

The debate should be aware of the global trends in this area while still recognising that the design of land administration systems and related capacity building concepts will always be country unique due to the different geographic and cultural preconditions and needs of regions and countries.

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BIOGRAPHICAL NOTES

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