LAUNCH OF CADAstral TEMPLATE 2.0

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Prof. Abbas Rajabifard Director Centre for SDIs and Land Administration, Melbourne University

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Québec, Canada, 7-8 Oct. 2014
What is the Cadastral Template?

• Initiative: Permanent Committee on GIS Infrastructure for Asia-Pacific (PCGIAP), WG-Cadastre, under the leadership of Ian Williamson (Australia) and Ahmad Fauzi bin Nordin (Malaysia)

• Research Centre: University of Melbourne, Centre for Spatial Data Infrastructures and Land Administration (Ian Williamson, Abbas Rajabifard, Daniel Steudler, Stig Enemark)

• Launch at a workshop in July 2003 in Okinawa, Japan

• Intention at that time:
  → "to develop an appropriate generic template for country profile analyses describing the status of cadastre and land administration, and the need for improvements, which will facilitate benchmarking and the development of performance indicators".
Design Principles for the Template

- keep it simple in order to attract as many participants as possible
  → part I and II (descriptive and statistics)
- role of cadastre for SDI
- resource for lesson-learning from each other
- resource for developing best practice and performance indicators
**Structure**

**Part I: Descriptive Country Report**

<table>
<thead>
<tr>
<th>A. Country Context</th>
<th>Geographical Context / Historical Context / Current Political and Administrative Structures / Historical Outline of Cadastre</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Institutional Framework</td>
<td>Government Organizations / Private Sector Involvement / Professional Organization or Association / Licensing / Education</td>
</tr>
<tr>
<td>C. Cadastral System</td>
<td>Purpose of Cadastral System / Types of Cadastral System / Cadastral Concept / Content of Cadastral System</td>
</tr>
<tr>
<td>D. Cadastral Mapping</td>
<td>Cadastral Map / Example of a Cadastral Map / Role of Cadastral Layer in SDI</td>
</tr>
<tr>
<td>E. Reform Issues</td>
<td>Cadastral Issues / Current Initiatives</td>
</tr>
</tbody>
</table>

**Part II: Questionnaire**

<table>
<thead>
<tr>
<th>1. Cadastral Principles</th>
<th>Deeds vs. title registration / registration compulsory or optional / systematic vs. sporadic registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Cadastral Statistics</td>
<td>Population / no. of land parcels / no. of strata titles / degree of registration / no. of professional land surveyors and lawyers/solicitors</td>
</tr>
</tbody>
</table>
47 countries (June 2014)
Issues

- soon after the initial workshop in 2003, it became difficult to get support and to get data from more countries
- in 2007, a request for updates provided replies from 3 countries out of 39 → BUT: information seems to be of interest
- quality control
- there are no procedures in place for regular updates
- technical set-up of website is static, therefore difficult to maintain and to make updates → motto: not perfect, but better than nothing
- in May 2011: adaptation of website → no updating of .htm pages anymore, but instead a complete list of country reports and versions in .PDF and .DOC formats
Cadastral Template 2.0

http://www.cadastraltemplate.org
Supporting Actors

**Project team**
- Daniel Steudler, Abbas Rajabifard (Univ. of Melbourne), endorsed by FIG-President (for 3 years, until end of 2016)
- to look after the validation of new and updated information
- to further develop, maintain and promote the cadastral template

**Developers**
- team from CSDILA at the University of Melbourne

**FIG Head Office**
- to send out official requests for participation to its national member associations (e.g. when renewing membership)

**FIG-Commission 7**
- to involve its delegates to contribute to the Cadastral Template
Technologies used

• **Database**
  - MySQL: to store and maintain cadastral data provided by the individual participants.

• **Back-end Technology**
  - PHP: a server-side scripting language to communicate and retrieve the data from the database.

• **Front-end Technology**
  - JavaScript: client-side scripts to interact with the user and visualised the retrieved data.
  - JQuery: to simplify the client-side scripting of HTML.
  - Datamaps: a SVG-based data maps using D3.js to provide some data visualisations based on geographical data.
  - D3.js: a JavaScript library that uses digital data to drive the creation and control of dynamic and interactive graphical form.
  - Google Chart API: A Google API to create charts from some data and embed it in a web page.
Cadastral Template 2.0

- **www.cadastraltemplate.org**
  - CT2.0 online since 6 Oct. 2014
  - previous version is still online at www.cadastraltemplate.org/version1.0/

- **country data**
  - previous country information has been transferred into new layout
  - graphics has not yet been transferred

- **updating**
  - by national delegates
  - based on username/password per country
  - periodic checking of updates by project team
Cadastral Template 2.0

Home Page

The “Cadastral Template 2.0” has been developed by a research group at the Centre for SDIs and Land administration, Department of Infrastructure Engineering of the University of Melbourne and it was established under UN mandate by Resolution 4 of the 18th UNRCC-AP in Okinawa, Japan in July 2003. It consisted of Professor Abbas RajabiFard, Dr. Daniel Steudler, and Professor Ian Williamson, supported by Professor Stig Enemark from Aalborg University, Denmark. PCGIAP Working Group 3 “Cadastre” cooperates with FIG-Commission 7 to place the country information jointly on this website and to maintain the information during its 2003-2006 Work Plan.

Participating countries

Field data:
The cadastral template is based on a raster of 17 data fields, which would need to be filled in according to
# Cadastral Template 2.0 – Index for country pages

## Participating countries

<table>
<thead>
<tr>
<th>Asia</th>
<th>Europe</th>
<th>Africa</th>
<th>North America</th>
<th>South America</th>
<th>Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brunei</td>
<td>Austria</td>
<td>Ethiopia</td>
<td>Mexico</td>
<td>Argentina</td>
<td>Australia</td>
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<tr>
<td>Cambodia</td>
<td>Belgium</td>
<td>Namibia</td>
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<td>Fiji</td>
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<td>China</td>
<td>Bulgaria</td>
<td>South Africa</td>
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<td>Kiribati</td>
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<td>Hong Kong</td>
<td>Cyprus</td>
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<td>Indonesia</td>
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<td>Malaysia</td>
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<td>Sri Lanka</td>
<td>Sweden</td>
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<td>Turkey</td>
<td>Switzerland</td>
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<td>Uzbekistan</td>
<td>UK</td>
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</tbody>
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Cadastral Template 2.0 – Comparison page
Cadastral Template 2.0 – About page

About the Cadastral Template

Project Partners

Project Directors

For providing or updating your country data, please contact:

Prof. Abbas Rajabifard
Dr. Daniel Steudler

abbas.r@unimelb.edu.au
Daniel.Steudler@swisstopo.ch
User issues

• in the "Contact" field, the spacing between lines might seem to be too large:
  → instead of using <return> at the end of a line, use <shift-return>
• when uploading illustrations, remove as much white space around the illustration as possible
• formatting of numbers → don't use any ' , . spaces or other characters; type in number as it is, for example "88098500"; when in viewing mode, the number will be formatted by the system, to i.e. "88,098,500"
• bear with us, we continuously try to improve and develop the website; we are of course very grateful for your hints

• don't hesitate to ask project and developing teams
Known issues to be looked at in near future

- to look at graphical web design issues, user friendliness
- to add the possibility to select/deselect single countries in the comparison section
- to improve colouring of countries in comparison section
- to add user instructions
- to add the possibility to indicate when a number is not available (\(\Rightarrow\) n.a.)
- to enable the possibility to produce a country file in PDF format
Next steps

• FIG-Commission 7 delegates are asked to provide, check or update their country data (one username/password per country)
• get username/password from daniel.steudler@swisstopo.ch
• project team will improve the website continuously over the next few months, also based on your feedback

• project team will discuss with partner organizations to use infrastructure for other data collections in the cadastral field (e.g. EuroGeographics CLRKEN, PCC, WB-LGAF, FAO-VGGT, CoFLAS, …)