

Minutes of GSDI 15 Workshop
Towards a Global Assessment of National SDIs
Taipei (Taiwan): 1 December 2016 at 15:30-17:30

Project Staff:

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Number of participants: 16 persons

A short introduction was presented by Georgina Chandler and Joep Crompvoets. The main objectives of the workshop were threefold: 1. To understand and explore the principles of NSDI indexing on global level; 2. To define a set of relevant key indicators; and 3. To be involved in the project 'Global NSDI-Assessment.

After a few introductory slides about assessment studies in general, the project 'NSDI Assessment Index' was briefly presented (incl. rationale, methodology, design principles and objectives. The key objective of the project is to develop a **high** level index for National Spatial Data Infrastructure Globally. This might give guidance to organisations directing investments into this space – and highlight countries which may struggle to report against international agreements such as the Sustainable Development Goals or Aichi Targets (biodiversity).

The design principle is component-based. A set of six components were defined: 1. Regulatory Framework; 2. Governing organisation; 3. Content; 4. Human Resources; 5. Information Gateway; and 6. Standards. The challenge was to determine/propose the key indicators for each component.

A breakout session was organised. It was organised in such a way that the participants had to propose maximum three key indicators for each component – each proposal had to be written down on one post-it. In order to smoothen the process, it was decided to divide the participants into 3 groups. Besides the indicators proposals, each indicator had to be briefly introduced, explained, discussed to the other group members, and 'positioned' to other indicators for each component. The breakout session was organised in such a way that the group circulated three times. Each time, the group members tackled two components – Regulatory framework + Governing organisation; Content + Human Resources; Information Gateway + Standards. After the three circulations, there was a plenary session in which the main results for each component were presented and summarised. Joep presented the components Regulatory framework + Governing organisation; Georgina presented Content + Human Resources; and David Patterson presented Information Gateway + Standards.

The workshop ended with a short overview of the follow-up actions: Writing a workshop report; Processing the workshop results; Developing the global index; Applying the Global Assessment Index; Organising follow-up workshop; and writing Scientific paper(s).

The tables below present the indicators mentioned for each component. Several (same/similar) indicators were mentioned by the participants more than once – Therefore, same/similar indicators might appear more than once in the tables and are grouped in one table record.

1. Regulatory Framework

Existence NSDI0 law	Existence of GI-Law	SDI legislation existence	SDI legislation	NSDI-establishment legislation	NSDI Law
Existence of data policy					
Data sharing policies	Policies on data sharing				
Terms of legislation implementation	Regulation on which agency is implementing what				
Enabling legislation					
Clarity about legal objectives					
Mandatory (legal) supply					
Is there a mandate for the establishment of the NSDI					
Legislation performance	Level of legislative regulation				
Consistency across jurisdiction	Consistency				
Monitoring & Reporting legislation	Review implementation	Number of relevant legal documents			
Level of legal flexibility					
Political ownership	President/PM is leader of Steering Committee				
Independence of political interference					
Existence of standard licenses	Licensing framework				
Privacy					
Open standards legislation					
Open data legislation					

2. Governing organisation

Multi-governmental coordination			
Existence of governance mechanisms			
Coordination body	Coordination body	National SDI Council or something similar	Committee on NSDI
High level involvement	Ministerial involvement	National Steering Committee (President is leader)	Ministry of Interior involvement
Number of organisations involved	Governance size		
Stakeholder involvement			
User community representation			
Number of administrative levels involved	Division of administrative levels involved	Task allocation for administrative levels	
Definition of roles and responsibilities			
Resources allocated to governance	Budget		
Is there an established enduring funding source?			
Review procedure for NSDI-governance	Monitoring & Reporting Framework	Is there clear accountability for NSDI functionality/operation?	
Procedures/guidelines for data governance (data compilation, integration, synchronisation)			

3. Content

Wide range of data themes	Un-GGIM themes				
Existence of fundamental datasets	Core foundation data	Existence of framework data			
Cadastral parcels					
Addresses	Addresses				
(3D) Topography	Topography				
Roads					
Land cover/use	Land use / land cover	Land use			
Administrative boundaries	Administrative boundaries				
Census (population)					
Coordinate system					
Georeferenced					
Coverage	Coverage	Coverage of data	Coverage	Coverage	Coverage
Scale					
Known quality	Quality	Quality	Quality	Quality defined + measured	Data quality
Currency	How old?	Up-to-date	timeliness		
Update frequency	Latest version				
Conformity tests/specs					
Well-structured					
Metadata availability	Clear metadata description				
Data accessibility (via geoportal)					
# of available thematic datasets					
Data model application					
Level of support					
Clear process for data publication					
How widely are the data used? Market view					
Balance of user & consumer viewpoint	Fit for designated purposes only				
Balance of "power users" and neophytes					
Take advantage of collaboration with different public & private data sources					
Not include value added data					

4. Human Resources

Education (& Training) at different levels (schools to universities)	Level of (GIS) education - # of GIS specialist per year		
Availability of necessary skills to support the NSDI	# of staff qualified in SDI		
Availability of universities providing courses on SDI	University SDI education		
SDI-certification			
Overview of HR training/education			
Does the NSDI have a champion?	Political awareness	Champion/leader	
Degree of willingness to cooperate			
Coordinating body for sustained educational/training funding	Steering committee/ Working groups/ Technical teams		
Education program			
Existing HRM Plan	Career development for SDI staff		
Level of local involvement			
Level of crowd sourcing			
Courses on spatial thinking			

5. Information Gateway

Portal existence	Existence National Geoportal	Geoportal	
Portal legislation			
How rich is the portal?	Level of delivery (web services, data, metadata, APIs)		
Multiple ways to discover and access SDI content and services	# of services (WMS, WFS, WCS) provided by the portal	Gateway services reflecting mass- market approached to data discovery / accessibility	# services
Service for visualising data			
Download/upload time	Speed		
Availability of metadata			
Searchable via Google	Portal is discoverable		
Language used			
APIs availability			
User support/help			
Support other devices (web, mobile)			
Support other operation systems			
Browser independent			
Integrated with other systems in one stop portal			
E-government integration			
Availability/accessibility conditions (rights, fees, licenses)			
Flexibility – Is it built in such a way that it can adapt to the changing demands			
Last update			
Internet access per capita			

6. Standards

# of standards implemented	# of standards applied		
Active direct of in-kind support of standards initiatives	Promoting the use of standards, memberships in-kind support	Promotion & attention to standards-based products to services	# or requests for support to standards
Legislative support of standards			
Language – Is the standard (material) available in native language			
Standards applicability / currency – How frequently are the reviewing standards?			
Compliance to the 'fundamental' standards	ISO/OGC compliancy	Compliance of data standards (National vs. International)	
Metadata (semantics, provenance, currency)	Metadata profile		
Testing data downloads			
Data exchange standards			
Single geodetic reference system	Reference geodetic system		

Finally, the participants highlighted that important SDI-components such as Funding mechanisms and IT-Infrastructures are missing!