Multi-view framework to assess (National) Spatial Data Infrastructures

Workshop Introduction

Wageningen, 23 May 2007
Joep Crompvoets
Presentations overview

1. Personal presentation + expectation
2. Related Projects
3. Why assessing (N)SDIs?
4. What assessing?
5. How to assess?
6. Previous Workshop results
7. Introduction Multi-view framework
8. Program schedule
9. Logistics
Personal presentation + Expectation

Introduce yourself
  Name
  Country
  Background information (focussing on SDI-assessment)

Workshop Expectation
  What do you expect to gain from this Workshop?
Related Projects

1. Development of framework to assess National Spatial Data Infrastructures
   *(Space for Geo-Information / RGI-005)*

Top-ups
1a. Multi-view framework to assess National SDIs
1b. Measuring SDI-performance as a function of budgeting processes

2. Evaluating and strengthening spatial data infrastructures for sustainable development in Latin-America and The Caribbean
   *(Iberian-American program of Science and Technology for Development (CYTED IDEDES)*
## Why assessing? Why evaluating?

<table>
<thead>
<tr>
<th>Four evaluation/assessment orientations</th>
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<tbody>
<tr>
<td>1. Control</td>
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<td>2. Learning</td>
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<td>3. Sense making</td>
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<td>4. Explorative practice</td>
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<tbody>
<tr>
<td>1. Accountability</td>
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<td>2. Development</td>
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<td>3. Knowledge</td>
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</table>

**Others**

Improving performance, gaining explanatory insights, to strengthen institutions/sectors
What assessing?

National Spatial Data Infrastructures
Need of definition?
If yes, which definition?
New definition or one of the multiple existing definitions?

Not comparing apples with pears?
US SDI vs. Luxembourg SDI
National Data producer led vs. Not National data producer led
What are good SDIs?

Nebert (ed.), 2004 SDI Cook book
Is this a good SDI?

INSPIRE Information Flow

Data resources

- Local data
- National and sub-national SDI
- European Data

INSPIRE specifications

- Discovery Service
- Technical Integration/harmonisation
- Harmonised Data policy
- Collaborative agreements

Users

- Government & Administrations
- Utility & Public Services
- Commercial & Professional Users
- Research
- NGOs and not-for-profit orgs
- Citizens

ISO

delivery of information services

request for information services

INSPIRE, 2006
Is this a good SDI?

Structuurschets
Vastgoedinformatie Voorziening, 1992
Criteria for assessment?

Relevant
Efficient
Effective
Satisfactory
Sustainable
(social, economic, environmental)

Compliant
Coherent
Well used
How to assess SDIs?

- Examples of existing assessment approaches
  - Masser (1999), Rajabifard et al. (2003): Generational
  - Steudler et al. (2003): Evaluation and Performance indicators
  - Delgado et al. (2005): NSDI-Readiness
  - Rodriguez Pabon (2005): Theoretical framework to assess SDIs
  - Crompvoets (2006): Clearinghouse Suitability Index
  - Lance et al. (2006): SDI control evaluation
  - Giff (2006): Performance based management

Different assessment orientation, different approaches, different sampling methods, different levels, different definitions
Examples of approaches: NSDI-Readiness

Índice de Alistamiento en IDEs en Iberoamérica y el Caribe

Delgado et al., 2007
Example: Nat. Clearinghouse suitability index

Crompvoets, 2006
## Example: (INSPIRE) State of Play

<table>
<thead>
<tr>
<th>País</th>
<th>Aspectos Organizativos</th>
<th>Aspectos legales y financiamientos</th>
<th>Datos espaciales</th>
<th>Meta-datos</th>
<th>Acceso servicios</th>
<th>Estándares</th>
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<td>Argentina</td>
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- En completo acuerdo con la declaración
- En parcial acuerdo
- En desacuerdo
- Insuficiente información disponible para evaluar el nivel de acuerdo

Spatial Application Division of KU Leuven, Danny Vandenbroucke, 2003-2005
Previous Workshop

- Foundation of the conceptual Multi-view framework
- Many (international) experts (USA, NL, BEL, SVK, India, Egypt, Pol, China, AUS, UK -> many opinions)
Previous Workshop results

Assessment framework
- NSDIs are complex, dynamic and multi-facetted
  -> Obstacles for assessment

- NSDI as evolving target -> specific strategy needed to assess
- NSDI as complex systems
  -> complex systems’ assessment strategies

- assessment based on user’s appreciation
- Flexible
Multi-view framework (Lukasz Grus)

Conceptual model of framework

Others: INSPIRE State of Play Clearinghouse Suitability Index, Global Survey of SDIs

Evaluation by key users

Determination critical factors
## Wednesday Morning program:

### Introduction to Multi-view framework to assess NSDIs

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>9:00 – 10:30 AM</td>
<td>- Introduction</td>
<td>Joep Crompvoets</td>
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<td></td>
<td>- More governance, Less SDI: Implications for evaluation research</td>
<td>Yola Georgiadou</td>
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<td></td>
<td>- The multi-faceted nature of SDIs and their assessment</td>
<td>Erik de Man</td>
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<td><strong>Coffee Break (10:30 – 11:00)</strong></td>
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<td>11:00 – 12:30</td>
<td>- Monitoring and assessing (N)SDIs: some general questions</td>
<td>Ian Masser</td>
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<td>- Behavior of Complex Adaptive Systems</td>
<td>Wiebe Aans</td>
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<td></td>
<td>- Multi-view framework to assess NSDIs</td>
<td>Lukasz Grus</td>
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<td>- <strong>Plenary debate</strong></td>
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Introduction to Multi-view framework to assess (National) SDIs

Plenary debate

“(N)SDIs are complex, multi-faceted, and dynamic. Therefore, the multi-view framework is an appropriate approach to assess (N)SDIs”

What is your comment to this statement?
# Logistics

**Coffee** 8:15; 10:30; 15:30  
**Lunch** 12:30 – 13:30  
**Workshop Dinner Wednesday** “Hotel De Wereld”: 19:00 - ????  
5 Mei Plein 1, Wageningen *(PE&RC funded)*  
Who will participate?  
**Dinner Thursday** “Eetcafé de Kater”: 19:30 - ????  
Markt 8, Wageningen  
**Working forms** Presentations, Presentation specific questions, Group activities, Plenary debates  
**Presentation procedure**  
± 15 min. Presentations, ± 15 min. Questions  
**Bus WICC <-> GAIA**  
*Bus tickets (Strippenkaarten) -> Joep*
Additional funding

C.T. de Wit Graduate School for Production Ecology and Resource Conservation (PE&RC) of Wageningen University
Thanks for your attention

Questions????

Contact details.
Joep Crompvoets
Wageningen University
The Netherlands
joep.crompvoets@wur.nl
## Wednesday afternoon  Multi-approaches

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>12:30 – 13:30</td>
<td>Lunch</td>
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<td>13:30-15:30</td>
<td>Introduction to indicators</td>
<td>Arnold Bregt</td>
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<td>13:30-15:30</td>
<td>Plenary activities “Key indicators”</td>
<td>Tatiana Delgado, Rafael Espin</td>
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<td>13:30-15:30</td>
<td>NSDI-Readiness</td>
<td>Lukasz Grus</td>
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<td>13:30-15:30</td>
<td>Generational approach</td>
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<td><strong>Coffee Break (15:30 – 16:00)</strong></td>
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<td>16:00 – 18:00</td>
<td>Assessing an SDI from an organization perspective</td>
<td>Bastiaan van Loenen</td>
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<td>16:00 – 18:00</td>
<td>Blazing the trail or follow the yellow brick road?</td>
<td>Henk Koerten</td>
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<td>16:00 – 18:00</td>
<td>On geo-information and organizing theory</td>
<td>Katleen Janssen</td>
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<td>16:00 – 18:00</td>
<td>A legal approach to assessing SDIs</td>
<td>Danny Vandenbroucke</td>
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<td>16:00 – 18:00</td>
<td>INSPIRE State of Play</td>
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**Workshop dinner 19:00 “Hotel De Wereld”**
<table>
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<tr>
<th>Time</th>
<th>Session Description</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>8:30-10:30</td>
<td>- Assessing the Impacts of SDIs&lt;br&gt;- SDI Effectiveness from User Perspective&lt;br&gt;- Cost – Benefit Indicators to assess SDI-Impact&lt;br&gt;- Designing Performance Indicators to Assist in SDI Evaluation</td>
<td>Max Craglia, Nama Raj Budhathoki, Zorica Nedovic-Budic, Roger Longhorn, Garfield Giff</td>
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<td>10:30-11:00</td>
<td>Coffee Break</td>
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<td>11:00-12:30</td>
<td>- SDI Performance measurement as a function of budgeting processes&lt;br&gt;- Towards key variables to assess NSDIs in developing countries&lt;br&gt;- Quality management in Dutch SDI&lt;br&gt;- Plenary debate</td>
<td>Kate Lance, Lyande Eelderink, Peter Laarakker, Floris de Bree</td>
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</table>
Multi-approaches

**Plenary debate**

How to integrate the assessment results of the different approaches in order to have a comprehensive SDI-assessment?

What is your suggestion?
User demands

- Who are the users of the assessment results?
- Why do users need these results?
- What are their demands to the assessment results? Qualitative? Quantitative? Index value? Monetary terms?
- What are the key user demands to these results?
- What are the key (critical) user indicators?
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<td>Lunch</td>
<td>Harlan Onsrud, Jan Cees Venema</td>
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<td>13:30-15:30</td>
<td>- Global Spatial Data Infrastructure Association</td>
<td>Danny Vandenbroucke, Tatiana Delgado, Kate Lance</td>
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<td>- UNSDI: an UNGIWG initiative</td>
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<td>- INSPIRE Directive: specific requirements to monitor its implementation</td>
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<td>- CYTED (Latin-American and The Caribbean)</td>
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<td>- Africa</td>
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<td>15:30-16:00</td>
<td>Coffee Break</td>
<td>Ruby Beltman, Rebecca Last, Paula Rojas, Tatiana Delgado</td>
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<td>(15:30 – 16:00)</td>
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<td>16:00-18:00</td>
<td>- GeoNovum</td>
<td>Rebecca Last, Paula Rojas, Tatiana Delgado, Jacqueline Meerkerk</td>
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<td>- Performance Evaluation for GeoConnections and the Canadian Geospatial Data Infrastructure</td>
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<td>- CIDERC</td>
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<td>- Demands of SDI – Connecting worlds</td>
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<td>- Plenary debate</td>
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<td>19:30</td>
<td>Dinner Eetcafe De Kater</td>
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Plenary debate

What are the key user demands to NSDI-assessment (and indicators)?
Matching user demands with assessment approaches in order to assess NSDI?

8:30 – 10:30
Introduction    Arnold Bregt

Group activity

Plenary debate

Coffee Break (10:30 – 11:00)
Matching user demands and assessment approaches

Group activity + Plenary debate
1. How do you match user demands and the existing assessment approaches in order to assess NSDIs?
2. What are the main conclusions of this matching?
3. Are you able to determine key indicators? If yes, what are they?
Application of Multi-view framework

**Purpose for applying**
- Identifying biases of assessment results
- Analyzing a variety of approaches to estimate their importance
- Confirming the validity of the approaches and the assessment framework
Application of Multi-view framework

Questions
- What is the best strategy for applying the Multi-view framework?
- Is it necessary to use all the approaches?
- What are the key data to be collected? Key (user) indicators?
- What is the best method for collecting the needed data?
- Would the initiative of the GSDI Global Survey of SDIs be a good opportunity to collect the needed data?
- How many (N)SDIs do we need to evaluate in order to assess the validity? Which (N)SDIs do we need to evaluate?
Application obstacles

- **Timing of application**
  Preference: Simultaneous application of the multi-approaches -> Setting times for collecting data and applying the approaches

- **Data availability for various assessment approaches**
  Different countries

- **Integration of multiple approaches**
  Possibility of conflicting approach results
<table>
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<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>11:00 – 12:30</td>
<td>- Introduction &lt;br&gt; - Assessing SDI Initiatives: A Ten-Year Retrospective  &lt;br&gt; - Group activity</td>
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<td>Lunch (12:30 – 13:30)</td>
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<tr>
<td>13:30 – 15:15</td>
<td>- Plenary debate &lt;br&gt; - Inventory of contact organisations &lt;br&gt; - Online questionnaire &lt;br&gt; - Time planning: Survey + Application</td>
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<td>Coffee Break (15:15 – 15:30)</td>
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<td><strong>Application of Multi-view framework</strong></td>
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**Group activity + Plenary debate**

1. What is the best sampling strategy for GSDI Global Survey of (N)SDIs using the multi-view framework concept?

2. What are the key questions to be asked?
Conclusion session

15:30 – 17:00
- Plenary debate
- Conclusions
- Book Logistics
- Further steps
Conclusions

**Plenary debate**

What are the main conclusions of the Workshop Multi-view framework to assess National SDIs?