11ᵗʰ JOINT UN-GGIM: EUROPE – ESS – UNECE MEETING on the integration of statistical and geospatial information

Report from UN-GGIM: Europe Line of Work on 'Data Integration'
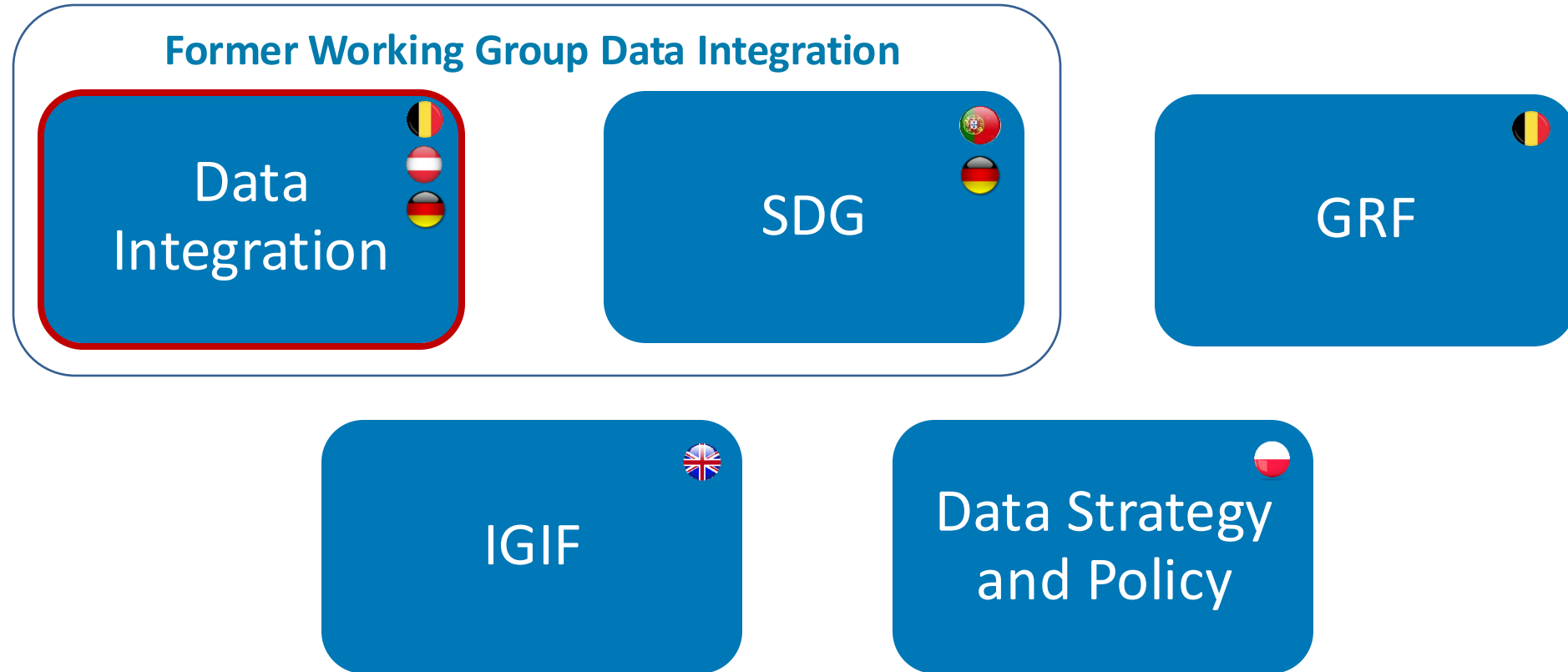
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UN-GGIM: Europe – the new work plan (2022-2025)

Former Working Group Data Integration

Data Integration

SDG

GRF

IGIF

Data Strategy and Policy

2022 ->: Line of Work 'Data Integration' – Work plan

Data spaces

- To promote and conduct **webinars** on specific **data integration topics**

- To compile and put together **use cases/discussion papers on best practices** on data integration methods and produce recommendations and guidelines

- To support and promote **capacity building and development initiatives** on data integration

- → **Link to global UN-GGIM work**

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Line of Work ‚Data Integration' – Webinar series

Setting the scene: to promote and conduct webinars on specific data integration topics

1	**Data integration in Europe – challenges, findings, added value and cost savings** data integration experiences and perspectives	Eurostat, DG REGIO, JRC	15 March ✓	**Eurostat**
2	**The way towards a Geospatial Knowledge Infrastructure** greater understanding of the geospatial knowledge	Geospatial World, EuroSDR, swisstopo	19 June ✓	**IGN Belgium**
3	**Linked Data in the European spatial data infrastructure – an operational view** up-to-date overview of the application and perspectives of linked data	NSI Ireland, NMCA Finland & Netherlands	7 November ✓	**BEV Austria**

Recording and presentations available on website
https://un-ggim-europe.org/un-ggim-europe-webinar-series/

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Outcomes & Findings physical meeting LoW DI in Lisbon

The Line of Work on Data Integration identified the following potential actions/tasks that include:

- **Task 1**: to write an **evaluation and assessment** report for the UN-GGIM: Europe data integration **report series** (recommendations, obstacles for implementation, etc.)

- **Task 2**: to write an **assessment use case example report (storyboard) on pragmatic data integration** (utilizing a prominent use case example from the global UN-GGIM Task Team on Climate Resilience)

- **Task 3**: to develop and conduct an **assessment/questionnaire on data integration issues** in order to "understand other domains"

Line of Work SDG – What we have done after March 2024?

Task 1: The relevance of Data Integration Line of Work: a summary

- An analysis of the past ten years activities: what are the obstacles to data integration and some recommendations

- Relevance of Geodata integration for AI

CONTENT

UN-GGIM-Europe_Relevance-of-DI-Line-of-Work_SummaryPaper_v1.0.pdf

REFERENCES

[1,2,3] UN-GGIM: Europe (2015). *Definition of the priority user needs for combinations of data*. Version 1.1.

[4] UN-GGIM: Europe (2016). *Report on Managing Side-Effects*. Version 1.0.

[5] UN-GGIM: Europe (2016). *Report on task B2.1 "The methods of implementing the prioritised combinations of data: Review of current European Interoperability Frameworks and geospatial and statistical integration projects regarding methods of combinations of data"*. Version 1.0.

[6] UN-GGIM: Europe (2017). *Recommendations for methods implementing the prioritised combinations of data*. Version 1.0.

[7] UN-GGIM: Europe (2019). *Report on questionnaire on data integration*. Version 2.0.

[8] UN-GGIM: Europe (2019). *The territorial dimension in SDG indicators: geospatial data analysis and its integration with statistical data*. Instituto Nacional de Estatística

[9] UN-GGIM: Europe (2019). *The integration of statistical and geospatial information — a call for political action in Europe*. 2019 Edition

[10] UN-GGIM: Europe (2020). *Scoping Paper: Subgroup I: SDG Indicator Calculation and Recommendations*. Version 1.0.

[11] UN-GGIM: Europe (2020). *Scoping Paper: Subgroup II: Data Integration Methods*. Version 1.0.

[12] UN-GGIM: Europe (2020). *Evaluation of the Policy Outreach Paper*. Version 1.0.

[13] UN-GGIM: Europe (2021). *Data Integration Methods*.

[14] UN-GGIM: Europe (2022). *SDG Indicator 11.2.1 Calculation and Recommendations*

[15] UN-GGIM: Europe (2022). *SDG Indicator 15.1.1 Calculation and Recommendations*

[16] UN-GGIM: Europe (2022). *SDG Indicator 15.3.1 Calculation and Recommendations*

[17] UN-GGIM: Europe (2022). *Evaluation Report*. Version 1.0

[18] UN-GGIM: Europe (2023). *Evaluation Report: Webinar 1: Data Integration in EU Context*. Version 1.0

[19] UN-GGIM: Europe (2023). *Evaluation Report: Webinar 2: Data Integration and GKI*. Version 1.0

[20] UN-GGIM: Europe (2023). *Evaluation Report: Webinar 3: Data Integration and Linked Data*. Version 1.0

[21] Keeley, L., Walter, H., Pikkel, R., & Quinn, B. (2013). *Ten Types of Innovation: The Discipline of Building Breakthroughs*. Wiley

[21] Plattner, H. et al. (2010). *Design Thinking: Understand, Improve, Apply*. Springer

[22] Lerche, I., & Glaesser, W. (2006). *Environmental risk assessment: quantitative measures, anthropogenic influences, human impact*. Springer

[22] O'Brien, M. (2002). *Making better environmental decisions: an alternative to risk assessment*. MIT Press

[23] Shrader-Frechette, K., & Westra, L. (Eds.). (1997). *Technology and values*. Rowman & Littlefield.

[24] Panu Muhli, National Land Survey Finland, https://www.maanmittauslaitos.fi/en/research/gsgf-finland-integration-geospatial-and-statistical-information-finland-gsfi

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Task 1: The relevance of Data Integration Line of Work: main points

- There is a **growing need for closer cooperation between NSI and NMCA** to address the challenges of data integration and to optimize the production and use of geospatial data.

- Regular consultations at the highest level (ministry) are less frequent, which can **complicate** the strategic direction **of cooperation**.

- **Geospatial data play an important role in monitoring the SDGs**, especially for indicators with a spatial dimension.

- Challenges include **harmonizing data sources**, defining thresholds and the availability of geospatial data at different spatial levels.

- **License agreements** for the use of geospatial data **are heterogeneous** and range from free use to paid licenses for commercial purposes.

- Challenges include **documenting and standardizing technical and organizational methods**, interoperability of systems and ensuring data quality.

- **Involving users and taking their needs** into account are essential for the success of data integration.

Task 1: The relevance of Data Integration Line of Work: summary

- The UN-GGIM: Europe Line of Work on Data Integration provides
  - **important impetus for the further development of the European geospatial knowledge infrastructure** (EU-GKI)
  - **the use of spatial data for political decision-making processes**
  - **monitoring of the UN-SDGs**
- The integration of geospatial data, ..., forms an essential foundation for AI applications by
  - **expanding the data basis for analyses,**
  - **improving semantic interoperability,**
  - **contributing to more precise insights and more informed decisions in various fields.**

Task 2: to write an assessment use case example report (storyboard) on pragmatic data integration (on going)

- To **convince management boards**, (European , national) authorities and other relevant stakeholders **on the usefulness of integrated data for decision-making process.**

- **To investigate data integration with other domains (environmental)**

- **To consider further partnership with other domains**

Actions:

- storyboard template (short)

- collecting use case on climate resilience and other domains (only 2)

Template for collecting pragmatic examples of data integration

Theme of interest

Which data space or theme of interest hosts your topic?
Select of the following...climate resilience, agriculture, energy, health, mobility, environment, security, finance, education, manufacturing, public administration, other theme (which one?)

(the selection is a topic for discussion, should be well defined, but will always be a living list)

....

Indication and evidence of a relevant topic

Which stories highlight a topic of public interest?
Describe and list references to indications as well as to evidence reports of a given topic.

....

Involved (geospatial) data sources
Which (geospatial) data are involved to document, calculate, analyse, manage and distribute the topic?

If possible, add a semantic description and link to the metadata of the data source

....

Data Integration Method and Use Cases
Describe the method of data integration and its use case. Which question has to be solved in detail and how is it calculated?

....

National implementation examples
Assess, list and describe examples of continuous implementation of the observed data integration method. Where and how is the method implemented to serve the (national) use case?

....

Observations and Recommendations
What are the main observations for the highlighted topic, its use cases and procedures? What are the main advantages and disadvantages? Which recommendations can be extracted by the observations?

....

What next

Webinar 1 April 10-11h a.m.:

- Presenting the deliverable (task 1)
- Reactivating the investigation on use cases (task 2)

You are invited :   **webex invitation**

Use cases proposals and ideas are highly welcome (per email)

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More information on our website:

https://un-ggim-europe.org/working-groups/low-sustainable-development-goals/

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