DESTATIS
Statistisches Bundesamt

GLOBAL STATISTICAL GEOSPATIAL FRAMEWORK
DEFINITION OF PRINCIPLE ONE

Use of fundamental geospatial infrastructure and geocoding

Lead: Mexico/Germany

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Principle Definition

- Create a common base infrastructure to handle statistical and geospatial information.
- The main objective is the process of geospatially enabling statistical and administrative data records.
- Establishing a location and a geocode for a statistical unit (e.g. person, household, and business) and to reference it to a date and/or time.
- Input Data should have high quality and be from standardized data sources to assure accurate and consistent results.
- Aggregation of statistical data to different geographic levels and to new/different geographic regions:
  - point referencing is highly preferable compared to polygon or grid referencing
  - Wherever existent, fundamental geospatial data from NMA should be used to support geospatial referencing and other activities within the statistical and administrative data communities.

Principle goals and objectives

Goals:

- Obtaining a high quality, standardised physical address, a property or building identifier, (or any other location element) which allows the assignment of precise coordinates.
- Using direct or indirect coordinate capture (for example, using GNSS and maps, respectively) from fieldwork.

Objectives:

- Flexibility to adapt new geographies or grid references and use for analysis and visualisation.
- Consistency, accuracy and meeting international and national agreed standards for all input and output information - including those relating to privacy and confidentiality.

Relationship to other principles

- Basis on which the four remaining principles will be built.

- A standardised, high quality, organized infrastructure creates a basis for further applications.

Principle optimal implementation and other pathways (1)

- A fundamental geospatial infrastructure should cover all level of applications
  - particularly at the subnational, national and international levels.

- An institutional administrative body responsible for coordination and administration of the geospatial data infrastructure is necessary in order to fulfil requirements related to the organisation, the collection of data, its provision and its use.

Principle optimal implementation and other pathways (2)

The following list is essential for implementation:

- Existence and availability of statistical and administrative data from National Statistic Institutes and Geospatial Agencies
- Foster an institutional environment for proper functioning, cooperation and general acceptance
- Create formal working relationships between agencies
- Declare inter-institutional agreements that facilitate the promotion and application of the creation of the use of the data
- Define terms of use
- Elaborate plan for realization is needed, that focus on topics of strategy, technical norms and regulatory agreements, methodologies and requirements, data management system

Principle inputs

- Focus on data for fundamental geospatial infrastructure:
  - Statistical data
  - Core/fundamental geospatial data
  - other geospatial data (exemplarily)

- Systems and capabilities are also very important
  - Covered in Principles 4 (Statistical and geospatial interoperability) and 5 (Accessible and usable geospatially enabled statistics)

External dependencies

- Dependencies exists with all other principle since Principle 1 is the base.
- Stakeholder: Countries, Citizens, Agencies, data suppliers (can be also agencies), businesses and many more…
  - open data environment is recommended.

Community roles

- Good, solid but also flexible collaboration between NSI and NMCA
- Frequent communication
- Legal statutes, Memoranda of Understanding (MoU) or collective agreements to define roles of different communities responsible for production of information
- Consistent management and monitoring of status quos, task and progresses

Summary of required standards

Statistical Community:

- Supporting Standards by UNECE:
  - Generic Activity Model for Statistical Organizations (GAMSO),
  - Generic Statistical Business Process Model (GSBPM),
  - Generic Statistical Information Model (GSIM),
  - Common Statistical Production Architecture (CSPA).

- Fundamental Principles of National Official Statistics

Summary of required standards

Geospatial Community:

Description of geographic information and services - ISO1900 series (ISO/TC 211) :

- ISO 19111 for spatial referencing by coordinates
- ISO 19112 for spatial referencing by geographic identifiers
- ISO 19115 most important metadata standard
- ISO 19115-2 extension of metadata standard for imagery and gridded data
- ISO 19113 quality principles of geographic information

Geospatial data:

- Global Geodetic Reference Frames (GGRF) (e.g. ETRS89)

Out of scope

“The intention of the Expert Group is for the Framework to be inclusive of all statistical and geospatial data, and to enable and encourage NSOs to look beyond traditional data sources and methods”

- Information on how other geospatial data like topographic maps, remote sensing data/orthophotos and scientific data can support these traditional data sources and methods
- Calculation of indicators
- New data from external sources
- Linked open data

Next steps

- Coordination of all 5 principles in order to identify gaps and overlaps in the templates

THANK YOU VERY MUCH!

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