THE EIGHTH UNITED NATIONS REGIONAL CARTOGRAPHIC CONFERENCE
FOR THE AMARICAS (UNRCCA)
27 June – 1 July 2005, United Nations Headquarters, New York

Supporting Capacity Development for Sustainable Land Administration Infrastructures

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ABSTRACT

Land management is the process by which the resources of land are put into good effect. Land management encompasses all activities associated with the management of land and natural resources that are required to achieve sustainable development. Land Administration Systems are institutional frameworks complicated by the tasks they must perform, by national cultural, political and judicial settings, and by technology. This paper facilitates an overall understanding of the land management paradigm.

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. 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.

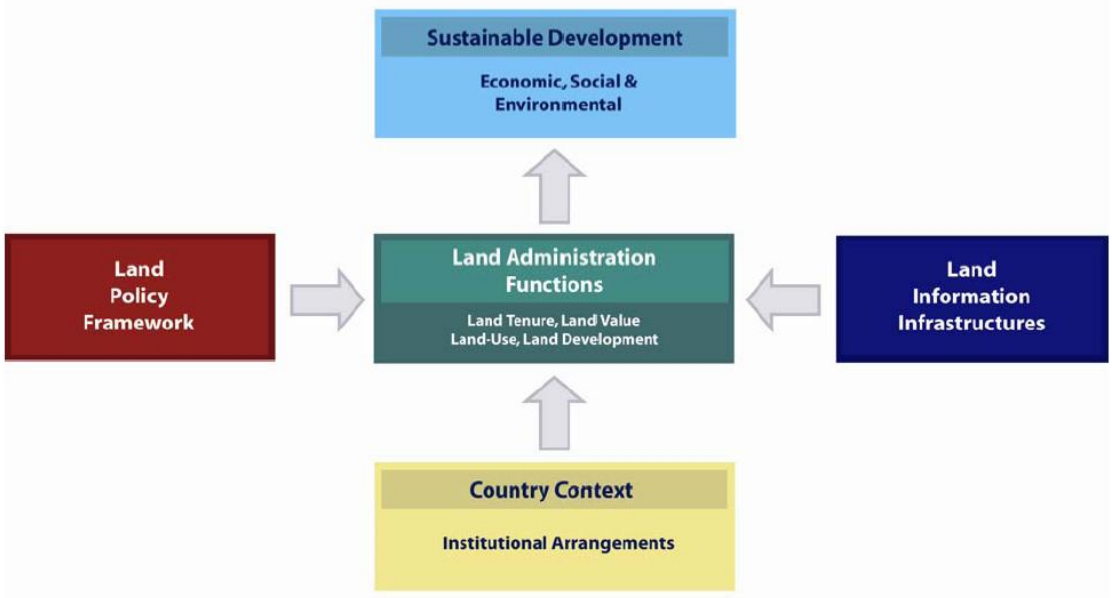
The paper examines the capacity building concept and underpins the need for institutional development to facilitate the design and implementation of efficient Land Administration Models and to support good governance.

Finally the paper identifies the role of FIG in this regard. This includes support for professional, institutional and global development in surveying and land management, and aims to facilitate the creation of sustainable institutional infrastructures.

THE LAND MANAGEMENT PARADIGM

Land management is the process by which the resources of land are put into good effect (UN-ECE 1996). Land management encompasses all activities associated with the management of land and natural resources that are required to achieve sustainable development.

The organisational structures for land management differ widely between countries and regions throughout the world, and reflect local cultural and judicial settings. The institutional arrangements may change over time to better support the implementation of land policies and good governance. Within this country context, the land management activities may be described by the three components: Land Policies, Land Information Infrastructures, and Land Administration Infrastructures in support of Sustainable Development. This Land Management Paradigm is presented in diagram below (Enemark et al., 2005):



The Land Management Paradigm

Land policy is part of the national policy on promoting objectives including economic development, social justice and equity, and political stability. Land policies may be associated with: security of tenure; land markets (particularly land transactions and access to credit); real property taxation; sustainable management and control of land use, natural resources and the environment; the provision of land for the poor, ethnic minorities and women; and measures to prevent land speculation and to manage land disputes.

The operational component of the land management paradigm is the range of land administration functions that ensure proper management of rights, restrictions and responsibilities in relation to property, land and natural resources. These functions include the areas of land tenure (securing and transferring rights in land); land value (valuation and taxation of land and properties); land-use (planning and control of the use of land and natural resources); and land development (utilities, infrastructure, construction planning, permits, and implementation).

Modern Land Administration Systems should facilitate sustainable development - the triple bottom line of economic, social and environmental sustainability - through public participation and informed and accountable government decision-making in relation to the built and natural environments. The land administration functions are based on and are facilitated by appropriate land information infrastructures that include cadastral and topographic datasets and provide access to complete and up-to-date information of the built and natural environment. This is illustrated in the diagram below (Enemark, 2004):

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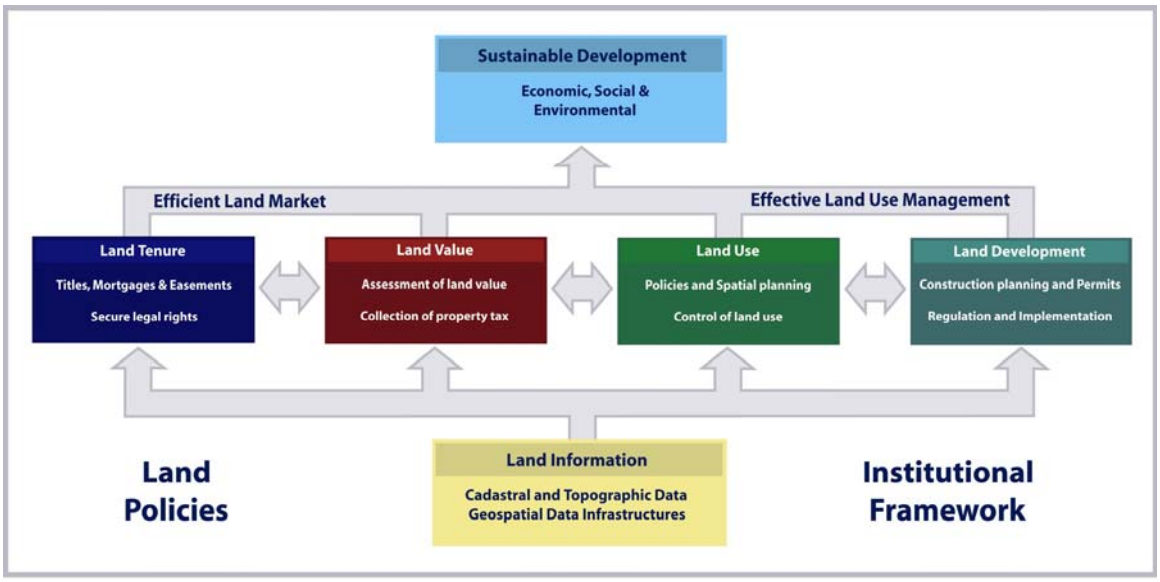


A Global Land Management Perspective. Stig Enemark, April 2004.

A modern Land Administration System is concerned with providing detailed information at the individual land parcel level. It should service the needs of both the individual and the community at large. Benefits arise through its application in guaranteeing of ownership, security of tenure and credit; facilitating efficient land transfers and land markets; supporting management of assets; and providing basic information in processes of physical planning, land development and environmental control. The system, this way, acts as a backbone for society.

These ambitious goals will not be achieved unless there is a commitment to designing and implementing effective land administration infrastructures. These may be described as the organisations, standards, processes, information and dissemination systems and technologies required to support the allocation, transfer, dealing and use of land (UN-FIG 1999). Information and communications technology (ICT) will play an increasingly important role both in constructing the necessary infrastructure and in providing effective citizen access to information. Also, there must be a total commitment to the maintenance and upgrading of the land administration infrastructure.

CAPACITY BUILDING

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 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. 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."* Capacity is seen as two-dimensional:

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, organisations 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 organisations 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; to understand and deal with their development needs in a broader context and in a sustainable manner.*" This definition is generally accepted and adopted by various donors. Capacity development in society can, in this regard, be addressed at three levels as outlined by UNDP:

- *The broader system/societal level.*
  The highest level within which capacity initiatives may be considered is the system or enabling environment level. For development initiatives that are national in context, the system would cover the entire country or society and all subcomponents that are involved. For initiatives at a sectoral level, the system would include only those components that are relevant.
- *The entity/organisational level.*
  An entity may be a formal organisation such as government or one of its departments or agencies, a private sector operation, or an informal organisation such as a community based or volunteer organisation. 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 group of people/individual level.*
  This level addresses the need for individuals to function efficiently and effectively within the entity and within the broader system. HRD is about assessing the capacity needs of people and addressing the gaps through adequate measures of education and training and continuing professional development (CPD) activities.

However, 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. Measures such as education and training become a means to an end while the end itself is the capacity to achieve the identified development objectives over time - such as to establish and maintain national land administration infrastructures for sustainable development (Enemark and Williamson, 2004).

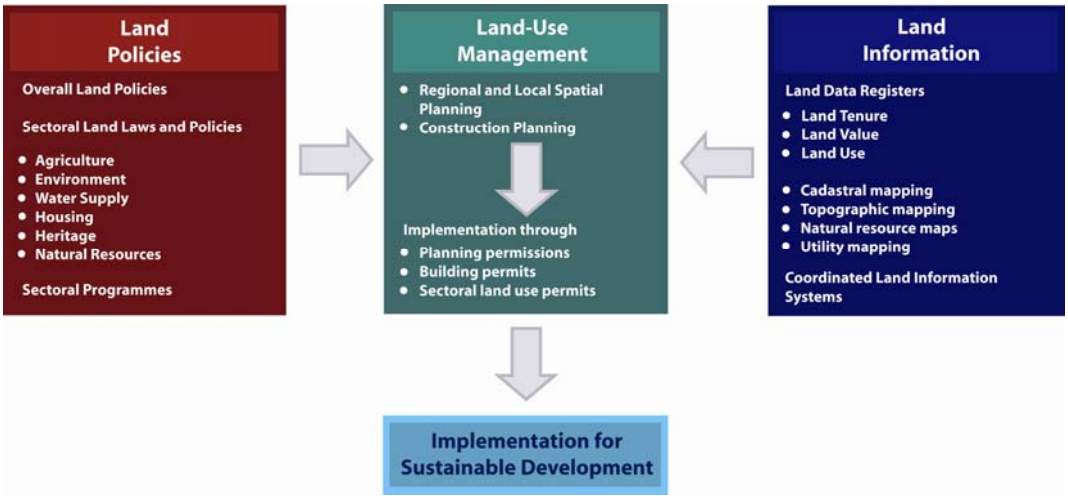
INSTITUTIONAL DEVELOPMENT IN LAND MANAGEMENT

The Land management activities rely on some form of land administration infrastructure that permits the complex range of rights, restrictions and responsibilities in land to be identified, mapped and managed as a basis for policy implementation. In this context there is a whole range of capacity building and HRD principles and options to be considered.

Institutional development in Land Management implies adoption of long-term strategic actions. This includes the need to:

- Establish a strategic approach to donor projects and ensure that capacity building measures are addressed up front – not as an add-on.
- Develop in-country self assessment procedures to identify the capacity needs with regard to urban-rural interrelations, and argue for the necessary measures of capacity development in terms of policies, legal framework, institutional infrastructures, and human resources and skills.
- Promote the creation and adoption of a comprehensive policy on land development and establish a holistic approach to land management that combines the land administration/cadastre/land registration function with the topographic mapping function
- Establish a clear split of duties and responsibilities between national and local government (decentralisation). Ensure that the principles of good governance apply when dealing with rights, regulations and responsibilities with regard to land resources and land development.
- Promote the understanding of land management as highly interdisciplinary that includes a whole range of policy measures such as social, economic, environmental, judicial, and organisational.
- Promote the need for an interdisciplinary approach to ‘surveying education’ that combines both technical and social science and links the areas of measurement science and land management through a strong emphasis on spatial information management.
- Establish strong professional bodies such as a national institution of surveyors who are responsible for the development and control of professional standards and ethics, enhancement of professional competence, and interaction with governmental agencies to develop the optimal conditions and services.
- Promote the need for CPD to maintain and develop professional skills and promote the interaction between education, research and professional practice.

Adoption of a comprehensive policy on land management is crucial since this will drive the legislative reform which in turn results in institutional reform and finally implementation with all its technical and human resource requirements. Such an approach is shown in diagram below (Enemark, 2004):



Integrated Land Use Management for Sustainable Development.

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. 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	Sustainability
• 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).

THE ROLE OF FIG

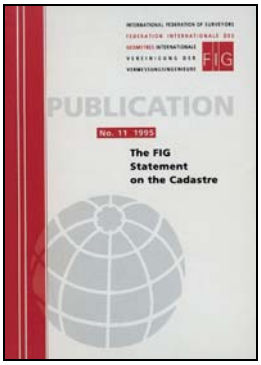
FIG can support the process of building capacity for sustainable land management in three ways:

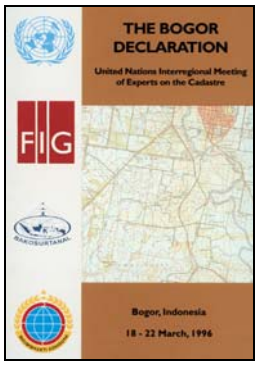
- **Professional development**
  FIG provides a global forum for discussion and exchange of experiences and new developments between member countries and between individual professionals in the broad areas of surveying and mapping, spatial information management, and land management. This relates to the FIG annual conferences, the FIG regional conferences, and the work of the ten technical commissions within their working groups and commission seminars. This global forum offers opportunities to take part in the development of many aspects of surveying practice and the various disciplines including ethics, standards, education and training, and a whole range of professional areas.
- **Institutional development**
  FIG provides institutional support to individual member countries or regions with regard to developing the basic capacity in terms of educational programs and professional organisations. The educational basis must include programs at minimum Bachelor level that include the combination of surveying and mapping, Spatial Information management, and Land Management. Such programs combine the land administration/cadastre/land registration function with the topographic mapping function within a holistic land management perspective. The professional organisations must include the basic mechanisms for professional development including standards, ethics and professional code of conduct for serving the clients.
- **Global development**
  FIG provides a global forum for institutional development through cooperation with international NGO´s such as the United Nations Agencies (UNEP, FAO, HABITAT), the World Bank, and sister organisations (IAG, ICA, IHO, and ISPRS). The cooperation includes a whole range of activities such as joint projects (e.g. Bathurst, Aguascalientes), and joint policy making e.g. through round tables. This should lead to joint efforts of addressing topical issues on the international political agenda, such as reduction of poverty and enforcement of sustainable development.

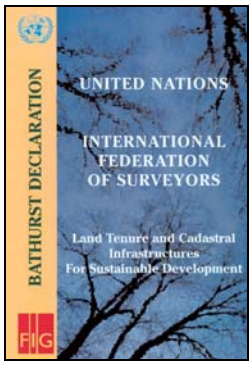
The three means of development are of course interrelated and interdependent. Professional development requires that both a professional organization and an educational basis are in place. Institutional development in terms of mature public agencies and policies requires a solid professional and educational base in order to establish a holistic and sustainable approach to land management based on principles of good governance and an adequate balance between the activities of the public and private sector. And global development of course requires mature NGO´s with a strong professional base.

FIG, this way, plays a strong role in improving the capacity to design, build, and manage land administration systems which incorporate spatial data infrastructures.

Throughout the last 10-15 years FIG has taken a lead role in explaining the importance of sound land administration systems as a basis for achieving "the triple bottom line" in terms of economic, social and environmental sustainability. International organizations such as UN, FAO, HABITAT and especially the World Bank have been key actors in this process. A number of these key publications are shown below. The latest achievement entitled the Aguascalientes Statement on Development of Land Information Policies in the Americas is developed as a joint initiative of UN/FIG/PCIDEA with FIG taking the lead role. The publication is available in both English and Spanish.







Furthermore, the FIG publication Series also includes a number of publications addressing educational, professional, and institutional issues of global relevance, such as Continuing Professional Development, Ethical Principles, and Business Matters for Professionals, Standardisation, and Mutual Recognition of Professional Qualifications. The publications are available on-line at the FIG Home Page http://www.fig.net/pub/figpub/pubindex.htm

FINAL REMARKS

The objective of this paper is to build a general understanding of the Land Management Paradigm 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/cadastre/land registration function with the topographic mapping function

This debate should be aware of the global trends in this area while still recognising that the design of such systems will always be unique due to the different geographic and cultural preconditions and needs of each respective country. This calls for increased international co-operation. FIG is prepared to invest in such corporative efforts.

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BIOGRAPHICAL NOTES

Stig Enemark is Professor in Land Management and Problem Based Learning at Aalborg University, Denmark, where he was Head of the School of Surveying and Planning 1991-2005. He is Master of Science in Surveying, Planning and Land Management and he obtained his license for cadastral surveying in 1970. He worked for ten years as a consultant surveyor in private practice. He is currently the President of the Danish Association of Chartered Surveyors. He is Vice-President of the International Federation of Surveyors (FIG) 2005-2008. He was Chairman of FIG Commission 2 (Professional Education) 1994-98, and he is an Honorary Member of FIG. His teaching and research are concerned with land administration systems, land management and spatial planning, and related educational and capacity building activities. Another research area is within Problem Based Learning and the interaction between education, research and professional practice. He has undertaken consultancies and published widely within these topics and presented invited papers to more than 50 international conferences. For further information see http://www.land.aau.dk/~enemark

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