Land Administration Infrastructures for Sustainable Development

Prof. Stig Enemark
Department of Development and Planning
Aalborg, University, Denmark

SEVENTH UNITED NATIONS REGIONAL CARTOGRAPHIC CONFERENCE FOR THE AMERICAS (UNRCCA)

The Global Challenges

- Technology development
  - GPS, GIS, Internet
- Micro-economic reform
  - privatisation, decentralisation, downsizing, quality assurance
- Globalisation
  - from local to global
  - events in one part of the world impact on people in other parts of the world
- Sustainable development
  - developments that effectively incorporates economic, social and environmental concerns in decision-making
  - meet the needs of the present without compromising the ability of future generations to meet their own needs

A Global Land Administration Perspective

Evolution of Western Land Administration Systems

Land Registration Systems around the World

The Nordic Way...

<table>
<thead>
<tr>
<th>Country</th>
<th>Denmark</th>
<th>Norway</th>
<th>Sweden</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>43,000 sq. km</td>
<td>328,800 sq. km</td>
<td>481,000 sq. km</td>
<td>337,000 sq. km</td>
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<tr>
<td>Area</td>
<td>5.2 mill</td>
<td>4.2 mill</td>
<td>6.6 mill</td>
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<tr>
<td>Population</td>
<td>About 5.5 mill</td>
<td>About 4 mill</td>
<td>About 3.5 mill</td>
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<td>National cadastral authority</td>
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<td>Municipal Survey and Cadastre</td>
<td>National Land Survey under the Ministry of Environment</td>
<td>State Survey under the Ministry of Agriculture</td>
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<tr>
<td>Cadastre surveys</td>
<td>Licensed/ unlicensed in private practice</td>
<td>Municipal Survey and Cadastre</td>
<td>County Survey and Cadastre</td>
<td>State Survey and Cadastre</td>
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Finland
- State Survey
- National Land Survey under the Ministry of Environment

Sweden
- National Land Survey under the Ministry of Environment

Norway
- Municipal Survey and Cadastre

Denmark
- Danish Survey and Cadastre
...The Nordic Way

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<tr>
<td>Property</td>
<td>National Survey and Cadastre</td>
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<td>Land Data Bank</td>
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The Web-Cadastre

- provides mechanisms for sharing geo-referenced information
- Conceptual mechanisms
  - design of organisational concepts for data sharing and costodianship
- Political mechanisms
  - provision of an effective institutional framework and the distribution
    of power between the governmental levels.
  - policies for access to data
- Economic mechanisms
  - cost recovery policies
  - strategies for distribution and maintenance

- considerable benefits flow from a well developed Spatial Data Infrastructure

The GIS Concept

Spatial Data Infrastructure

The Property Concept
The Planning Concept

- Land Use Management

  - Planning Control
    - Regional structure plans
    - Municipal structure plans
  - Local/Neighbourhood plans
  - Sectoral land use permits
  - Infrastructure permits

- Information Base

  - Land Use Data
  - Cadastre
  - Land Bank
  - Urban/Network
  - Building Register
  - Metropolitan maps

- Implementation and Governance

The Educational Challenge

- The Educational Challenge

  - Not de-concentration
  - Relates to autonomous land-use decision-making at local level
  - Based on democratic ideals of local self-government

Decentralisation

- Competencies should rest with the lowest possible level of jurisdiction
  - More efficient service
  - Better use of local knowledge
  - Greater participation and democracy
  - Increased popular consent to government
  - Improved political sustainability
  - Particularly valid for land-use decision-making
  - Depends on a finely tuned relationship between national, regional and local level

Subsidiarity

- Requires action at all jurisdictional levels
  - Sectoral policies must be co-ordinated
  - Mature governmental structures is a must

Sustainability
• The Bathurst Declaration established a powerful link between appropriate land administration and sustainable development

• Sustainable development is not attainable without sound land administration

• This again requires support from a well developed spatial information infrastructure

• A global approach to land management depends on appropriate structures of governance

• Decentralisation may be seen as a significant key to sustainable development