

Working Group on Trends in National Institutional Arrangements in Geospatial Information Management

UN-GGIM Europe 3rd Plenary meeting
Budapest 5th October 2016

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United Nations Committee of Experts on
Global Geospatial Information Management

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INDEX

1. **UN-GGIM NIA WG. Who we are?**
2. **UN-GGIM NIA WG Objective**
3. **Methodology**
4. **Topics to discuss in the breakout session**



1. UN-GGIM NIA WG. Who we are?

UN-GGIM Working Group on Trends in National Institutional Arrangements for Geospatial Information Management

- Established in July 2013 requested by the United Nations Committee of Experts on Geospatial Information
- **Definition of National Institutional Arrangement (2014)**

*“The formal and informal cooperation structures that supports and links public and private institutions and/or organizations and which are used to establish the **legal, organizational and productive frameworks** to allow for **sustainable management of geospatial information**, inclusive of its **creation, updating and dissemination**, thereby providing an **authoritative, reliable and sustainable** geospatial information base for all users.”*
- **Terms of Reference (2015)**
 - ✓ *Characteristics/criteria which determine effective geospatial institutional arrangements,*
 - ✓ *Publication detailing best practices in geospatial institutional arrangements.*
 - ✓ *Catalogue of index or indices for evaluating and monitoring the status and/or evolution of geospatial institutional arrangements.*



1. UN-GGIM NIA WG. Who we are?

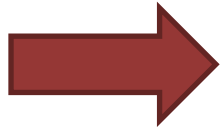
UN-GGIM Working Group on Trends in National Institutional Arrangements for Geospatial Information Management

- 3 Task Group comprise the WG

TG	Subject	Coordinator
Task Group 1	Production Systems Analysis	Spain
Task Group 2	Funding Structures, dissemination Systems & Data Policy Models	Mexico
Task Group 3	Structure of GI Management Organisations and role of VGI	Singapore



2. UN-GGIM NIA WG Objective



Identification and selection of best (good) practices on National Institutional Arrangements (NIA) based on objective criteria, globally and by topics already set.

- Good practices
- Sets of institutional models and legal frameworks



**GEOSPATIAL
INFORMATION**

- Efficient management
 - Interoperability
- { systems
institutions }



3. Methodology

Sustainable Development (17 Goals)

NIA Aspects (GI)

- **Technical**
- **Economical**
- **Political**
- **Administrative**

9 LAND THEMES (→ GRD):

- Geographical names
- Administrative units
- Cadastral parcels
- Transport networks
- Hydrography
- Elevation
- Land Cover
- Imagery
- Settlements

TG1- Production System
TG2- Funding, Dissemination, Data Policy
TG3- Organization and Governance and VGI

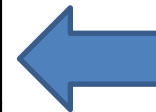
Questionnaire



3. Methodology: Factors

Factors have been identified and justified in order to take in account for **good practices** → 52

52 FACTORS	TG1	Production systems	7 factors
	TG2	Funding systems	8 factors
		Dissemination systems	10 factors
		Data policy models	7 factors
	TG3	Coordination & Collaboration Among Entities	5 factors
		Facilitating Infrastructure & Technology	4 factors
		Use of GI for Policy & Decision Making	3 factors
		Data & Service Standards	3 factors
		Role of VGI	5 factors



External consultation

11 organizations consulted
8 organizations answered

- EUROSTAT
- JOINT RESEARCH CENTRE
- EUROSDR
- UN-GGIM WG Land Management
- UN-GGIM Europe WG-A
- EUROGEOGRAPHICS
- CARLETON UNIVERSITY
- CSIRO
- UN-GGIM Europe WG-B
- HANNOVER UNIVERSITY
- UN-GGIM WG FDS

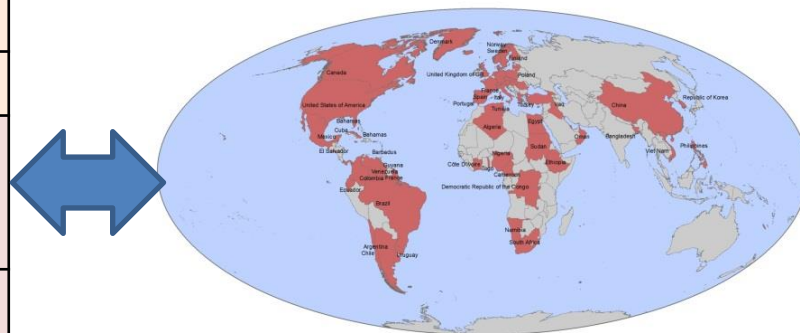


3. Methodology: Factors

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Questionnaire structure



6. Future activities

FACTORS

52 INDICATORS	TG1	Production systems	7 indicators
		Funding systems	8 indicators
	TG2	Dissemination systems	10 indicators
		Data policy models	7 indicators
	TG3	Coordination & Collaboration Among Entities	5 indicators
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		Use of GI for Policy & Decision Making	3 indicators
		Data & Service Standards	3 indicators
		Role of VGI	5 indicators

52 Factors

Selected key Factors



NIA TYPOLOGY

NIA1

NIA2

NIA3

...

NIAx

Countries with NIA 1

Countries with NIA 2

Countries with NIA 3

Countries with NIA x

ASSESSMENT

Good practices 1

Good practices 2

Good practices 3

Good practices x

Questionnaires

SCENARIOS

Ancillary official information

- Country area.
- Human Development Index (HDI), Inequality-corrected Human Development Index (IHDI)
- ICT Development Index (IDI)



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4. Issues to be addressed in the breakout session

1. Are the set of factors selected by NIA Group to characterized NIA appropriate?
2. Is there any ancillary information to be included in the analysis?
3. Is there a subset of key-elements within the 52 factors list more suitable to describe different types of NIA?



1. Are the set of factors selected by NIA group appropriate to characterize NIA?

- Are the 52 selected factors suitable for describing a National Institutional Arrangement?
- Is there any factor to be added?
- Is there any factor to be suppressed?
- Is there any factor to be modified?



2. Is there any ancillary information to be included in the analysis?

Possible candidates to be included in the analysis:

- Country area.
- Human Development Index (HDI) and/or Inequality-adjusted Human Development Index (IHDI)
- ICT Development Index (IDI)
- E-government development Index



3. Is there a subset of key- elements within the 52 factors list more suitable to define different types of NIA?

- If this subset is to be defined as key-elements, what factors should be included in it?
- What different combinations of factors define the different types of NIA?
- How many types of NIA would have to be defined?



Task Group 1: Production systems

Sub-area	Indicator	Justification
Production methods	Are the methods applied for creation/update automatic or semi-automatic? (In 50% or more of the production process)	Automatic or semi-automatic methods applied for production are considered as best practice due to the cost reduction and the possibility of applying "standards" processes already proved
Creation/update of GRI	Are collaborative methods, understood as contribution with resources or economical, between public or private institutions used?	The collaborative production involves a share of knowledge and costs which makes the production more efficient
	Is VGI included in the process?	The collection of geospatial data by VGI although doesn't come with the quality assurances, has a level of detail and maintenance regimes that are required to inform major business or public-service questions
Approach for GRI creation/update	Is BOTTOM-UP approach applied in the creation/update in more than 3 GRI themes among administrative units, transport network, hydrography, elevation, land cover or settlements?	The Bottom-up approach with the production with the maximum scale/resolution, except for Geographical names or Imagery is considered as a best practice as is consistent with the INSPIRE principles
Production scale	Are more than 6 GRI themes produced with 1:25.000 scale or higher?	The scale 1:25.000 is a much extended scale used for national or subnational management. So the limit has been put on this scale considering as a best practice when more than 6 of the 9 GRI themes are produced at this scale or higher
GRI update	More than 3 GRI themes are update in a continuous way?	Information update at any time would be desirable and we have considered that 3 GRI themes continuously updated will be a best practice
	The update period is ≤ 5 years for at least 4 GRI selected themes?	Less than 5 years period for reviewing at least 4 GRI themes will means a GRI information considerably updated



Task Group 2: Funding structures and dissemination systems in GI. Data policy models.

- Funding structures

Funding origin	Is there any existing public funding model for acquisition, processing and dissemination of GI?	Due to high costs needed for producing and managing GI, it is necessary to share resources and avoid duplicities
	Is there any private structured model for acquisition, processing or dissemination of GI?	Involvement of private sector in production of official GI helps minimizing costs and broaden scope
	Is there any funding coming from international sources for GI production?	Making use of funds available from international organizations support availability and GI update
	Is the percentage of the budget assigned to manage GI over 0,05% of the GDP?	It is necessary to have a threshold in terms of total budget assigned to GI management
Return on investment	Is any model of return on investment available?	Due to high costs of producing GI, a plan for obtaining a certain return is necessary
	Does the use of GI implies any cost for citizens?	This may help to recover part of the invested costs in production, but it also may diminish interest on official GI
Destination of funding	Is part of the funding dedicated to research activities?	Assures adoption of innovations and emerging technologies related to production and management of GI
	Is part of the funding dedicated to the development of a local, national or regional SDI?	Allows to have available resources for boosting actions for facilitating a SDI initiative and associated elements



Thank you for your attention

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