Determination of Global Fundamental Geospatial Data themes

8th Session of the Committee of Experts
August 2018
GGIM8 - Report

Report to GGIM8 includes:

- Methodology
- Theme Descriptions
- Theme icons
- Promotion activities
- Recommendations to Committee of Experts
Background to the Global Fundamental Geospatial Data themes

A report on fundamental data themes prepared by UN-GGIM: Europe and presented at 5\textsuperscript{th} Session of the Committee of Experts

There was agreed there was:

‘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’
UN-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 so as not to raise political concerns.
GGIM7 – Fundamental Data Highlights

The Committee of Experts:

• **Supported adoption** of the minimum list subject to minor suggested amendments, noting that it had been developed through broad consultation and consensus.

• Agreed that UN-GGIM: Europe should complete the top level theme descriptions and further detail could be done with experts in specific domains.

• Supported the offer from UN-GGIM: Europe to work with Secretariat and other groups to draw up plans for promoting and socialising the proposed ML to the wider community including the non-geospatial community.

• Took note of the suggestions that the WG consider:
  – Including measures to ensure implement the data themes
  – Recognising positioning as a theme
  – How the themes may be integrated into statistics, EO and other imagery
  – How to bring contributing elements of GGIM’s work together into a coherent communication so as to amplify their impact in influencing national policies.
Data Themes and Reference Frame

• Addresses
• Buildings and Settlements
• Elevation and depth
• Functional Areas
• Geographical Names
• Geology and Soils
• Land Cover and Land Use
• Land Parcels
• Orthoimagery
• Physical infrastructure
• Population distribution
• Transport Networks
• Water
• Reference Frame: Global Geodetic Reference Framework
Progress since GGIM7
Methodology

Regions

Input

WG Members

Workshops

Input

Minimum List (Draft)

Input

Minimum List

Review

GGIM Groups + SIDS

Input

Theme Experts

Input

Theme Descriptions (Draft)

WG Members

GGIM7
<table>
<thead>
<tr>
<th>Theme title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Why this theme fundamental?</td>
</tr>
<tr>
<td>Which sustainable development goals (SDGs) will it help to meet?</td>
</tr>
<tr>
<td>Geospatial data features in more detail</td>
</tr>
<tr>
<td>Possible sources of geospatial data</td>
</tr>
<tr>
<td>Existing geospatial data standards</td>
</tr>
</tbody>
</table>
**Example - Addresses**

<table>
<thead>
<tr>
<th>Description</th>
<th>Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td>An address is a structured label, usually containing a property number, a street name and a locality name. It’s used to identify a plot of land, a building or part of a building, or some other construction, together with coordinates indicating their geographic position. Addresses are often used as a proxy for other data themes such as Land Parcels.</td>
<td></td>
</tr>
</tbody>
</table>

**Why is this theme fundamental?**
Addresses underpin government administration at all levels; and good administration is a prerequisite for achieving sustainable development goals. 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, and notifying them of relevant incidents. The theme also helps in managing buildings and properties, and supports 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 addresses relates such information to geographic location. This allows for location-based data analytics and data mining.

**Which sustainable development goals (SDGs) will it help to meet?**
Addresses have been identified as playing a key role in the achievement of SDGs 4, 6, 7, 9 and 11.

**Geospatial data features in more detail**
The addresses theme comprises a single feature type, address, to which a variable number of attributes may be attached. Typically, in urban areas these comprise at least one locator (building, floor or apartment number and/or name), a two-dimensional geographic position and a number of address components which place the address within other features such as a road, a locality, an administrative unit or postal code. In rural areas the locator may be less precise.

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

**Existing geospatial data standards**
Note: This is indicative. Other lists of standards exist and UN-GGIM will seek to work with thematic experts to develop a list of relevant data standards.

- INSPIRE Data Specification on Addresses – Technical Guidelines 3.1
- ISA Programme Location Core Vocabulary
- ISO 19160-4(UPU, Universal Postal Union) Addressing--Part4: International postal address components and template language
Methodology

Workshops → Input → Minimum List (Draft) → Review → Minimum List → Input → Theme Descriptions (Draft) → Review → Theme Descriptions

Regions → Input → GGIM Groups + SIDS → Input → Regions

WG Members → Input → GGIM7

WG Members → Input → GGIM8
Promotion and awareness raising

Icons

- Global Geodetic Reference Frame
- Geographical Names
- Addresses
- Functional Areas
- Buildings and Settlements
- Land Parcels
- Transport Networks
- Elevation and Depth
- Population Distribution
- Land Cover and Land Use
- Geology and Soils
- Physical Infrastructure
- Water
- Orthoimagery
Data Themes Storyboard

Created by the GGIM Secretariat:

Story Map Cascade
Inclusion in the Integrated Geospatial Information Framework
Regional and national implementation

Workshops on Fundamental Data

Dedicated three-day workshop organised at UNECA Addis Ababa in April 2018

Small workshop organised as part of the UN-GGIM: Europe Plenary, May 2018
How did the FDWG do against the ToRs?

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

And

7. Suggestions from the Committee of Experts at GGIM7 ✓
The Committee of Experts is invited to:

(a) Take note of the report and express its views on the valuable progress of the Working Group, including the provision of theme descriptions for the 14 global fundamental geospatial data themes; and

(b) Provide guidance on steps to promote, communicate and raise awareness of the 14 global fundamental geospatial data themes widely across the global geospatial information community, UN-GGIM Regional Committees, wider UN System, and within the broader global geospatial ecosystem.
Thank you