UN-GGIM: Europe activities

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

Carol Agius
UN-GGIM: Europe Secretariat

Third International Workshop on Operationalizing the Integrated Geospatial Information Framework

Minsk, Republic of Belarus
26 to 28 November 2019

Governance of UN-GGIM: Europe

- UN-GGIM: Europe is coordinated and managed by an Executive Committee of nine approved at Regional Plenary Meetings
- The current Executive Committee of UN-GGIM: Europe:

Chair

- Tomaz Petek, Slovenia

Vice-Chairs

- Francisco Vala, Portugal
- Antonio Arozarena Villar, Spain
- David Henderson, United Kingdom of Great Britain and Northern Ireland

Members

- Colin Bray, Ireland
- Ezio Bussoletti, Italy
- Frank Tierolff, Netherlands
- Janusz Dygaszewicz, Poland
- Susanne Ås Sivborg, Sweden

- The Netherlands is responsible for providing the secretariat to UN-GIM: Europe. The function of the Secretariat of UN-GGIM: Europe is funded and executed by EuroGeographics AISBL through a Service Level Agreement with Kadaster Netherlands which has been renewed for another two years until the end of 2020.

Sixth Plenary Meeting UN-GGIM: Europe

- The Sixth Plenary Meeting was held from 5 – 6 June 2019 in Brussels, Belgium hosted by Eurostat.
- The Event brought together senior executives and experts from the national geospatial information and statistical authorities of 24 Member States, and 11 international and observer organisations.
- It included a half day workshop on developing the Integrated Geospatial Information Framework Implementation Guide, and presentations on global and regional issues and items, together with an overview of the work being carried out by UN-GGIM: Europe.
- Approved the Regional Work Plan 2019 – 2022 and nominations to the Executive Committee for UN-GGIM: Europe

https://un-ggim-europe.org/past-meetings/plenary-meetings/sixth-plenary-un-ggim-europe-june-2019/

UN-GGIM: Europe – Regional Working Groups

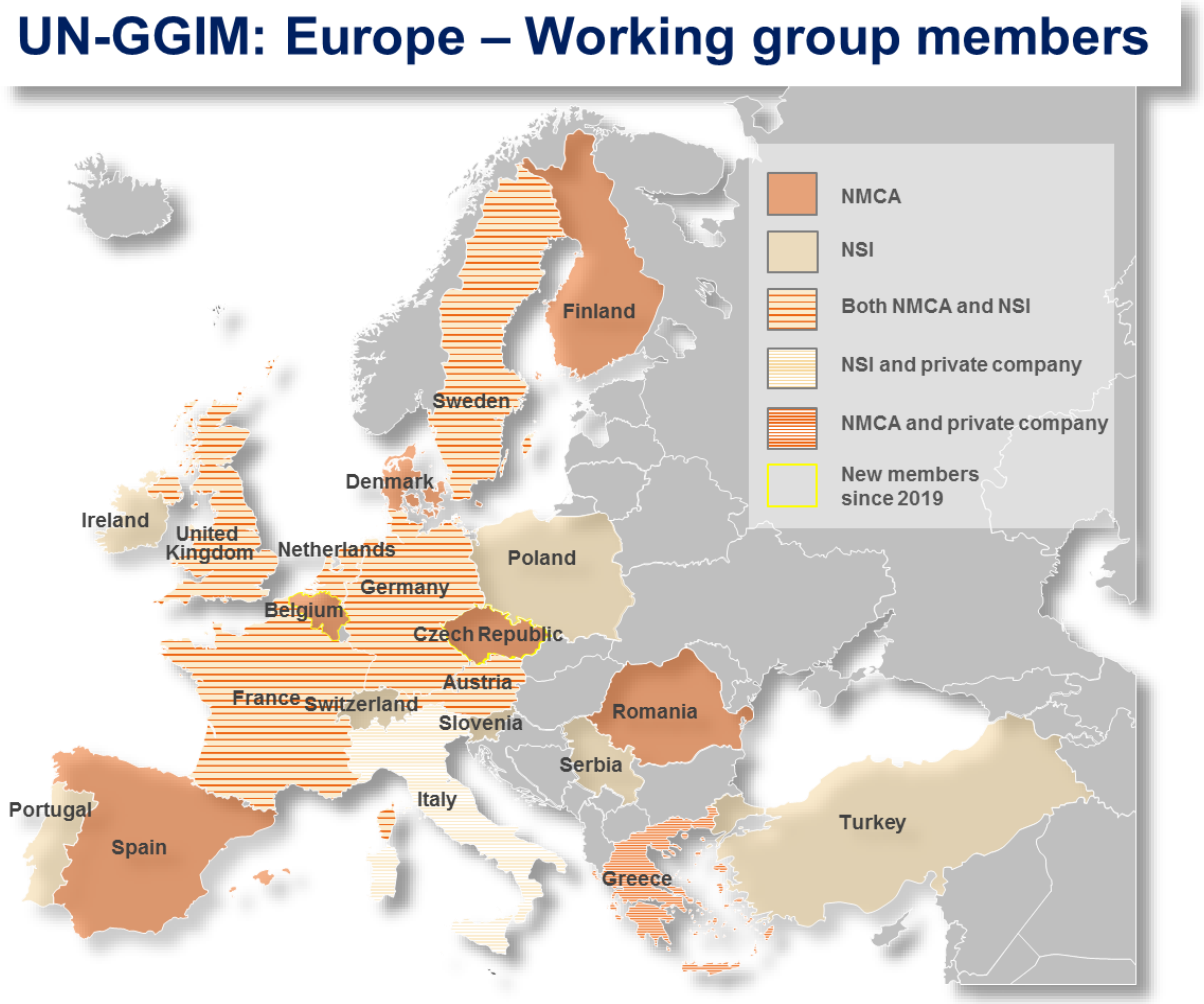
- Working Group on Core Data is focusing on increasing data interoperability and harmonisation by proposing core geospatial data which meets essential user needs
  - issued recommendations for content for four themes since last plenary
- Working Group Data Integration works to ensure that the regional entity focuses on how geospatial data can enhance sustainable development and the 2030 Agenda in Europe.
  - Delivered on all scheduled tasks outlined in work plan
- Working Group on Geodetic Reference Frame - Europe has a close connection to the various geodesy-related organisations in Europe, and actively contributes to the of the SCoG.
  - Currently reviewing its scope to avoid regional duplication

Recent Events

- Joint UN-GGIM: Europe – ESS- UNECE meeting in the March 2019 together with Eurostat and UNECE
- Realising the Potential of Statistical and Geospatial Data in May 2019 in Serbia. In collaboration between UN-GGIM: Europe, UNECE, Eurostat, the European Free Trade Association (EFTA) and the Serbian Statistical Office.
- Balkans Regional Conference, September 2019, Neum, Bosnia and Herzegovina
- Digitally Enabled Development for a Sustainable Future in Eastern Europe,
- 18 - 20 September, Vrdnik, Serbia
- Sixth meeting of the Expert Group on the Integration of Statistical and Geospatial Information, 8 - 9 October 2019 Manchester, United Kingdom
- European Forum for Geography and Statistics Conference, 10-11 October 2019, Manchester

UN-GGIM: Europe Working Group Data Integration

The Working Group is chaired by Germany and deals with the integration of geospatial data with other information.
Currently National Mapping and Cadastral Authorities and National Statistical Institutes from about 20 European UN Member States are members of this Working Group.
Eurostat, the Joint Research Center and the European Environment Agency also participate in the working group.



https://un-ggim-europe.org/working-groups/working-group-data-integration/

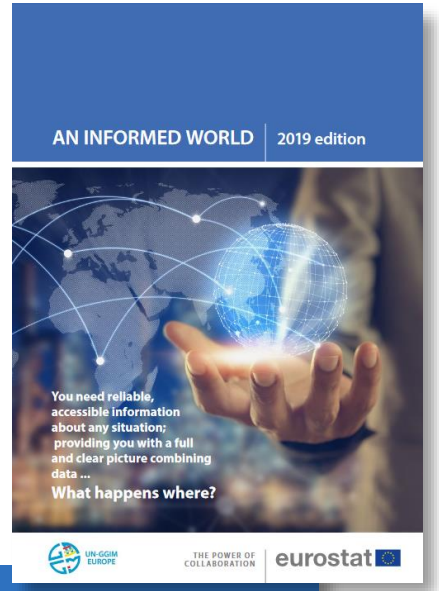
Work plans

1	**Work plan 2014 – 2016** ✓ B1: Definition of the priority user needs for data combinations ✓ B2: Recommendations for implementing prioritized combinations of data ✓ B3: Recommendations on how to manage side-effects
2	**Work plan 2017 – 2019** ✓ Task 1: Draft a policy outreach paper on data integration ✓ Task 2: Analyse four SDG indicators at a global, regional and national level
3	**Work plan 2019 - 2022** ❑ Concept 1: Analysing further SDG indicators ❑ Concept 2: Advisory group for data integration issues ❑ Concept 3: Analysing future trends in data integration

2 Work plan 2017 - 2019

Task 1 Questionnaire & Policy Outreach Paper & Leaflet

Questionnaire	Policy Outreach Paper	Leaflet
✓ provided information on data integration	✓Promotes the benefits of data integration ✓Recommendations on data integration	✓Strengthen information ✓Effective examples of data integration
Published	Published	Published



Work plans

1

Work plan 2014 – 2016

- ✓ B1: Definition of the priority user needs for data combinations
- ✓ B2: Recommendations for implementing prioritized combinations of data
- ✓ B3: Recommendations on how to manage side-effects

2

Work plan 2017 – 2019

- ✓ Task 1: Draft a policy outreach paper on data integration
- ✓ Task 2: Analyse four SDG indicators at a global, regional and national level

3

Work plan 2019 - 2022

- ☐ Concept 1: Analysing further SDG indicators
- ☐ Concept 2: Advisory group for data integration issues
- ☐ Concept 3: Analysing future trends in data integration

Breaking news from WG Data Integration

Kick off meeting to define the new work plan for the next period 2019-2022 was held on the 30-31 October 2019.
The tasks were agreed by the 30 participants in attendance.

These include:

- the analysis of further SDG indicators, probably with focus on environmental issues
- the collection of “Data Integration Methods” to enhance and promote data integration in general
- further define its role as an Advisory Group to serve data integration activities and projects of the United Nations and the European Commission.

Context for the Global Fundamental Geospatial Data

Work embarked at GGIM5, following a report on fundamental data themes prepared by UN-GGIM:Europe

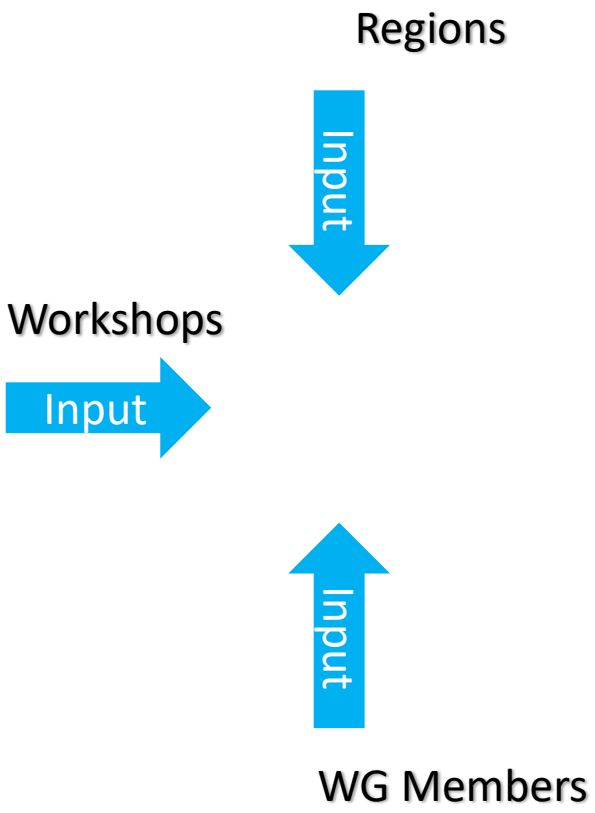
The Committee agreed that there is:

> *'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'*

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.

What was done and how



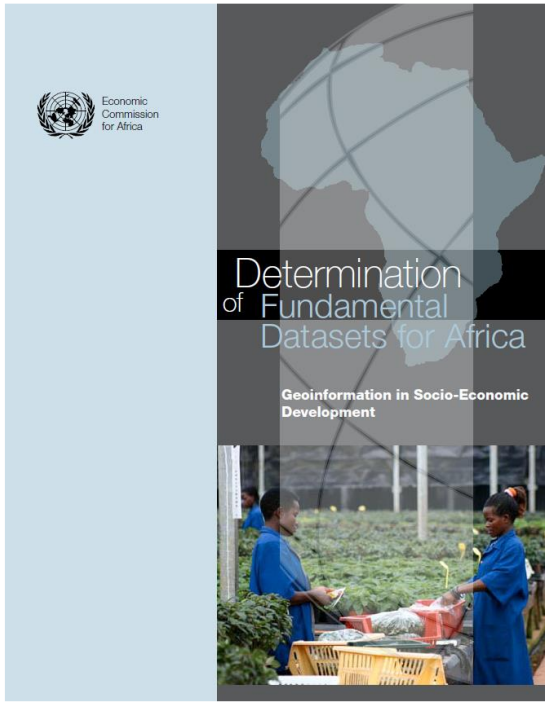
It was not difficult to find existing work …

INSPIRE · Infrastructure for Spatial Information in Europe

PAN AMERICAN INSTITUTE OF GEOGRAPHY AND HISTORY OAS

Fundamental Geospatial Data

ANZLIC
the Spatial Information Council



UN-GGIM NIA
Working Group on Trends in National Institutional Arrangements

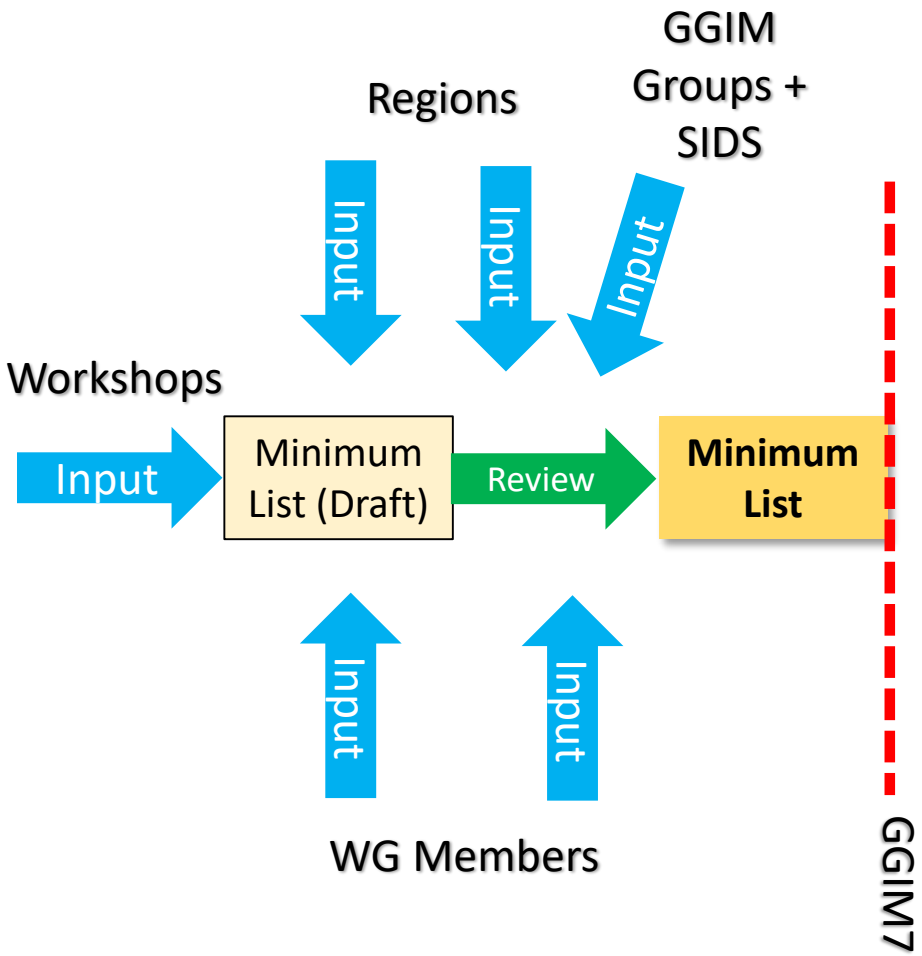
‘Common Denominator’ approach

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

SDG Requirements 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							■	■		■			

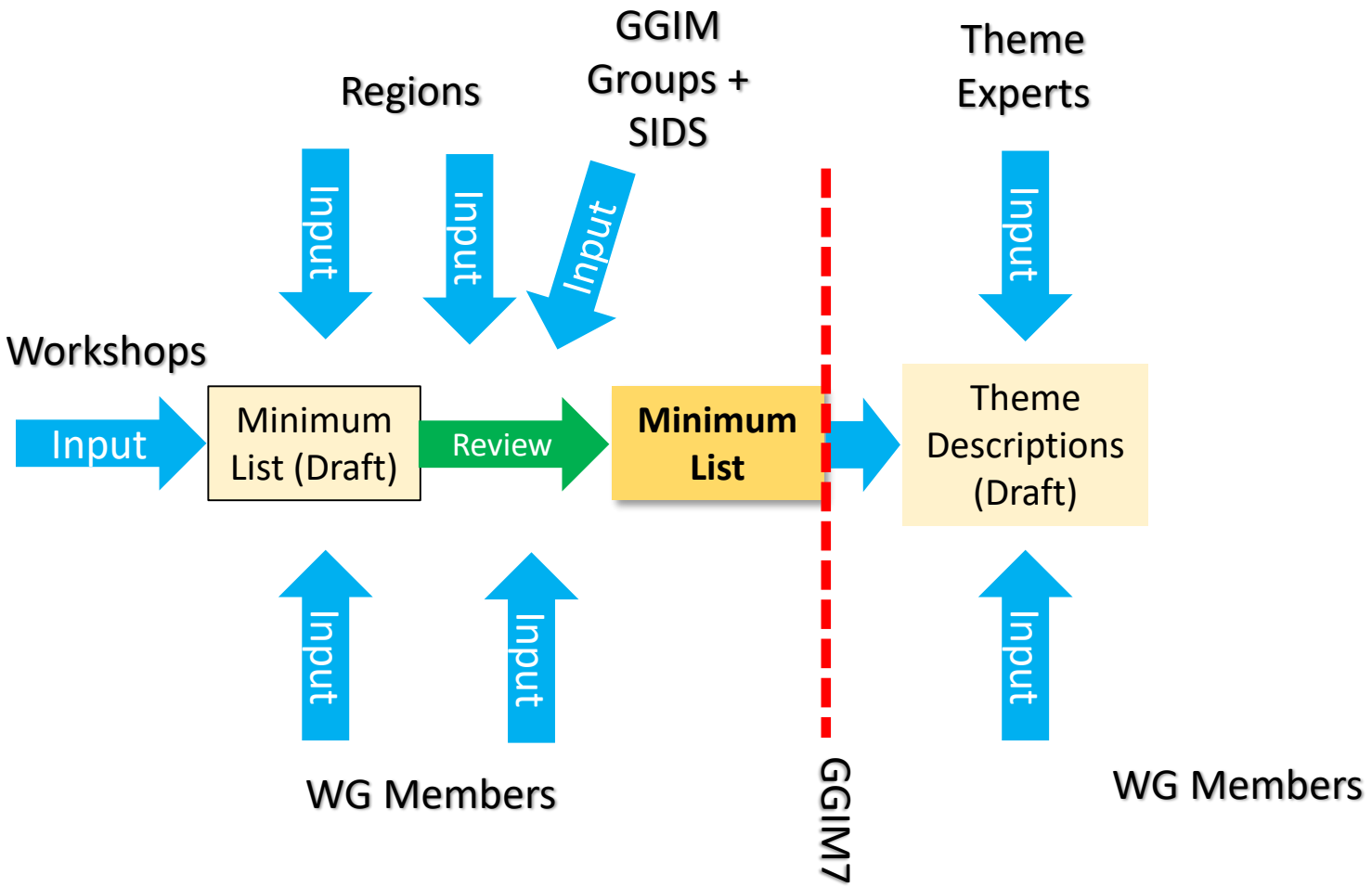
What was done and how



Data Themes and Reference Frame

1. Global Geodetic Reference Framework
2. Addresses
3. Buildings and Settlements
4. Elevation and Depth
5. Functional Areas
6. Geographical Names
7. Geology and Soils
8. Land Cover and Land Use
9. Land Parcels
10. Orthoimagery
11. Physical infrastructure
12. Population Distribution
13. Transport Network
14. Water

What was done and how



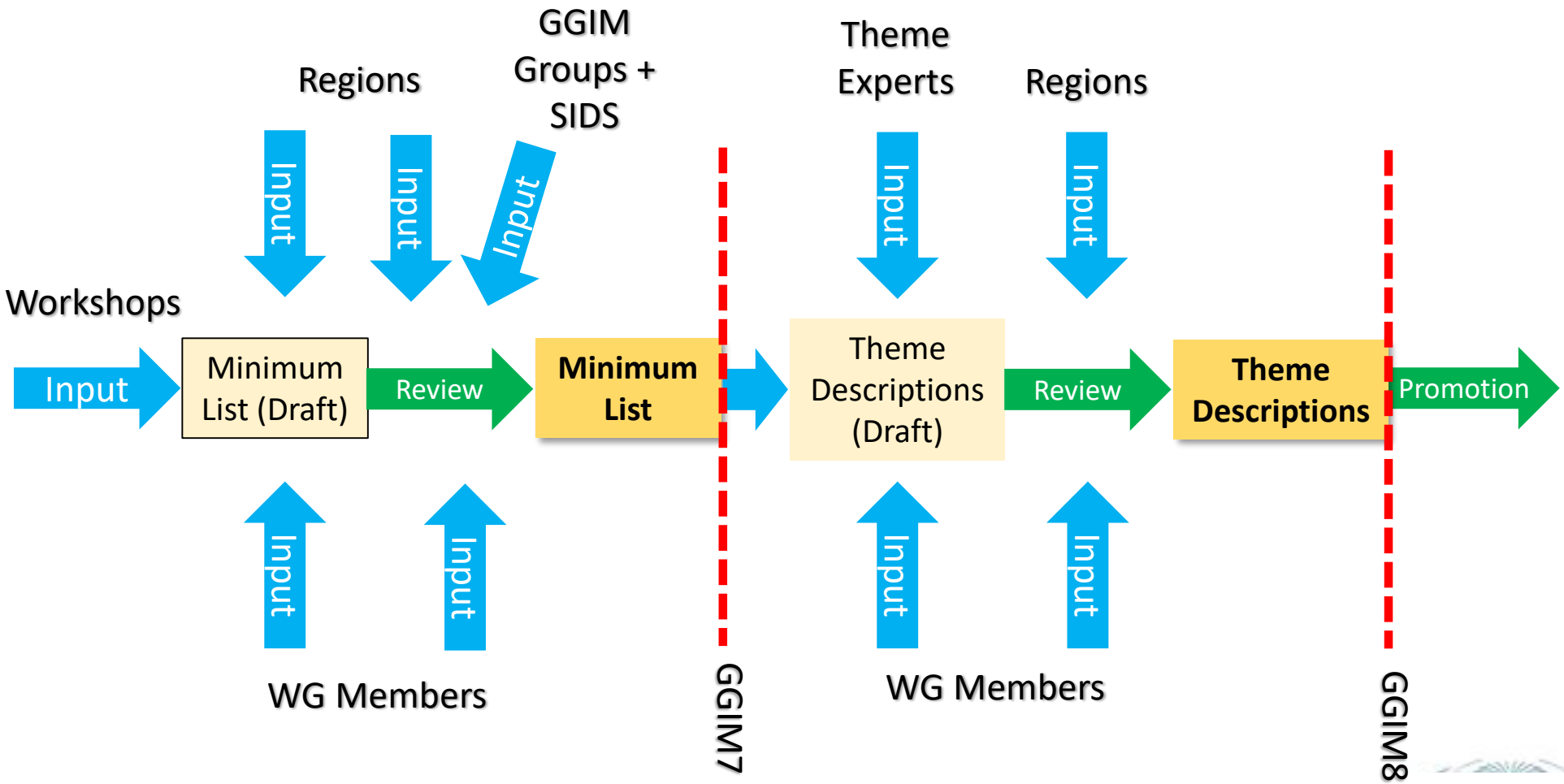
Theme Description – One side A4 only

Theme title
Description
Why this theme fundamental?
Which sustainable development goals (SDGs) will it help to meet?
Geospatial data features in more detail
Possible sources of geospatial data
Existing geospatial data standards

Example - Addresses

Theme title:	**Addresses**
Description	
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.	
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 • ISO 19160-1:2015 Addressing -- Part 1: Conceptual model • ISA Programme Location Core Vocabulary • ISO 19160-4(UPU, Universal Postal Union) Addressing--Part4: International postal address components and template language	

What was done and how



Global Fundamental Geospatial Data themes

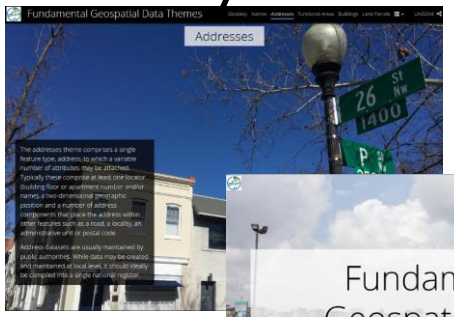
1. Global Geodetic Reference Framework
2. Addresses
3. Buildings and Settlements
4. Elevation and Depth
5. Functional Areas
6. Geographical Names
7. Geology and Soils
8. Land Cover and Land Use
9. Land Parcels
10. Orthoimagery
11. Physical infrastructure
12. Population Distribution
13. Transport Network
14. Water

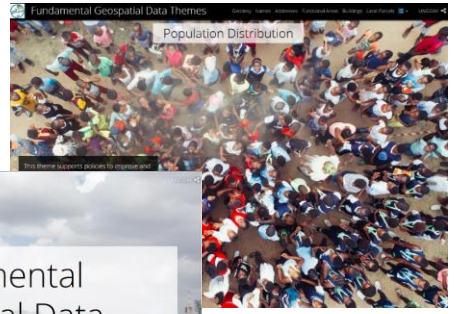
The Global Fundamental Geospatial Data Themes

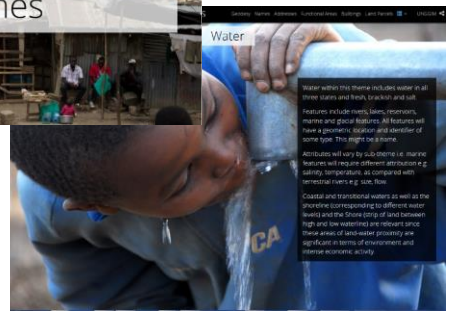
Story Map Cascade

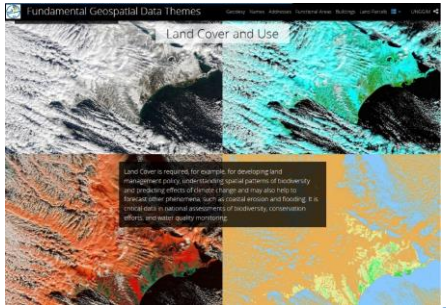
Data Themes Storyboard

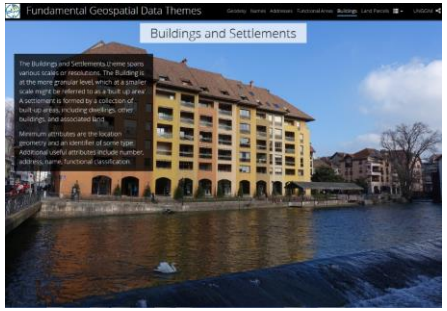
Created by the GGIM Secretariat:





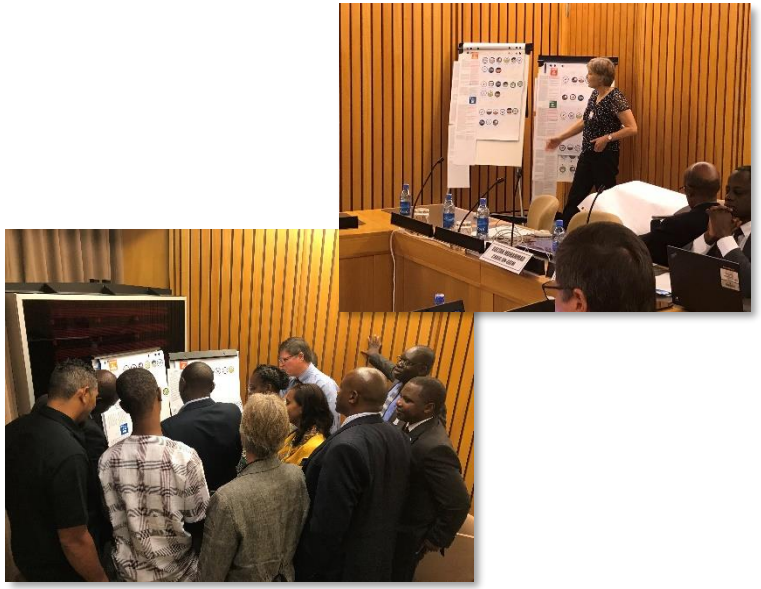






[Story Map Cascade]

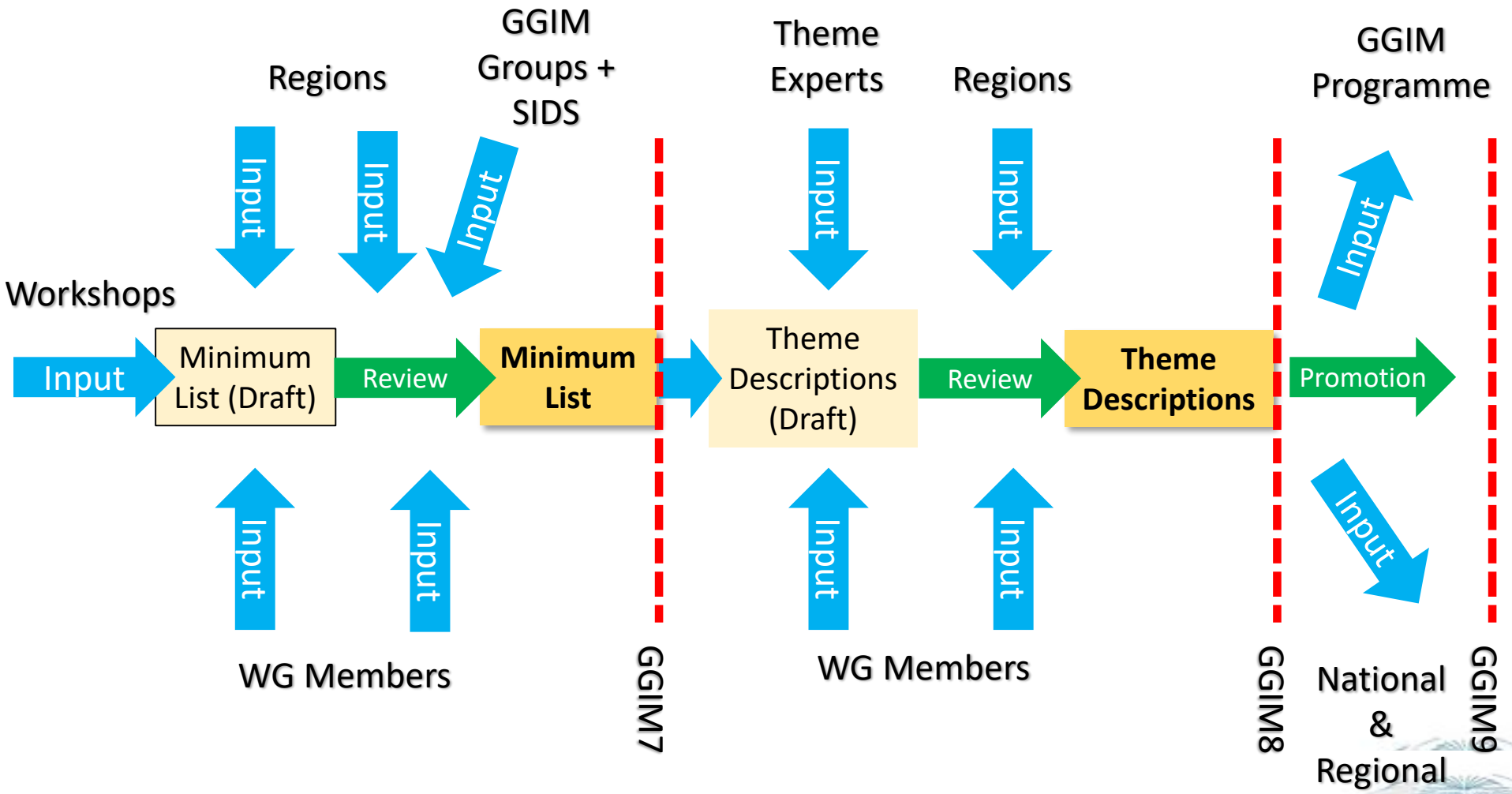
Regional and national implementation Workshops on Fundamental Data



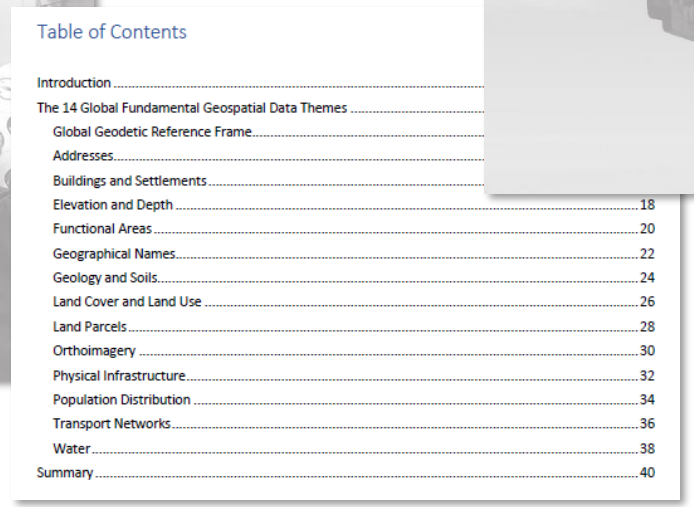
Dedicated three-day workshop organised at UNECA Addis Ababa in April2018

Small workshop organised as part of the UN-GGIM: Europe Plenary, May 2018

What was done and how



UN-GGIM Publicatio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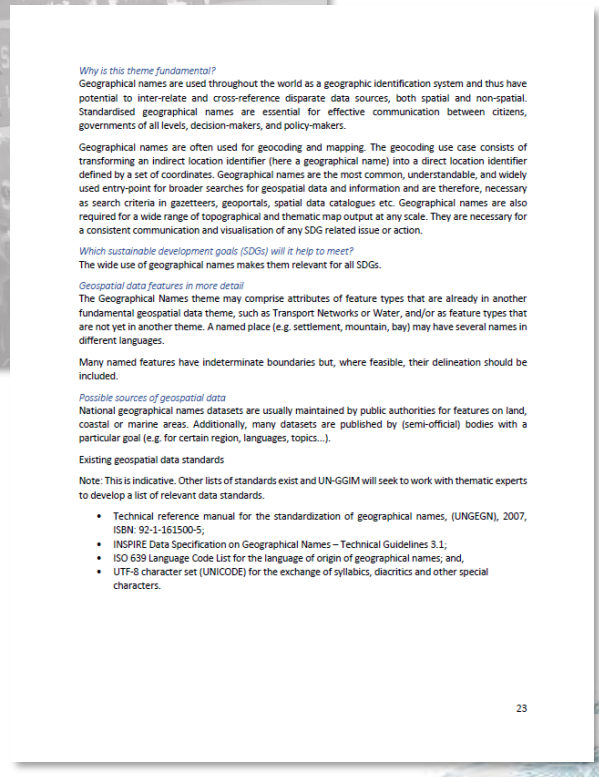
Why is this theme fundamental?

Geographical names are used throughout the world as a geographic identification system and thus have potential to inter-relate and cross-reference disparate data sources, both spatial and non-spatial. Standardised geographical names are essential for effective communication between citizens, governments of all levels, decision-makers, and policy-makers.

Geographical names are often used for geocoding and mapping. The geocoding use case consists of transforming an indirect location identifier (here a geographical name) into a direct location identifier defined by a set of coordinates. Geographical names are the most common, understandable, and widely used entry-point for broader searches for geospatial data and information and are therefore, necessary as search criteria in gazetteers, geoportals, spatial data catalogues etc. Geographical names are also required for a wide range of topographical and thematic map output at any scale. They are necessary for a consistent communication and visualisation of any SDG related issue or action.

Which sustainable development goals (SDGs) will it help to meet?

The wide use of geographical names makes them relevant for all SDGs.

Geospatial data features in more detail

The Geographical Names theme may comprise attributes of feature types that are already in another fundamental geospatial data theme, such as Transport Networks or Water, and/or as feature types that are not yet in another theme. A named place (e.g. settlement, mountain, bay) may have several names in different languages.

Many named features have indeterminate boundaries but, where feasible, their delineation should be included.

Possible sources of geospatial data

National geographical names datasets are usually maintained by public authorities for features on land, coastal or marine areas. Additionally, many datasets are published by (semi-official) bodies with a particular goal (e.g. for certain region, languages, topics…).

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.

- Technical reference manual for the standardization of geographical names, (UNGEGN), 2007, ISBN: 92-1-161500-5;
- INSPIRE Data Specification on Geographical Names – Technical Guidelines 3.1;
- ISO 639 Language Code List for the language of origin of geographical names; and,
- UTF-8 character set (UNICODE) for the exchange of syllabics, diacritics and other special characters.

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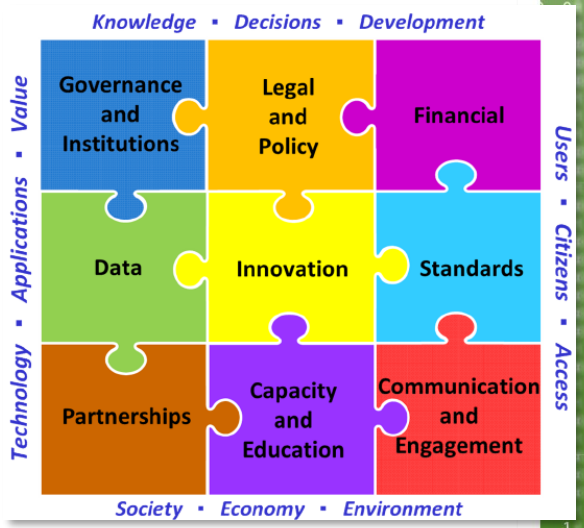
http://ggim.un.org/meetings/GGIM-committee/9th-Session/documents/Fundamental_Data_Publication.pdf

INTEGRATED GEOSPATIAL INFORMATION FRAMEWO



Strategic Pathway 4

DATA

*This **strategic pathway** establishes a geospatial data framework and custodianship guidelines for best practice collection and management of integrated geospatial information that is appropriate to ensure cross sector and multidisciplinary collaboration.*

*The **objective** is to enable data custodians to meet their data management, sharing and reuse obli community through the execution of organizing, planning, acquiring, int archiving geospatial information.*

Summary

Geospatial data is the foundation on wh It is used in policy development and in th use is growing exponentially across intelligence to make timely and accurate

Having access to the right data and at th making. It is data that provides new lev future. For this reason, governments, b know they are using the most accurat analysis, navigation and visualization – g

As the amount, variability and availa requirements for 'organized' geospatial important. Geospatial data has grown i institution. Every part of government cr is a nation's 'digital currency', an as designed, and managed to provide end quality, accuracy, security and use.

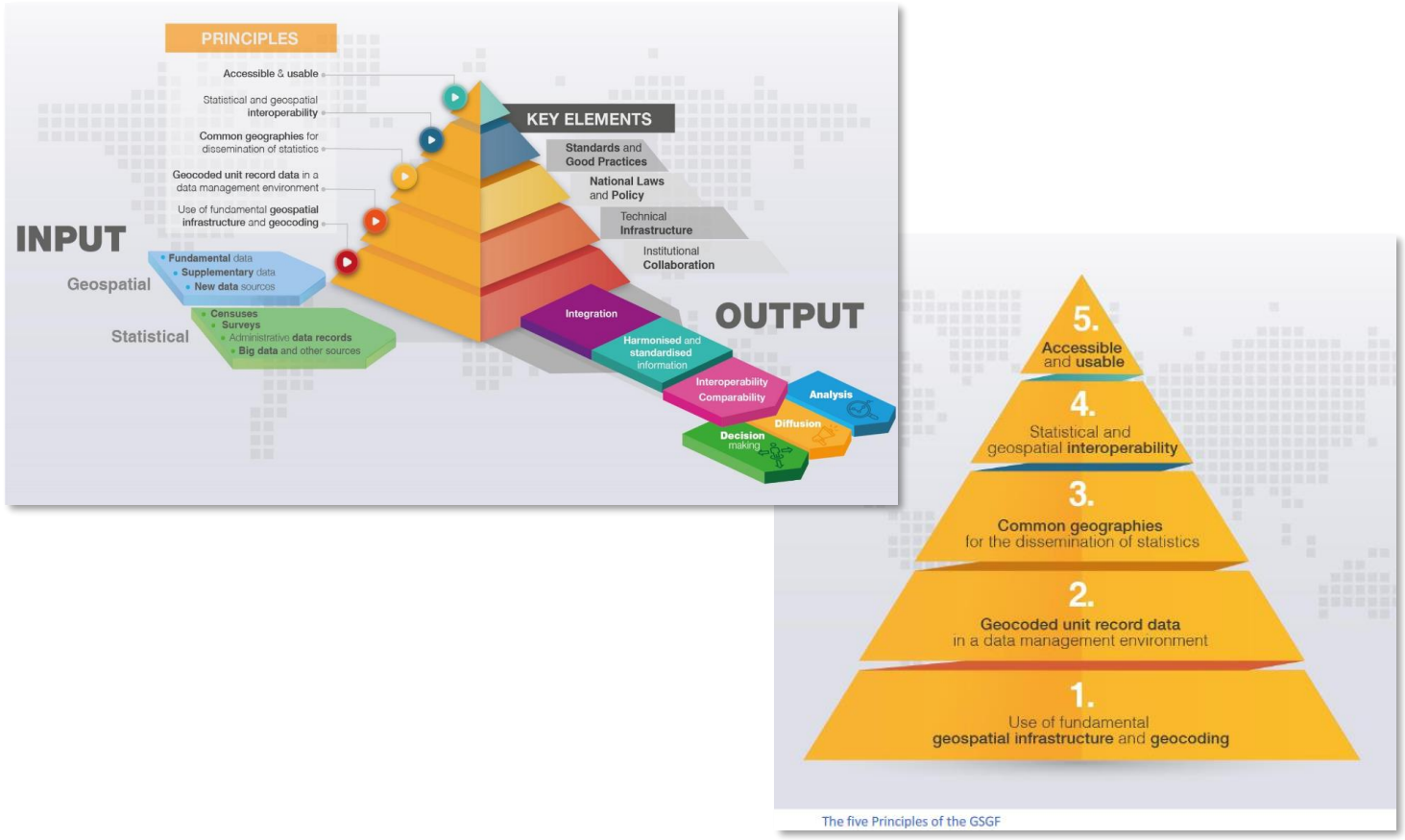
An ecosystem that fosters the proper o of geospatial data, leads to cutting-edge across a range of sectors. Advances can disaster management and transportati enabling the discovery of new patterns and influences by combining geography, and social and cultural norms in a way that reveals new knowledge through enhanced visualizations, analysis and traceability.

Strategic Pathway 4: Data 1 | Page

Common to all government and business applications are four key elements associated with data coordination that need to be achieved to enable an environment where innovation, and pioneering research and development can thrive. These four elements are:

- **Data Themes** – the organization of priority national data themes, aligned to the globally endorsed fundamental geospatial data themes.
- **Custodianship, Acquisition and Management** – leading to responsible collection, management, maintenance and dissemination of fit-for-purpose geospatial information.
- **Data Supply Chains** – and interlinkages that support cooperative data sharing and integration.
- **Data Curation and Delivery** – enables enduring accessibility and value of data, and an information resource for broader usage across all sectors.

The Global Statistical Geospatial Framework



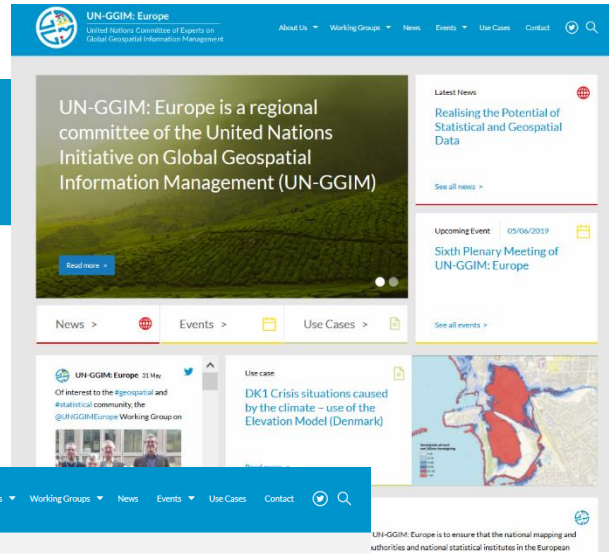
The five Principles of the GSGF

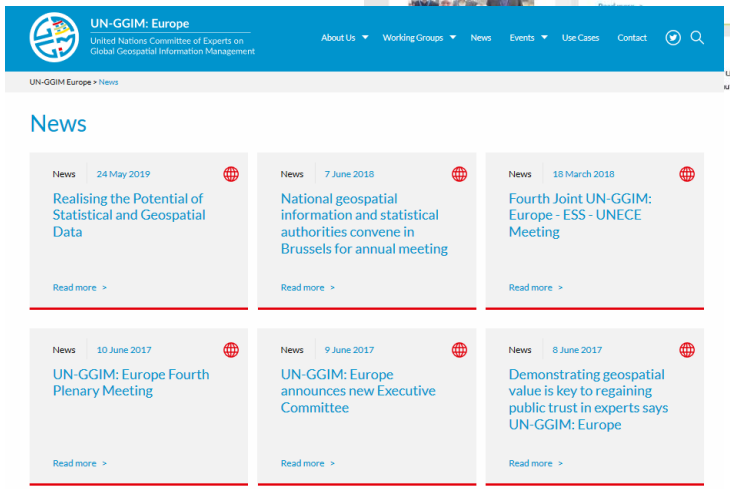
Future activities

- Sixth Joint UN-GGIM: Europe-UNECE-ESS Meeting, March 2020, Luxembourg City, Luxembourg
- UN-GGIM High Level Forum, April 2020, London, United Kingdom
- Seventh Plenary Meeting of UN-GGIM: Europe, June 2020, Geneva, Switzerland
- Annual Committee of experts session – GGIM10, August 2020

Find out more about UN-GGIM: Europe

- UN-GGIM: Europe website
- Twitter





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Thank you!

UN-GGIM EUROPE

UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT