

Building Institutional and Organisational Capacity for Land Administration: An Update on the Work of the FIG Task Force

Iain GREENWAY, United Kingdom

Key words: survey, land administration, capacity building, development

SUMMARY

A key component of a land administration system is to put in place organisations that are sufficiently robust to develop, enable and ensure the effective operation of surveying and land administration activities. The relevant organisations include the professional surveying associations and private surveying companies, as well as the government agencies such as mapping organisations and the organisations with land registration and land administration responsibilities.

The current FIG Council has made Building the Capacity its key priority for its term of office, and the FIG General Assembly in 2007 established a Task Force on Institutional and Organisational Development. This paper describes how the Task Force has developed a capacity assessment model into an assessment template which can be used by organisations and nations to highlight their strengths and weaknesses. The paper also presents, as a basis for further discussion and refinement, a series of key organisational elements which the Task Force believes need to be in place for organisations forming part of land administration systems to work effectively.

Building Institutional and Organisational Capacity for Land Administration: An Update on the Work of the FIG Task Force

Iain GREENWAY, United Kingdom

1. INTRODUCTION

Previous papers by the author and others (for instance, Enemark and Greenway, 2006; Greenway and Enemark, 2007) have explored the area of capacity building, noting that this consists of the key components of capacity assessment and capacity development. The papers have suggested that sufficient capacity needs to exist at three levels: a societal (systemic) level; an organisational level; and an individual level, with all three needing to be in place for capacity to have been developed.

UNDP (1998) offers this basic definition of capacity: “Capacity can be defined as the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainably.” Recognising the vital importance of building capacity, the current FIG Council has taken this as its key theme for its 2007-2010 term of office, and in 2007 the FIG General Assembly established a Task Force on Institutional and Organisational Development. This Task Force is predominantly exploring the organisational level of the three set out in the previous paragraph, although it can only do this effectively by also considering linkages up to the societal level, and down to the individual level.

Many donor projects have not managed to build sustainable capacity in countries and organisations, and so can perhaps be deemed to have failed. The Task Force therefore has a key focus on how capacity can be developed in a sustainable manner.

This paper provides some background to the role and scope of the Task Force. It then describes a self-assessment template that has been developed by the Task Force and others, and summarises the results to date of use of the template. The paper moves on to outline the key components that its work is leading it to conclude need to be in place in an organisation, and describes the plans to bring the work of the Task Force to a conclusion. The Task Force is currently at the stage of gathering views to refine the list of necessary key components in securing the capacity of an organisation.

2. THE SCOPE AND ROLE OF THE TASK FORCE

The Task Force has constrained its work in two ways: that it is considering the field of Land Administration; and that it is considering the (institutional and) organisational level of capacity. The sections below provide further descriptions of these two terms, as context for the following description of Task Force work to date and future plans.

2.1 Land Administration

Land administration is part of the infrastructure that supports good land management. The term Land Administration refers to the processes of recording and disseminating information about the ownership, value and use of land and its associated resources. Such processes include the determination of property rights and other attributes of the land that relate to its value and use, the survey and general description of these, their detailed documentation and the provision of relevant information in support of land markets. Land administration is concerned with four principal and interdependent commodities – the tenure, value, use, and development of the land – within the overall context of land resource management.

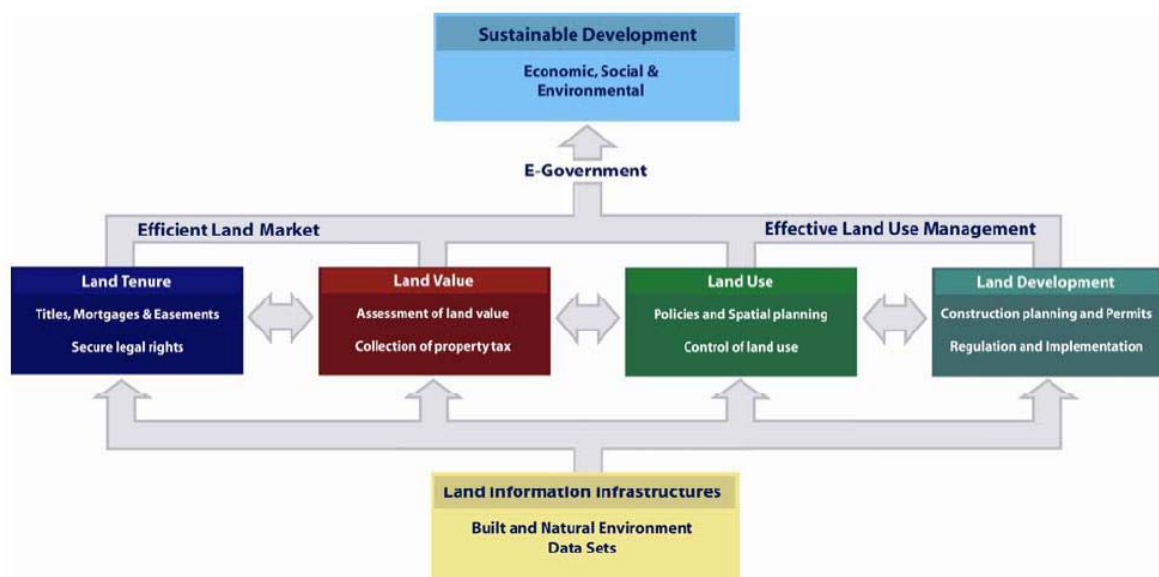


Figure 1: A Global Land Administration Perspective (Enemark, 2004)

The day to day operation and management of the four land administration elements includes national agencies, regional and local authorities, and the private sector in terms of, for instance, surveying and mapping companies. The functions include:

- the allocation and security of rights in lands; the geodetic surveys and topographic mapping; the legal surveys to determine parcel boundaries; the transfer of property or use from one party to another through sale or lease;
- the assessment of the value of land and properties; the gathering of revenues through taxation;
- the control of land use through adoption of planning policies and land use regulations at national, regional and local levels;
- the building of new physical infrastructure; the implementation of construction planning and change of land use through planning permission and granting of permits.

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 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.

2.2 'Institutional' and 'Organisational'

Institutional and organisational development is about capacity development at the organisational level. Such development measures cannot, however, ignore the societal and individual levels.

More specifically, for the purposes of this paper, institutional development relates to the enhancement of the capacity of national surveying and mapping agencies and private organisations to perform their key functions effectively, efficiently and sustainably. This requires clear, stable remits for the organisations being provided by government and other stakeholders; these remits being enshrined in appropriate legislation or regulation; and appropriate mechanisms for dealing with shortcomings in fulfilling the remits (due to individual or organisational failure). Putting these elements in place requires agreement between a wide range of stakeholders, in both the public and private sectors, and is a non-trivial task.

Organisational development relates to the enhancement of organisational structures and responsibilities, and the interaction with other entities, stakeholders, and clients, to meet the agreed remits. This requires adequate, suitable resourcing (in staffing and cash terms); a clear and appropriate organisational focus (to meet the agreed remit of the organisation); and suitable mechanisms to turn the focus into delivery in practice (these mechanisms including organisational structures, definition of individual roles, and instructions for completing the various activities).

One useful and succinct model for putting in place suitable measures to enable and underpin organisational success is that developed by the UK Public Services Productivity Panel (HMT, 2000). This recognises five key elements which need to be in place:



Figure 2: A Performance Management Model (HMT, 2000)

- *Aspirations* – to stretch and motivate the organisation
- *A coherent set of performance measures and targets* – to translate the aspiration into a set of specific metrics against which performance and progress can be measured
- *Ownership and accountability* – to ensure that individuals who are best placed to ensure delivery of targets have real ownership for doing so
- *Rigorous performance review* – to ensure that continuously improving performance is being delivered in line with expectations
- *Reinforcement* – to motivate individuals to deliver the targeted performance.

Of course, defining and implementing the detail in any one of the above items is a significant task, and all must be in place if the organisation is to succeed. By putting the appropriate mechanisms and measures in place, and continuously challenging and improving them, organisations can ensure that they effectively turn inputs into outputs and, more importantly, the required outcomes (certainty of land tenure etc).

All organisations need continuously to develop and improve if they are to meet, and continue to meet, the needs of their customers and stakeholders. In the land administration field, there are many examples of under-resourced organisations unable to respond effectively to stakeholder requirements, thereby leading to a lack of access to official surveys and land titling (leading to unofficial mechanisms being used, or a total breakdown in efficient land titling). There is a need to provide appropriate assistance to enable the necessary capacity to be built and sustained by such organisations (once the need for such capacity has been accepted by the funding bodies), given the key role of their operations in underpinning

national development. A range of methods exist, including releasing internal resources for this work (if suitable resources exist), or external support.

2.3 An example of successful capacity building

An example of the successful development of sustainable capacity is work in recent years in Swaziland (Mhlanga and Greenway, 1999). Prior to 1995, the UK Government had provided long-term support for Swaziland's Surveyor General's Department (SGD). The retirement of the expatriate then holding the position of Deputy Surveyor General created the opportunity for exploring other mechanisms for developing sustainable organisational capacity. The UK Government agreed to fund a series of short-term consultancy inputs, to supplement the ongoing work of two expatriate technical cooperation officers. The series of visits (approximately 12 in all, involving more than 10 different consultants but with continuity provided through an overall lead consultant) made good progress, and allowed the Department to feel confident, in 1999, that it could continue its work without the need for expatriate input. The consultancy visits worked in a large number of areas (the ability to provide input from a range of consultants in this regard being a strength over longer-term inputs). The work and outputs included:

- *A thorough review of the strengths, weaknesses and external impacts on the SGD*, including interviews with a wide range of staff and other stakeholders (including senior officials, private sector surveyors and customers). From this review, a number of work packages were agreed, and progressed (with periodic review and revision of priorities) over the following four years.
- *The creation of a clear vision, mission and aims for the SGD*, to provide a clear focus for its work. This was shared with all staff in the SGD through a series of workshops and briefings. A key element in the work was the marking, by senior managers, of the Department's performance in 1995 against each of the aims, providing a powerful means of focusing required effort on improvement, alongside consolidating areas of good performance.
- *Creation of a business plan for the Department*, to ensure progress towards the vision and aims.
- *Fundamental restructuring of the Department*, with a change of managerial hierarchy, the deletion of old positions and the creation of a range of new positions. The new structure supported career progression as well as effective delivery of the outputs required. Alongside this, policies for staff development and retention were developed and implemented. The development of these, and all of the other changes, were through interactive workshops, so that the senior Swazi staff of the Department felt strong ownership of the results, and could effectively argue for them in discussions with the central civil service and with SGD staff.
- *The creation of revised policies to guide SGD work* – these included policies on survey control, map revision, map specification, and marketing (including pricing).
- *The implementation of clear performance measures.*

- *Support for the completion of the cadastral database, and the implementation of digital map revision systems.*

The work in Swaziland reflected the breadth of organisational development set out in the model described in the previous section. Key lessons learned from the work were that long-term consultancy input can easily become counter-productive, with the individuals drawn into line management roles, leading to limited transfer of skills and therefore not providing sustainable capacity development. In contrast, short-term visits require local managers to focus on completion of agreed actions between visits. Another key lesson was that management confidence, as well as competence, is crucial to success – and that building such confidence is therefore a necessary element in successful projects. In addition, a clear progression from vision to aims to objectives is essential for success.

This case study provides confidence that appropriate efforts can build, in a sustainable way, the required capacity, in this case with limited local and external resources being available.

3. A FRAMEWORK TO ASSESS AND DEVELOP CURRENT CAPACITY

As described in section 1 of this paper, capacity development consists of two stages: capacity assessment and then capacity development. Given the broad field of Land Administration, and the broad range of organisations and countries involved, it was vital that the Task Force also followed these two stages in its work. The first stage for the Task Force was therefore to assess current capacity, and to ascertain if the weak and the strong areas differed or were similar through countries and regions. Only then could the Task Force focus its work on the areas where it could make most difference.

3.1 Development of a model to assess capacity

A model through which to assess capacity was developed in close conjunction with ITC from the Netherlands, and was tested at a workshop at the Cambridge Conference of National Mapping Organisations in July 2007. The ITC model had been developed in conjunction with UN Agencies and considered the three levels of societal (systemic), organisational and individual. On another axis, it considered five components of capacity:

- The capacity to conceptualise and formulate policies, legislation, strategies and programmes;
- The capacity to implement policies, legislation and strategies;
- The capacity to build consensus among all stakeholders;
- The capacity to generate and mobilise geoinformation and knowledge; and
- The capacity to monitor, evaluate, report and learn.

These five components can perhaps be seen as the five sequential but overlapping steps to develop land administration policy and implement it successfully.

The model was well received at the Cambridge Conference workshop but comments made by participants, along with reference to other published material (particularly Enemark and van der Molen, 2006; and Enemark and Williamson, 2004), led the Task Force to make some further refinements to it. The Enemark and van der Molen paper usefully sets out a series of self-assessment questions in a range of areas, but the Task Force felt that it was too binary a model (most questions required a Yes or No answer) to gather the richness of input that the Task Force required. The Task Force therefore considered whether respondents to a self-assessment template could be asked to choose one statement, from a set of four, which most closely reflected the situation in their country. A test of this on Task Force members led to the conclusion that respondents often felt that choosing one statement was difficult in that elements of different statements applied. In conjunction with Professor Spike Boydell from the University of Technology, Sydney, the Task Force therefore considered other options such as Likert scale (agree/ disagree) responses for various statements. This was also tested on Task Force members but felt to be too cumbersome for effective completion. The format that was used in the on-line survey that went live via the FIG website in March 2008 was therefore that respondents were asked to rank agreement (1-4) with sets of four statements. This was felt to give an appropriate balance between richness of response, and keeping completion time to a sensible period.

The Task Force also considered the five elements of capacity in the Cambridge Conference model (noting that most authors have settled on the three levels of capacity) and refined it into six elements, those being:

- The development of appropriate land administration policy and legislation;
- The conversion of those policies and legislation into strategies, systems and programmes;
- Agreeing the split of activity between different stakeholders;
- The production of the necessary outputs (for instance, accurate and current surveys, land registers and valuation lists);
- The effective use of those outputs; and
- Ensuring effective learning and improvement.

The reader will recognise that the first element of the Cambridge model has, in effect, been split into two, with the others retained (albeit with some wording changes).

3.2 Implementation of the model in a self-assessment questionnaire

In the assessment template as published by the Task Force, four statements appear for each of 18 areas (each of the six elements above, at each of the three levels). Respondents are asked to rank the statements 1-4 in terms of how well the statements reflect the situation in their country/ state. Two examples of the four statements are given below:

Policy development at the systemic level:

- Government and professional coordination and leadership are lacking, meaning that policy and legislation development is disjointed and reactive
- There is communication between organisations but with suspicion, meaning that policy development is driven by dominant organisations

- Organisations work together but without coherence, meaning that useful policy is developed but it takes longer than it need
- Government and other organisations work together in an organised manner on land issues, meaning that there is timely and clear policy development

Effective use of outputs at the organisational level:

- Each organisation does not effectively understand its key stakeholders, and does not have systems in place to learn from them about their needs
- Each organisation has a level of understanding of stakeholder needs but does not grasp the full requirements, and therefore does not effectively meet their needs
- Each organisation understands stakeholder needs but is not always effective at balancing the conflicts between them, and at adapting to changes in requirements
- Each organisation fully understands stakeholder needs and is effective at prioritising the trade offs between them, meaning that the benefits available are realised in the best possible way

3.3 Results

The assessment template was made available on line during the middle months of 2008, and was also made available in hard copy versions. 41 questionnaires were completed in full. 17 of these were completed on line, giving the full richness of scoring each statement 1-4; the other 25 were completed on hard copies, with only the statement most closely matching the national/ state situation marked (this after strong feedback from non-native English speakers that the 1-4 system made it very complicated).

The results include returns from:

Australia	Denmark	Malawi	Swaziland
Brunei	Egypt	Nigeria	The Netherlands
Bulgaria	Fiji	Norway	The Philippines
Canada	Finland	Singapore	Tonga
Colombia	France	Solomon Islands	UK
Cook Islands	Germany	South Africa	USA
Czech Republic	Hong Kong	Sri Lanka	Vanuatu

giving a broad geographic spread of responses. The responses to many of the questions are very clear cut, suggesting that common issues exist in different regions – this is encouraging in that it allows a single set of outputs from the Task Force to support work in various regions. The table below provides an overview of the responses.

	Societal	Organisational	Individual
Policy development	4	3	3
Conversion into programmes	3	3	2
Division of work	1	3	2
Producing outputs	2	3	3
Use of outputs	2	3	3

Learning	3	3	2
-----------------	---	---	---

Figure 3: the most commonly selected answers (where 1 is the 'worst' answer and 4 the 'best' answer)

A textual summary of the results is that:

- The organisational section scores best, with the third answer being selected in all six areas;
- In the institutional section, the worst answer is selected once and the second answer two times. Despite the best answer being selected once, it is last choice for very many respondents;
- In the individual section, the second answer is selected three times and the third answer three times;
- The area scoring best is policy development;
- The area scoring worst is agreeing the division of labour between stakeholders at the various levels.

Of course, this analysis is somewhat crude, simply showing the answer that is selected most often by respondents as their first choice (the best fit with their perception of the situation in their country); and it is of 41 completed returns, albeit from a wide range of countries.

3.4 Key issues emerging for developing capacity

Recognising the constraints set out in the previous section, the Task Force has examined the responses, including the textual responses as to specific issues which hamper organisational capacity in the views of the respondents, and believes that the following broad conclusions can be drawn from the responses:

- Cooperation between organisations is a weak point, with cooperation instead being suspicion in some cases, and the remits and skills of the different organisations not joined up effectively;
- Effective working across sectors is a particular issue brought forward in the free-form comments;
- There are skill gaps declared, particularly in the conversion of policy into programmes, the division of labour, and ensuring effective learning and development;
- Stakeholder requirements appear insufficiently understood/ insufficiently balanced when turning to ensuring effective use of outputs;
- There is insufficient time and effort given to learning from past experience.

Given the results summarised above and feedback from questionnaire respondents, Task Force members and others, the Task Force is now focussing its work on how organisations, and in particular different levels (regional/ national/ sub-national) and sectors (public/ private/ professional expertise), can work together more effectively. With a range of land administration initiatives at each level, it is vital that organisations demonstrate effective coordination, collaboration and cooperation with each other.

The Task Force has therefore moved one stage further from the above summaries, to consider what statements need to be true if institutional and organisational arrangements are such as to enable sustainable capacity to be put in place. The Task Force has also considered a number of recent publications on land administration policy guidelines, including those from the UN FAO (2007), AusAID (2008) and Land Equity International (2008). The last two of these focus on elements of land administration which need to be in place; the FAO document considers good governance and therefore provides the closest parallel with the work of the FIG Task Force. The focus of the FAO document coincides closely with the systemic level as defined in section 1 of this paper, whereas the Task Force work considers elements more at the organisational level; the two documents therefore appear to complement each other.

For reference, the practical measures set out by FAO for improving land governance in land administration are:

- Introduce a framework for transparency;
- Set service standards;
- Improve systems and processes;
- Build capacity;
- Secure finances;
- Develop a human resources policy;
- Establish independent auditing;
- Make effective use of information technology and communications;
- Support professional organisations;
- Strengthen customary institutions.

The Task Force is in the process of developing its key statements, and welcomes discussion at the FIG-World Bank Conference. The statements are currently as follows:

1. There are clear statements of what each level/ sector is responsible for
2. Relevant training courses clearly explain the need for cooperative working, and the roles of each level/ sector
3. There is clear leadership ‘from the top’ to encourage joining up
4. A clear role/ input is given to the private sector (including professional bodies)
5. There is a clear focus in place to develop a cooperative culture at individual level
6. The network of individuals and organisations has a sufficient voice with key decision makers that land administration issues are taken fully into account in all central policy making
7. Strategy making is a process open to all stakeholders, with all relevant voices being clearly heard

8. The legal framework enables [or at least does not hinder] modern techniques and cross-sector working
9. There are structured methods for learning from our own and others' experiences

These statements cover all five elements of the performance management model illustrated at Figure 2 of this paper.

4. NEXT STEPS

The Task Force intends to progress its work by producing an FIG Policy paper for publication at the FIG Congress in Sydney, Australia in April 2010. The paper will include practical support tools for organisations seeking to assess and develop capacity. The content of the document is likely to include:

- A policy declaration by FIG
- The context – stressing the importance of land administration for national and economic development, and the need for successful, sustainable organisations and institutions to achieve this
- The background – explanation of terms; some models which may prove useful; the three tier model of systemic/ organisational/ individual; links/ references to other relevant work
- The research – the model (6 areas by 3 levels) used; results of the questionnaire (and any other relevant material)
- The components that need to be in place for institutional and organisational capacity to be developed and sustained, as determined from the Task Force's research across countries and continents, with examples of good practice against each statement
- Conclusions and recommendations
- Annexes
 - A self-assessment tool
 - A checklist (for use by CEOs etc) of key issues from the work of the Task Force that need to be concentrated on

The paper will therefore give practical advice to organisations and practitioners, both on a general basis of key issues to consider, and in a tool to allow them to identify their own strengths and areas for development. It will build on several other FIG Publications, including the Bathurst Declaration (FIG, 1999); the Nairobi Statement on Spatial Information for Sustainable Development (FIG, 2002); the Aguascalientes Statement (FIG, 2005); and Capacity Assessment in Land Administration (FIG, 2008). It will also be designed to complement other studies, including those referenced in section 3.4 of this paper.

The Task Force will also consider how the Internet, and in particular knowledge portals and the like, can be used to assist the process of assessing and building capacity. The Global Spatial Data Infrastructure (GSDI) Association has established such a portal. The Task Force membership includes an individual who is very active in the GSDI Association, and one option which will be progressed by the Task Force is making a range of material available via the GSDI Portal. The possibility of progressing some pilot studies will also be considered.

5. FINAL REMARKS

The FIG Task Force on Institutional and Organisational Development was established by the FIG General Assembly in 2007. It has since then:

- Developed, tested and refined a self-assessment template to determine where the main strengths and weaknesses in land administration capacity lie;
- Used the results of the template to propose key elements for success; and
- Begun to prepare an FIG Policy Paper which will include diagnostic tools for organisations

The author, as Task Force Chair, gratefully acknowledges all of the input and support provided by the Task Force members, FIG Council and Commission Officers, and others, in bringing the work to this stage.

REFERENCES

Australian Agency for International Development (AusAID), 2008, Making Land Work: Volume 1 – Reconciling Customary Land and Development in the Pacific. Available from http://www.ausaid.gov.au/publications/pdf/MLW_VolumeOne_Bookmarked.pdf

Enemark, S. and Williamson, I., 2004, Capacity Building in Land Administration – A Conceptual Approach. Survey Review, Vol. 37, No 294, pp 639-650.

Enemark, S. and van der Molen, P., 2006, A Framework for Self-Assessment of Capacity Needs in Land Administration. Proceedings of the XXIII FIG Congress, Munich, October 2006. Available from www.fig.net

Enemark, S., 2004, Building Land Information Policies. Proceedings of UN/FIG Special Forum on Building Land Information Policies in the Americas. Aguascalientes, Mexico, 26-27 October 2004.

Enemark, S. and Greenway, I., 2006, Promoting Institutional and Organisational Development in Surveying and Land Administration. Proceedings of the XXIII FIG Congress, Munich, October 2006. Available from www.fig.net

FIG, 1999, The Bathurst Declaration on Land Administration for Sustainable Development. FIG Publication No 21. Available from www.fig.net

FIG, 2002, The Nairobi Statement on Spatial Information for Sustainable Development. FIG Publication No 30. Available from www.fig.net

FIG, 2005, Aguascalientes Statement – The Inter-Regional Special Forum on Development of Land Information Policies in the Americas. FIG Publication No 34. Available from www.fig.net

FIG, 2008, Capacity Assessment in Land Administration. FIG Publication No 41. Available from www.fig.net

Greenway, I. and Enemark, S., 2007, FIG's contribution to Institutional and Organisational Development. Proceedings of the FIG Working Week, Hong Kong, May 2007. Available from www.fig.net

HMT, 2000, Public Services Productivity: Meeting the Challenge. Available from <http://www.hm-treasury.gov.uk/d/241.pdf>

Land Equity International Ltd, 2008, Governance in Land Management – A Draft Conceptual Framework. Available from

<http://www.landequity.com.au/publications/Land%20Governance%20-%20text%20for%20conceptual%20framework%20260508.pdf>

Mhlanga, A. and Greenway, I., 1999, Recent experiences in developing Swaziland's Surveyor General's Department. Survey Review, Volume 35, No 274, pp 231-242.

OXERA (Oxford Economic Research Associates Ltd), 1999, The economic contribution of Ordnance Survey GB. Report available at <http://www.ordnancesurvey.co.uk/>

UNDP, 1998, Capacity Assessment and Development. Technical Advisory Paper No. 3.

UN FAO, 2007, Good Governance in Land Tenure and Administration. FAO Land Tenure Studies 9.

BIOGRAPHICAL NOTES

Iain Greenway is Chief Survey Officer of Northern Ireland and Director of Operations in Land and Property Services. As such, he is responsible for all land registration and rate collection activity in the Agency, as well as overseeing the development of the Geographic Information Strategy for Northern Ireland. He was from 2006-2008 Chief Executive of the Ordnance Survey of Northern Ireland. He holds an M.A. in Engineering from Cambridge University, an M.Sc. in Land Survey from University College London and an MBA from Cranfield University (including study at Macquarie University, Australia). Between 2000 and 2006, Iain was General Manager (Operations & Mapping) of Ordnance Survey Ireland, responsible for management of the operations and mapping technology of the organisation as it underwent profound changes in status, structure, processes and culture. In 1999-2000 he worked in Her Majesty's Treasury in the Secretariat to the Public Services Productivity Panel (PSPP).

Between 1986 and 1999 he worked for the Ordnance Survey of Great Britain. His positions during those years included geodetic and topographic survey, strategic planning and pricing, sales and marketing, as well as a number of management consultancy inputs in Swaziland and Lesotho and technical consultancies supporting land reform in Eastern Europe.

Iain is a Chartered Surveyor (MRICS), an Honorary Fellow of the Institution of Civil Engineering Surveyors (FInstCES), a Fellow of the Irish Institution of Surveyors (FIS) and a member of the Chartered Institute of Marketing (MCIM). He was elected a Vice President of the International Federation of Surveyors (FIG) for 2009-12 and between 1998 and 2006 was the head of the RICS delegation to FIG. He is Chair of the FIG Standards Network and of the FIG Task Force on Institutional and Organisation Development. He is also a member of the Management and Editorial Boards of the journal Survey Review. He has published a range of articles and papers on geodetic surveys, business and management practices, sales and marketing, and standardisation.

CONTACTS

Iain Greenway
Land & Property Services
Oxford House
49-55 Chichester Street
Town Parks
Belfast BT1 4HH
UNITED KINGDOM
Tel. + 44 28 9025 2253
Fax + 44 28 9025 2113
E-mail: iain.greenway@btinternet.com