Fundamental Global Geospatial Data Themes
- getting closer?

UN-GGIM EUROPE | UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

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Quick Background

- GGIM 5 – Report on fundamental data themes prepared by GGIM:Europe. GGIM5 agreed that there is:

    'an urgent need for a set of global fundamental geospatial data themes that could be harmonized in order to enable the measurement, monitoring and management of sustainable development in a consistent way over time and to facilitate evidence-based decision-making and policy-making'

- GGIM:Europe asked to take lead to:
    - Produce a recommendation for a minimum list of global fundamental geospatial data themes. Each data theme should be supported by a description and guidelines.
    - Take account of existing activity being undertaken by UN-GGIM regional committees, ensuring that where possible existing resources are used.
    - Consider the prioritisation of the data themes and how they link to other data needs with in the UN-GGIM programme of work.
    - Consider the specific needs and vulnerabilities of small island developing States.
    - Ensure that the data themes should be technical in nature as not to raise political concerns.

Progress to date

- Creation of WG
- Appointment of UK to lead
- Collation of existing Regional material
- Workshops and side meetings:
  - High Level Forum, Addis Ababa, April 2016
  - Geospatial World Forum, Rotterdam, May 2016
  - GGIM6 Side meeting, New York, August 2016
- Methodology and Minimum List drafted and reviewed by Regions and WG.
- Revised Proposal for the Minimum List produced.
- Approval from Steering Group (UN-GGIM:Europe ExCom)
- Proposed Minimum List is being reviewed by other GGIM Groups

The draft Top Level Proposal

- What is the task?
  - Objective (minimum list for sustainable development)
  - Definitions ('fundamental' and 'theme')
- Review of Regions work
- Methodology
  - 'Common denominator'

'Common Denominator' approach

UN-GGIM: Europe	UNECA and GSDR	ANZLIC	UNGGIM NIA	UN-GGIM Arab States
Geographical names	Geographic names	Place names	Geographical names	Names
Administrative units	Boundaries	Administrative boundaries	Administrative units	Administrative Boundaries
Transport networks	Transportation	Transport	Transport networks	Transport Networks
Hydrography	Hydrography Drainage	Water	Hydrography	Hydrography
Orthoimagery	Imagery	Imagery	Imagery	Imagery
Elevation	Hypsography	Elevation and depth	Elevation	Elevation
Land cover	Natural environment	Land cover	Land Cover	Land cover
Cadastral parcels	Tenure/parcels (part of land management theme)	Land parcel and property	Cadastral parcels	Land parcels
Buildings	Populated places (part of Boundaries theme)		Settlements	
Addresses	Street addresses (part of land management theme)	Geocoded addressing		Addresses
Utilities and government services	Utilities and services			Utilities
Area Management	Land management units/areas			
Statistical Units				
Land Use				

The draft Proposal

- What is the task?
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  - 'Common denominator'
  - 'First principles' from SDGs

'First principles' approach

INSPIRE Theme	Sustainable Development Goal												
	1	2	3	5	6	7	8	9	11	12	13	14	15
Address													
Administrative units													
Cadastral parcels													
Geographical Names													
Hydrography													
Transport networks (road, rail, water, air, cable)													
Protected sites													
Elevation													
Land cover													
Ortho-Imagery													
Geology													
Buildings													
Land use (existing , planned)													
Soils													
Human health													
Governmental services and utilities													
Environmental Monitoring facilities													
Production facilities													
Agricultural facilities													
Population distribution/ Statistical Units													
Area management - Regulated areas													
Natural risk zones													
Sea regions													
Oceanographic features													
Atmospheric conditions – meteorologic features													
Biogeographical regions													
Habitats and biotope													
Species distribution													
Energy resources													
Mineral resources													

The draft Proposal

- What is the task?
  - Objective (minimum list for sustainable development)
  - Definitions ('fundamental' and 'theme')
- Review of Regions work
- Methodology
  - 'Common denominator'
  - 'First principles' from SDGs
  - Use of two fundamental criteria:
    - Other data are linked to these themes
    - They are used across many topic areas
  - Cross referencing
- Results

Theme	Notes on Scope	Other data linked to these themes	Used across many topic areas
Geographical Names	Used as a proxy for other data themes e.g. settlements, natural features	Y	Y
Addresses	Postal and non-postal	Y	Y
Functional Areas	To include administrative areas, statistical areas, governance areas, service delivery areas etc	Y	Y
Buildings/Settlements	To include dwellings and other structures	Y	Y
Land parcels	To include administrative, ownership, occupation and use parcels	Y	Y
Transport Networks	Air, water, road, rail, foot	Y	Y
Elevation and bathymetry			Y
Population demographics	Locations of people		Y
Land Cover and Use			Y
Geology/Soils			Y
Physical infrastructure/service delivery points	To include utilities, industrial facilities, service delivery points		Y
Imagery	Included as, although not a theme in its own right, when interpreted it is a widely-used data source for many themes.		Y
Water	To include Inland water and sea		Y

Proposed Minimum List

- Geographical Names
- Addresses
- Functional Areas
- Buildings/Settlements
- Land parcels
- Transport Networks
- Elevation and bathymetry
- Population demographics
- Land Cover and Use
- Geology/Soils
- Physical infrastructure/service delivery points
- Imagery
- Water

ExCom Approval

Yet to do:

1. Finalise top level proposal for minimum list ✓
2. Check that appropriate for SIDS In hand
3. Consider prioritisation and linkage to other GGIM data needs In hand
4. Draw up theme descriptions In hand
5. Draft proposal for non-geospatial audience

Description Template

Theme title
Description of theme Brief description of the theme for a non-geospatial audience. Around 3 lines max.
Why this theme is needed (i.e. why it is fundamental, which SDGs it is relevant for)
Longer description of data features included in the theme
Possible sources of data
Existing data standards

Example - Addresses

Theme title
Addresses

Description of theme (max 3 lines)
An address is a structured label—usually containing a property number, a road name and a locality name—used to identify a plot of land, a building or part of a building, or some other construction together with coordinates.

Why this theme is needed (i.e. why it is fundamental, which SDGs it is relevant for)
In addition to their core function in the delivery of mail and parcels, addresses underpin government administration at all levels; and good administration is a prerequisite for the achievement of the SDGs. An address is often the unit to which a public service, such as water, is provided. Addresses also enable effective communication with citizens; informing them of policies applying to them, notifying them of incidents affecting them and supporting the carrying out of social surveys. Datasets relating to individuals or households are often linked to addresses, which can therefore play a role in connecting otherwise-unrelated information. Geocoding of addresses allows such information to be related to geographic location.   Addresses have been identified as playing a key role in the achievement of SDGs 4,6,7, 9 and 11.

Longer description of data features included in the theme
The addresses theme comprises a single feature, *address*, to which a variable number of attributes may be attached. Typically these comprise at least one *locator* (number and/or name), a two-dimensional *geographic position* and a number of *address components* that place the address within other features such as a road, a locality, an administrative unit or postal code.

Possible sources of data
Address datasets are usually maintained by public authorities. While data may be created at local level, it should ideally be compiled into a single national register.

Existing data standards
INSPIRE Data Specification on Addresses – Technical Guidelines 3.1 ISO 19160-1:2015 Addressing -- Part 1: Conceptual model ISA Programme Location Core Vocabulary UPU (Universal Postal Union) S42 International postal address components and templates

GGIM7 - Report

Report to GGIM7 aims to include:

- Proposed Minimum List

- Links to other GGIM activity

- Outline of theme descriptions

- Recommendations to C of E

Thank you!