The Bathurst Declaration on Land Administration for Sustainable Development

18th - 22nd October 1999
Bathurst, Australia

INTERNATIONAL FEDERATION OF SURVEYORS FIG
in co-operation with
THE UNITED NATIONS

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The Bathurst Declaration
on Land Administration for Sustainable Development

The Bathurst Declaration, the position papers prepared as background reading for the Bathurst Workshop then presented at the International Conference in Melbourne and the full program, summaries and proceedings of the Melbourne Conference are available on the WWW at:

http://www.FIG.net

For further information on the organisation and outcomes of the Bathurst Workshop contact the co-organisers:

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FOREWORD

On behalf of the delegates at the Bathurst Workshop on Land Tenure and Cadastral Infrastructures for Sustainable Development we wish to thank the United Nations Department of Economic and Social Affairs (DESA), Statistics Division, New York, for its financial support and encouragement in organising this event which has resulted in the *Bathurst Declaration on Land Administration for Sustainable Development*.

We are also grateful for the participation of the:

- United Nations (UN) Department of Economic and Social Affairs, Division for Sustainable Development, New York;
- United Nations Centre for Human Settlements (Habitat), Nairobi;
- United Nations Food and Agricultural Organisation (FAO), Rome;
- United Nations Economic Commission for Africa (UNECA), Addis Ababa;
- World Bank, Washington DC;
- Meeting of Officials of Land Administration (MOLA) under the direction of the United Nations Economic Commission for Europe (UNECE); and the
- Permanent Committee for GIS Infrastructure for Asia and the Pacific (PCGIAP) which was created by the United Nation Regional Cartographic Conference (UNRCC) for Asia and the Pacific.

We would also like to acknowledge the support and participation of our colleagues in the International Federation of Surveyors (FIG) and particularly Commission 7 (Cadastre and Land Management) of the FIG. Without their commitment and enthusiasm over the last couple of years, the development of the *Bathurst Declaration* would not have been possible.

Our sincere thanks also go to the industry sponsors and the many people in the New South Wales Government who have supported the Workshop both financially and in kind over the last couple of years.

Finally, and most importantly, our gratitude and thanks go to all the delegates who travelled from around the world to attend the Workshop and who participated so actively and enthusiastically. We are delighted with the results of their efforts and we have no doubt that the *Bathurst Declaration* will make a valuable contribution to the administration of land, our most scarce resource.

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Bathurst
New South Wales, Australia
22nd October 1999

THE BATHURST DECLARATION ON LAND ADMINISTRATION FOR SUSTAINABLE DEVELOPMENT

1. EXECUTIVE SUMMARY

Almost all societies are currently undergoing rapid change brought about by a diverse range of factors that include growing population pressures on the land, especially in urban areas. The world's population has already reached six billion people. The poor are becoming increasingly concentrated in slums and squatter settlements in our ever-expanding cities. The gender inequities in access to economic and social opportunities are becoming more evident. Within 30 years, two-thirds of the world's population will live in cities. Fresh water availability is now approaching crisis point. At present consumption levels, two-thirds of the world's population will live in water-stressed conditions by the year 2025. The challenge is not only to meet world population needs for food, shelter and quality of life, but also to ensure that future generations can also have their needs met.

Insecure property rights inhibit use and investment in rural and urban land. They hinder good governance and the emergence of engaged civil society. Uncoordinated development, poor planning and management of land and its use, and the increasing vulnerability of populations to disaster and environmental degradation all compound the difficulties of meeting this challenge. Without effective access to property, economies are unable to progress and the goal of sustainable development cannot be realised.

However, the world is changing. Growing awareness of the issues, better understanding of the consequences of actions, and greater capacity to secure and use relevant information are helping to bring about the necessary changes. These issues are forcing the re-engineering of land administration systems to ensure that they support sustainable development and efficient land markets. Land administration frameworks will be forced to respond rapidly to these unprecedented changes.

The joint United Nations and International Federation of Surveyors Bathurst Workshop[1] on Land Tenure and Cadastral Infrastructures for Sustainable Development has responded to this challenge. Land administration institutions and infrastructures will have to evolve and adapt their often inadequate and narrow focus to meet a wide range of new needs and technology, and a continually changing institutional environment. They also need to adapt continually to complex emerging humankind-land relationships at the same time as changing relationships between people and governments. These conditions should lead to improved systems of governance.

[1] Held in Bathurst, Australia from 18-22 October 1999

The Bathurst Workshop examined the major issues relevant to strengthening land policies, institutions and infrastructures and, in particular identified the following:

- future humankind/land relationships;
- the role of land in sustainable development;
- food, water and land policies;
- land tenure and land administration systems;
- how land markets, land registration, spatial planning and valuation interact; and
- re-engineering land administration systems.

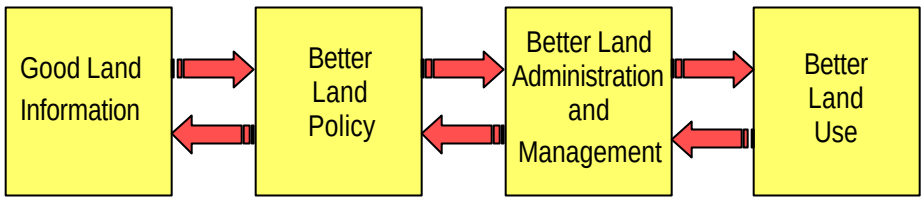
For each of these key areas, the Workshop reviewed the existing situation within the rapidly changing land administration environment. It investigated and provided recommendations as to how land tenures, land administration institutions and infrastructures and cadastral systems should evolve to enable the challenges of change in the 21st century to be met.

The Bathurst Declaration on Land Administration for Sustainable Development calls for a commitment to provide effective legal security of tenure and access to property for all men and women, including indigenous peoples and those living in poverty or other disadvantaged groups. It identifies the need for the promotion of institutional reforms to facilitate sustainable development and for investing in the necessary land administration infrastructure. This gives people full and equal access to land-related economic opportunities.

Most significantly, the Declaration justifies and calls for a commitment on the part of the international community and governments to halve the number of people around the world who do not have effective access to secure property rights in land by the Year 2010.

To realise this commitment, the Workshop proposes a set of recommendations. The policy and institutional reform recommendations ensure that there is a balanced and integrated approach to addressing all tenure relationships in both urban and rural society. Full and active participation by local communities in formulating and implementing the reforms is recommended. The need to develop land administration infrastructures that effectively address the constantly evolving requirements of the community is critical. Finally, information technology is seen as playing an increasingly important role in developing the necessary infrastructure and in providing effective citizen access to it.

Sustainable development is not attainable without sound land administration.



2. INTRODUCTION

> Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own: but together we can - in a global partnership for sustainable development.
>
> *Preamble to Agenda 21: Programme for Action for Sustainable Development.*

Ever since its founding, the United Nations has recognised the fundamental relationship between people and land. Today, every Member Nation of the United Nations is facing major challenges in dealing with its land and land-based resources. The effective management of these is a key to the achievement of sustainable development. The overall goal of sustainable development is an equitably distributed level of economic and social well-being that can be sustained over many generations while maintaining the quality of the environment. This calls for the elimination of poverty and deprivation and it requires the conservation and enhancement of the resource base.

Land not only contributes to wealth and economic development. It is part of the social and political fabric that sustains all communities. Additionally, land represents a fundamental component of eco-systems. Managing the relationship between land and people inevitably and universally raises emotions and is at the heart of many cultural sensitivities. It is of crucial importance that the issues raised by land management and administration are openly and sensitively addressed.

Almost all societies are currently undergoing rapid change brought about by a diverse range of factors that include growing population pressures on the land, especially in urban areas. The world's population has already reached six billion people. The challenge is not only to meet their needs for food, shelter and quality of life but also to ensure that future generations also have their needs met. As it is, human-induced degradation of the soil has already affected 20% of the world’s susceptible dry lands and put the livelihoods of one billion people at risk.

The poor are increasingly concentrated in slums and squatter settlements in our ever-expanding cities. Forty to sixty per cent of the occupation of cities in developing countries is informal with people having no secure tenure. The proportion of people making their living from land is declining. In 1970, two-thirds of the world's population lived in rural areas; today it is only half, while within 30 years two-thirds of the world's population will live in cities providing a serious challenge to achieving sustainability. Already more than half of the world’s population lives within 60 kilometres of the coastline, one-third of which is at

high risk from degradation brought about by human activity. Fresh water availability is approaching crisis point. At present consumption levels, two-thirds of the world's population will live in water-stressed conditions by the year 2025.

In every continent, there are people whose customary rights to land and natural resources have been ignored. There is also a need to provide women with equal access rights to land recognising women account for half the world's total population but only own 1% of the world's wealth. In many nations, legislation accords women with equal rights whilst in other nations legislation and customs may declare otherwise.

Overall the most serious problems facing the relationship between land and people include:

- degradation of land due to unsustainable land use practices;
- lack of land for suitable urban development;
- lack of security of tenure (which in many societies impacts most severely on women and children);
- inequitable access to land by indigenous peoples and minority groups;
- access to land by women;
- increasing vulnerability to disaster;
- destruction of bio-diversity;
- lack of adequate planning and of effective land administration;
- tensions between environmental conservation and development; and
- impact of market forces on traditional economies and tenures.

Fortunately, there has been a growing awareness of these issues and as a result the world is changing. Nations are now generally more conscious of the fact that the actions of individuals can have global consequences. This awareness has arisen as a result of the greater availability of information. This in turn has re-ignited the debate about how land can best be administered for the good, not only of individual landowners and users, but also for the community as a whole. The imperative to re-examine land administration systems in the context of sustainable development is now overwhelming.

The world's nations have committed themselves to a global agenda addressing a range of matters pertaining to sustainable development. Amongst them are the problems identified above. These problems are addressed through major international conferences such as the Conference on Environment and Development held in Rio de Janeiro in 1992 whose Agenda 21 has been re-affirmed in the subsequent international fora such as the Social Conference in Copenhagen, the Population Conference in Cairo, the Women's Conference in Beijing, the HABITAT II Conference held in Istanbul in 1995 that resulted in the Habitat Agenda, and the World Food Summit in Rome in 1996 resulting in the Food for All Campaign.

In order to review the contribution of land administration and land tenure to these international issues, the UN and the FIG agreed to cooperate on a number of initiatives. As a result of a resolution at the United Nations Regional Cartographic Conference for Asia and the Pacific in Beijing in 1994, a joint UN-FIG meeting of experts on cadastral reform was held in Bogor, Indonesia in 1996.

The Bogor meeting resulted in the *UN-FIG Bogor Declaration on Cadastral Reform* which recognised that although each country has different needs and is at a different state in the development of the relationship between its people and their land, there is much benefit in exchanging ideas and experiences. By examining solutions in other countries one can achieve a better understanding of the problems in one's own region. (*http://sunspot.sli.unimelb.edu.au/fig7/Bogor/BogorDeclaration.html*).

Arising from the *Bogor Declaration*, a resolution was passed at the 14th United Nations Regional Cartographic Conference for Asia and the Pacific, held in Bangkok in 1997. It urged the United Nations, in collaboration with the International Federation of Surveyors (FIG), to hold a Global Workshop on Land Tenure and Cadastral Infrastructures in support of Sustainable Development. The proposed workshop was also referred to in Resolutions of the United Nations Regional Cartographic Conference for the Americas held in New York in 1997.

These Resolutions resulted in the Workshop on Land Tenure and Cadastral Infrastructures for Sustainable Development held in Bathurst, Australia from 18-22 October 1999. It was followed by an open International Conference in Melbourne at which the *Bathurst Declaration* was presented. The United Nations Department for Economic and Social Affairs together with FIG participated in both events.

The Workshop brought together 40 international land administration experts from 23 countries representing all continents to develop the Declaration in a series of workshops and plenary sessions. Firstly, they addressed the changing relationship of humankind to land. The Workshop then considered the relationship of land with sustainable development, and the consequent relationship of land tenure to land administration. The changing nature of land and its critical role in sustainable development was confirmed by a strong recognition of the inter-dependency of land, water and food. As background for discussion, 25 position papers were commissioned from these experts.

In considering the changing nature of humankind to land the Workshop then explored the relationship between land markets, land registration, spatial planning and valuation. Recognising that new land administration and cadastral arrangements would be required in the future to support these changes, the Workshop investigated the re-engineering of land administration systems and concluded with a discussion of recommendations and an implementation strategy. This process resulted in the *Bathurst Declaration* that built upon, updated and broadened the previous *Bogor Declaration*. The principal findings of the *Bathurst Declaration* are summarised below. Part Two of this document summarises the Workshop and, together with the position papers, was the basis on which the recommendations have been developed. Part Three includes the list of Workshop delegates, the methodology, the list of position papers and operational definitions used by the Workshop.

3. THE WORKSHOP FINDINGS

The Workshop took note of several of the major economic, social, technological and environmental challenges leading into the new millennium: rapid urbanisation; environmental degradation; the changing role of government in society; widening economic inequity and an increase in poverty and food shortages; and the economic and social challenges associated with increasing globalisation.

The availability of reliable information about land and its resources emerged as a vital issue in managing these challenges. If relevant and good decisions are to be made by public authorities, private resource users or community bodies, they must be based on sound information about the land and environment in order to contribute to sustainable development. This in turn requires the articulation of principles for the development and operation of land information and cadastral systems, as well as land registration systems, which give effect to the principle of sustainable development.

The property rights in land do not in principle carry with them a right to neglect or destroy the land. The concept of property (including ownership and other proprietary interests) embraces social and environmental responsibility as well as relevant rights to benefit from the property. The registration of property in land is thus simultaneously a record of who is presumed to bear this responsibility and who is presumed to enjoy the benefit of relevant rights. The extent of responsibility is to be assessed by understanding the social and environmental location of the land in the light of available information and is subject to express laws and practices of the appropriate jurisdiction.

Laws should, as far as possible, be interpreted to express the international concept of sustainability. Nations should be encouraged to review these laws to ensure that the concept of sustainability is integrated into all basic rights, responsibilities, procedures and transactions.

Effective land administration is essential to meet these challenges. In this context, property may be viewed as the rights and responsibilities that individuals and groups of individuals have to access, use, develop and transfer land and related resources (such as water, forests and soils). Land administration may be built around the concept of individual and shared, communal, commercial and private rights. The focus may be on leasehold tenures or so-called freehold tenures. What is important is that the rights and responsibilities are formally recognised and secured.

Lack of secure property rights in the land will inhibit investments in housing, sustainable food production and access to credit, hinder good governance and the emergence of civic societies, reinforce social exclusion and poverty, undermine long term planning, and distort prices of land and services. Without effective access to land and property, market economies are unable to evolve and the goals of sustainable development cannot be realised.

In recognition of the fundamental role of property and access to land in responding to the challenges of sustainable development, the Bathurst Workshop delegates addressed the urgent need to strengthen the policies, institutions and infrastructure necessary for effective access to land and property. Beyond this, the Bathurst Workshop called on the international

community to support an ambitious, long-term program of positive action in order to significantly reduce the numbers of people around the world who do not have secure access to land and property rights.

The Workshop fully realised that there is no hope of success unless a comprehensive and rigorous action agenda is formulated and implemented. An agenda must be practical, achievable and assessable. The preparation of such an agenda will require extensive work on the part of the international community (and will build on such initiatives as the Habitat Global Campaign for Secure Tenure) and will need to consider a wide variety of policy, institutional and structural issues.

Any action agenda will first need to address the **policy issues** associated with building and sustaining effective land administration. Core principles must be articulated that promote equal access to property for all people while respecting the sensitivity to local needs and requirements. Policies must be formulated that ensure that the processes for formalising and subsequently transferring property rights are as simple and efficient as possible. From the outset, the policy agenda must ensure that there is a balanced and integrated approach to addressing the requirements of both urban and rural society, to dealing both with land and other resources (including water, forests and soils). Every effort should be made to encourage the full and active participation of local communities in formulating and implementing the policy agenda.

Of special importance will be the need to construct **land administration institutions** that effectively address the constantly evolving requirements of the community. Land administration institutions, in this context, mean the "rules of the game". These include the laws and regulations necessary for creating property rights (and the associated restrictions and requirements imposed by the state or the community), for registering and subsequently transferring them, for resolving disputes, for taxation purposes, and the equitable resumption of these rights. They must be responsive to local requirements and conditions, and be capable of evolving over time to deal with different needs and priorities. As well, these institutions must be open and transparent.

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. One of the major challenges will be to build an infrastructure that is sufficiently robust to, amongst other things, effectively support the goal of enhancing security and access to credit, while at the same time being sufficiently simple and efficient so as to promote and sustain widespread participation. The processes for formalising property rights will necessarily involve significant community participation whilst the subsequent registration and transfer process will have to be capable of an evolving response to changing community requirements. Information technology will play an increasingly important role both in constructing the necessary infrastructure and in providing effective citizen access to information. Finally, there must be total commitment to the maintenance and upgrading of the land administration infrastructure.

Following are the recommendations resulting from the Bathurst Workshop and the *Bathurst Declaration*.

4. RECOMMENDATIONS

Given that more than half the people in most developing countries currently do not have access to secure property rights in land and given the concerns about the sustainability of development around the globe and the growing urban crisis, the Bathurst Workshop *recommends* a global commitment to:

1. ***Providing*** effective legal security of tenure and access to property for all men and women, including indigenous peoples, those living in poverty and other disadvantaged groups;

2. ***Promoting*** the land administration reforms essential for sustainable development and facilitating full and equal access for men and women to land-related economic opportunities, such as credit and natural resources;

3. ***Investing*** in the necessary land administration infrastructure and in the dissemination of land information required to achieve these reforms;

4. ***Halving*** the number of people around the world who do not have effective access to secure property rights in land by the year 2010.

The Workshop in confirming the *UN/FIG Bogor Declaration on Cadastral Reform*, extending the professional debate on desirable land administration and recognising that the community of nations have committed themselves to the various United Nations Global Plans of Action arising out of the UN Summits over the last decade, recommends the following:

5. *Encourage* nations, international organisations, Non-Government Organisations (NGO)s, policy makers, administrators and other interested parties to adopt and promote the *Bathurst Declaration* in support of sustainable development.

6. *Encourage* all those involved in land administration to recognise the relationships and inter-dependence between different aspects of land and property. In particular there is need for functional cooperation and coordination between surveying and mapping, the cadastre, valuation, physical planning, land reform, land consolidation and land registration institutions.

7. *Encourage* the flow of information relating to land and property between different government agencies and between these agencies and the public. Whilst access to data, its collection, custody and updating should be facilitated at a local level, the overall land information infrastructure should be recognised as belonging to a national uniform service to promote sharing within and between nations.

8. *Improve* security of tenure, access to land and to land administration systems through policy, institutional reforms and appropriate tools with special attention paid to gender, indigenous populations, the poor and other disadvantaged groups. In many nations, this will entail particular efforts in areas under customary or informal tenure and in urban areas where population growth is fast and deficiencies are most prevalent.

9. *Recognise* that good land administration can be achieved incrementally using relatively simple, inexpensive, user-driven systems that deliver what is most needed for sustainable development.

10. *Recognise* that the unacceptable rise in the incidents of violent dispute over property rights can be reduced through good land tenure institutions that are founded on quality land information data. Good land information underpins good governance. Where conflict arises, there must be inexpensive land dispute resolution mechanisms in place that are readily accessible to all parties concerned.

11. *Encourage* national and local government bodies to document and manage their own land and property assets.

12. *Recognise* that land markets operate within a range of land tenures of which freehold is but one. It is important to facilitate the efficient operation of land markets through appropriate regulatory frameworks that address environmental and social concerns.

13. In order to increase knowledge of the global situation of land administration and land tenure, the United Nations *undertake* a study of global land administration issues such as the range of tenure issues, gender, urban agglomeration, land disputes, problems and indicators with a view to producing a global atlas and related documentation. Much of the needed data are already available in different UN databases.

14. Recognising the difficulties in interpretation of the many land administration related terms, *develop* a readily accessible thesaurus, translated into appropriate languages, to facilitate a better understanding of the terminology used. Further, on the basis of selected criteria, use this to *prepare* examples of best practice in the field of land administration. This can be done using work already completed by FIG and FAO.

15. In view of the crucial importance of human resources in the management of land, *ensure* that there is sustained education and training in land administration. In particular, international agencies should seek to develop multi-disciplinary, multi-national training courses in land administration and make these available at the local level through the use of modern information technology.

16. International and national agencies, NGOs and other interested parties *to arrange* workshops and conduct studies with regard to such matters as the quality of access to land and information, gender issues, customary law and indigenous rights, land tenure systems, interaction between land and water rights, maritime cadastres, and the management of land administration systems.

17. In order to *coordinate* foreign assistance, countries seeking help should play a more active role in the coordination of aid and prepare a country profile analysis, describing the status of land administration and the need for improvements. Based on this the countries should then prepare a master plan to which all land administration, initiatives and projects should adhere.

18. In order to ensure sustainable development of territorial oceans claimed under UNCLOS (United Nations Convention on the Law of the Sea), the United Nations *emphasise* the need for claimant countries to develop their capability to support effective marine resource administration through the national spatial data infrastructure.

19. *Undertake* analyses and *develop* performance indicators that can monitor the effectiveness of land administration and land tenure systems in relation to sustainable development and poverty alleviation.

20. That the Workshop and FIG strongly *support* the "Global Campaign for Secure Tenure" undertaken within the implementation of the Habitat Agenda, presently launched by the UNCHS (Habitat), and *commit* to promoting activities in terms of this campaign in future FIG programs.

APPENDICES

APPENDIX I :List of Delegates, Organisations and Countries

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Prof Stig Enemark
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Dr Dozie Ezigbalike
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The World Bank
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Dr Clarissa Fourie
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Prof Don Grant AM
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Prof John McLaughlin
University of New Brunswick
Canada

Mr John Mobbs
Public Sector Mapping Agencies Australia
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Prof Ir Paul van der Molen
Dutch National Cadastre
The Netherlands

Dr Paul Munro-Faure
Land and Property Economics Ltd.
United Kingdom

Mr Graeme Neate
National Native Title Tribunal
Australia

Mr Orlando Nino-Fluck
United Nations Economic Commission for Africa
Ethiopia

Ms Elizabeth O'Keeffe
Land Victoria
Australia

Mr Helge Onsrud
Statens Kartverk, Norway
Norway

Mr András Ossko
Survey Department
Hungary

Mr Tommy Österberg
Swedesurvey
Sweden

Prof John Parker
Land Victoria
Australia

Ms Karen de Plater
Land Information Centre
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Dr Murray Raff
The University of Melbourne
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Ms Mele Rakai
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Prof Kai Yang
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APPENDIX II: Workshop Methodology

Theme

The theme for the Workshop: "Land Tenure and Cadastral Infrastructures for Sustainable Development" was developed to complement the progress made by the Bogor Declaration. The Workshop broadened the focus to include the role of land administration in serving the changing humankind-land relationship and recognise the imperative to achieve sustainable development. The title of the Declaration was accordingly changed to the *Bathurst Declaration on Land Administration for Sustainable Development.*

Delegates

Delegates were chosen for their expertise and established record of achievement in their respective areas. Invitations were extended to experts from, or with expertise in, a range of developing and developed countries. They came from a variety of backgrounds including surveyors, lawyers, planners, information technologists, government administrators, academics and representatives from the private sector.

Topics

Initially, the outline of the Bathurst Declaration was formulated and then the draft of key topics distributed for comment to all delegates eight months in advance of the Workshop. These were the basis of the Workshop. Each participant was asked to prepare a paper on a recommended topic based on the Workshop themes. This was designed to ensure that relevant and topical materials would be available as a resource for all delegates to read in preparation for the Workshop.

Chairs and rapporteurs were allocated to workshops based on their expertise. Each topic was discussed in small workshop groups. During this time issues were identified and discussed, implications for the future were assessed and recommendations were formulated. There were specific workshops on implementation. The findings from the small group workshops were then presented at plenary sessions to allow delegates an opportunity to discuss each of the topics. This process assisted the rapporteurs to develop the ideas from their respective workshops and to draft the wording of the particular section of the Bathurst Declaration. The drafts from the workshops were circulated for comment and modification.

A compiling team was tasked to compile the pre-drafted sections of the Bathurst Declaration. This team ensured consistency of both content and style. This draft declaration was presented for discussion by small review groups, followed by a plenary session. The feedback was used to refine the penultimate declaration which was circulated to participants for further comment. At a further plenary session, the final draft of the declaration was discussed and endorsed.

The Bathurst Declaration was presented at the conclusion of the Workshop and was then officially launched at the following three-day Conference on Land Tenure and Cadastral Infrastructures for Sustainable Development held in Melbourne, Australia.

APPENDIX III: List of Technical Papers prepared for the Bathurst Workshop

The Economic and Social Justification for Cadastral Reform: The Latin American experience

Santiago Borrero
Director General
Agustin Codazzi Geography Institute of Colombia
COLOMBIA

Is Technology a Blessing or a Curse in Land Administration?

Peter Dale
Professor of Land Information Management
University College London
UK

Sustainable Development as a Global Trend

JoAnne DiSano
Director, Division for Sustainable Development
Department of Economic and Social Affairs
UNITED NATIONS

Cadastres, Land Information Systems and Planning - is Decentralisation a Significant Key to Sustainable Development?

Stig Enemark
Professor and Reader in Land Management
Department of Development and Planning
Aalborg University
DENMARK

Hans Sevatdal
Professor of Department of Land Use and Landscape Planning
Agricultural University of Norway
NORWAY

Women's Access to Land

Agneta Ericsson
Chief County Surveyor
National Land Survey of Sweden
SWEDEN

African Experience of Tenure Reform and Cadastres: A Place in the Global Sun?

Chukwudozie Ezigbalike
Senior Lecturer
Department of Civil Engineering
Faculty of Engineering and Technology
University of Botswana
BOTSWANA

Qhobela Cyprian Selebalo
Chief Surveyor
Lands, Survey & Physical Planning
Ministry of Local Government
KINGDOM OF LESOTHO

Land Administration Reform: Economic Rationale and Social Considerations

Gershon Feder
Research Manager – Rural Development
Development Research Group
The World Bank

Cadastre and Land Information Systems for Decision-Makers in the Developing World

Clarissa Fourie
Senior Lecturer - Surveying Program
School of Civil Engineering, Surveying and Construction
University of Natal
SOUTH AFRICA

Orlando Nino-Fluck
Senior Cartographic Officer
Development Information Services Division
United Nations Economic Commission for Africa
ETHIOPIA

Lessons from South East Asian Cadastral Reform, Land Titling and Land Administration Projects in Supporting Sustainable Development in the Next Millennium

Chris Grant
Manager - International Projects
BHP Engineering
AUSTRALIA

Spatial Data Infrastructures: The Vision for the Future and the Role of Government in Underpinning Future Land Administration Systems.

Donald M Grant
Surveyor-General of New South Wales
Land Information Centre
AUSTRALIA

Future Cadastres: Implications for Future Land Administration Systems - Bringing the World Together?

Jürg Kaufmann
Cadastre and IT Consultant; Chair - Working Group 7.1 FIG
Kaufmann Consulting
SWITZERLAND

Contribution of UNCHS (Habitat) to the UN-FIG International Conference on Land Tenure and Cadastral Infrastructures for Sustainable Development

Sylvie Lacroux
Co-ordinator, Land and Tenure Unit
United Nations Centre for Human Settlements (Habitat)

Land Administration and Globalization

John McLaughlin
Vice-President (Research & International Cooperation)
Professor, Department of Geodesy & Geomatic Engineering
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Land Administration and Cadastral Trends: The Impact of the Changing Humankind-Land Relationship and Major Global Drivers

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A Methodology to Review Torrens Systems and their Relevance to Changing Societies from a Legal Perspective

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Land Administration and Cadastral Trends - A Framework for Re-Engineering

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APPENDIX IV: Glossary of Terms*

Abstract of title: a chronological statement of the documents and events under which a person is entitled to property.

Adjudication: the process whereby the ownership and rights in land are officially determined.

Adverse possession: the occupation of land inconsistent with the rights of the owner.

Alienation: usually relates to the transfer of property by the Crown to another.

Allodial title: freehold under Roman law.

Appraisal: estimating the value (often the market value) of property.

Assessment: determining the tax level for a property based upon its valuation.

Attribute: data associated with a spatial or non-spatial entity.

Boundary: either the physical objects marking the limits of a property or an imaginary line or surface marking the division between two estates. Also used to describe the division between features with different administrative, legal, land-use, topographic, etc., characteristics.

Browser: a program (software) that is used to access formatted resources via the Internet.

Cadastral index map: a map showing the legal parcel framework including legal parcel boundaries, land parcel identifier, administrative boundaries, boundaries and dimensions of land parcels, sometimes reference to underlying cadastral survey plans, road reserves and administrative names.

Cadastral map: a map showing the boundaries of land parcels, often buildings on land, the parcel identifier, sometimes references to boundary corner monumentation. Cadastral maps may also show limited topographic features.

Cadastral surveying: the surveying and mapping of land parcel boundaries in support of a country's land administration or land registration system.

Cadastre: a register of land information or more specifically according to the FIG definition: a cadastre is normally a parcel-based, and up-to-date land information system containing a record of interests in land (e.g. rights, restrictions and responsibilities). It usually includes a geometric description of land parcels linked to other records describing the nature of the interests, the ownership or control of those

* In this glossary, terms are defined for the limited purposes of this document.

interests, and often the value of the parcel and its improvements. It may be established for fiscal purposes (e.g. valuation and equitable taxation), legal purposes (conveyancing), to assist in the management of land and land use (e.g. for planning and other administrative purposes), and enables sustainable development and environmental protection.

Caution or caveat: an entry in the public registers preventing certain actions being taken without notice to the person registering the caution or caveat.

Collateral: security additional to the principal security.

Commodification: the treatment of rights in land as marketable commodities

Common law: generally restricted to English common law systems, this law was originally administered by common law courts and was based on the commonly accepted customs and precedent, as distinct from statute law and local customary law.

Compulsory purchase: see "resumption" and "expropriation".

Condominium: the co-ownership of property.

Consolidation: the amalgamation of land parcels into units of a different size, shape and location. In some jurisdictions, it refers to the planning and redistribution of land into units of more economic and rational size, shape and location.

Conveyance: the transfer of rights in land. See also "land transfer".

Crown land: a term used in some countries to refer to land owned by the state.

Customary law: unwritten law established by long usage.

Customary tenure: the holding of land in accordance with customary law.

Data custodian: the entity charged with ensuring appropriate care and maintenance of information.

Deed: a legal document evidencing legal rights and obligations.

Demarcation: the marking-out of the boundaries of each land parcel on the ground.

Digital Cadastral Database (DCDB): term used extensively in Australia to describe the state-wide digital cadastral map.

Digital mapping: the processes of acquiring, transforming, manipulating and presenting spatial data held in digital form.

Digital Terrain Model (DTM): a numerical model of the Earth's surface.

Easement: a right enjoyed by the owner of one lot of land (the dominant tenement) over that of another (the servient tenement); for instance a right of access or for the passage of water or electricity.

Expropriation/Eminent Domain: **the right of government to take private property for public purposes and subject to proper recompense.**

Estate: the quality of an interest in property (both real and personal). The term is also used in relation to physical elements of land as well as the legal and financial interests.

Fixed boundary: the legal boundary of a land parcel where the precise line has been agreed and recorded.

Fragmentation: the division of land units too small for rational exploitation, usually as a result of the system of inheritance. The process may lead to a multiplicity of parcels for one owner or a multiplicity of owners of one parcel.

Freehold: a free tenure, distinct from leasehold, in which the owner has the maximum rights permissible within the tenure system.

Fundamental spatial data sets: spatial data for which there is a justified need for national consistency by multiple users in order for those users to meet their objectives. A fundamental dataset may comprise a number of compatible databases maintained by custodians in several jurisdictions.

General boundary: a boundary for which the precise line on the ground has not been determined.

Geodesy: the scientific study of the size and shape of the Earth and the determination of positions upon it.

Geodetic framework or network: a spatial framework of points the position of which has been precisely determined on the surface of the Earth. The geodetic network is a basis for topographic, environmental and cadastral surveying and mapping.

Geodetic survey: the process of precisely determining the spatial position of points on the Earth's surface.

Geographic Information System (GIS): a computer system for capturing, managing, integrating, analysing and displaying data which are spatially referenced to the Earth.

Global Positioning System (GPS): a system for fixing positions on the surface of the earth using radio-emitting satellites.

Global Spatial Data Infrastructure (GSDI): the policies, organisational remits, data, technologies, standards, delivery mechanisms, and financial and human resources necessary to ensure that those working at the global and regional scale are not impeded in meeting their objectives.

Grant: a general word to describe the transfer of property

Harmonisation: the means of ensuring a common understanding of land related information which exists within and between the components of land administration systems.

Hypertext Markup Language (HTML): the coding language used to create documents for use on the World Wide Web.

Hypothec: a charge on property as security for payment, the property remaining in the possession of the debtor.

Information: any data processed, organised or classified into categories to serve a useful purpose. It can be presented in voice, digital, printed, pictorial, image, graphical or numerical formats.

Interests: rights in land derived from a particular title for a specific purpose, such as an easement permitting a neighbouring land drainage or access, or a mortgage.

Internet: an international network of dispersed local and regional computer networks used predominantly for sharing information and resources.

Intranet: a private network inside a company or organisation that uses the same kinds of software that one would find on the public Internet, but that is only for internal use.

Land: the surface of the Earth, the materials beneath, the air above and all things fixed to the soil.

Land administration: the processes of determining, recording and disseminating information about the tenure, value and use of land when implementing land management policies.

Land information system (LIS): a system for acquiring, processing, storing and distributing information about land.

Land management: the activities associated with the management of land as a resource from both an environmental and an economic perspective towards sustainable development.

Land parcel: an area of land under homogeneous property rights and unique ownership.

Land reform: the various processes involved in altering the pattern of land tenure and land use of a specified area.

Land register: a public inventory used to record the existence of deeds or title documents.

Land registration: the process of recording rights in land either in the form of registration of deeds or the registration of title to land.

Land tenure: the manner of holding rights in and occupying land.

Land title: the evidence of a person's rights to land, ownership, certificate of ownership.

Land transfer: the transfer of rights in land.

Land value: the worth of a property, determined in a variety of ways which gives rise to different estimates of the value.

Leasehold: land held under a lease, which is a contract by which the right of exclusive possession of land is granted by a landlord (the lessor) to a tenant (the lessee) for an agreed amount of consideration (usually money) for an agreed period of time.

Local Spatial Data Infrastructure (LSDI): See "Spatial Data Infrastructure".

Lot: a land parcel.

Market value: the most probable sale price of a real-estate property in terms of money, assuming a competitive and open market.

Metadata: is a structured summary of information that describes the data (data about data).

Metes and bounds: a property description by reference to the bearings and lengths of the boundary lines (metes) together with the names of adjoining properties (bounds).

Modem: a "MOdulator-DEModulator", a device for the inter-conversion of digital and analogue signals to allow data transmission over telephone lines.

Mortgage: an interest in land created by a written instrument providing security for the performance of a duty or the payment of a debt.

Multi-purpose cadastre: a record of interests in land, encompassing both the nature and extent of these interests. An interest or property right in land may be narrowly construed as a legal right capable of ownership or more broadly interpreted as any uniquely recognised relationship among people with regard to use of the land.

National Spatial Data Infrastructure (NSDI): See "Spatial Data Infrastructure".

Ortho-photo/image map: a map that looks like an aerial photograph or satellite image but which is geometrically accurate.

Overriding interest: a legal interest in land that has legal force even though not recorded in the public land registers; also called a statutory interest.

Prescription: the gaining of a right by reason of a lapse of time.

Private conveyancing: the transfer of rights in land without any public record of the transfer.

Property: everything that is or may be subject to ownership. A distinction is made between personal property (such as physical objects), intellectual property, and real property (by which is meant the ownership of rights in land and things attached permanently to the land).

Provisional title: a registered title that should in due course become an absolute title provided that no objections are registered within a prescribed period, or that certain conditions are met.

Real estate: land-related property.

Real property: land and any things attached to the land including buildings, apartments and other constructions and natural objects such as trees, and in some jurisdictions, minerals.

Regional Spatial Data Infrastructure (RSDI): see "Spatial Data Infrastructure".

Registration of deeds: a system whereby a register of documents is maintained relating to the transfer of rights in land.

Registration of title: a system whereby a register of ownership of land is maintained based upon the parcel rather than the owner or the deeds of transfer.

Reserve: land set aside for specific use.

Restrictive covenant: an agreement whereby one landowner agrees to restrict certain ways in which the land might be used for the benefit of another.

Resumption: see "expropriation".

Servitude: an easement.

Spatial data/information: data/information relating to the land, sea or air that can be referenced to a position on the earth's surface. It is also the key to planning,

sustainable management and development of our natural resources at local, national, regional and global levels.

Spatial referencing: the association of an entity with its absolute or relative location.

Sporadic adjudication: the determination of rights in land here and there, now and then.

Stamp duty: tax on the transfer of property.

Spatial Data Infrastructure (SDI): a term that describes the fundamental spatial datasets, the standards that enable them to be integrated, the distribution network to provide access to them, the policies and administrative principles that ensure compatibility between jurisdictions and agencies, and the people including user, provider and value adder who are interested at a certain level of area that starts at a local level and proceeds through state, national and regional levels to global level. This has resulted in the development of the SDI concept at these levels.

Statute of limitations: a statute that limits the period during which a claim, for instance for the restoration of rights in land, can be pursued.

Strata title: title to land which is necessarily divided horizontally, such as in high-rise buildings or for mining rights.

Subdivision: the process of dividing a land parcel into smaller parcels.

Systematic adjudication: the determination of rights in land on a regular and systematic basis, for example within all of one area at one time.

Tenure: the way in which the rights, restrictions and responsibilities that people have with respect to the land are held. The cadastre may record different forms of land tenure such as ownership, leasehold, and different types of common, communal or customary land tenure.

Title deeds: documents giving evidence of title to land.

Title plan: a plan especially drawn to show the extent of rights and restrictions of land parcels.

Uniform Resource Location (URL): the standard way to give the address of any World Wide Web resource.

World Wide Web (WWW): the WWW is a system that allows users to access resources stored on computers world-wide via the Internet. (WWW is frequently used incorrectly when referring to "The Internet").