Report from Working Group on Data Integration - 06/2019 - 05/2020

1. Background information

The Working Group on Data Integration is chaired by Germany and deals with the integration of geospatial data (including cadastral parcels) with other information. Currently 21 European UN Member States comprising more than 25 National Mapping and Cadastral Authorities or National Statistical Institutes are members of the Working Group. Eurostat and the Joint Research Center (JRC) actively cooperate in the Working Group since the beginning in 2014. The European Environment Agency (EEA) joined the Working Group in 2017.

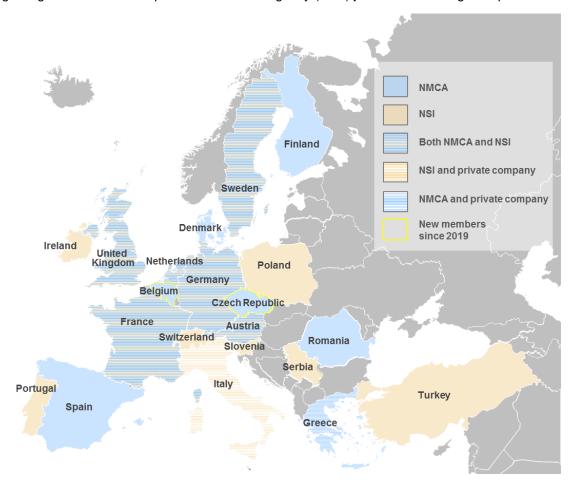


Figure 1: Members of the Working Group comprising new members in 2020

2. Review of Working Group activities according to the Work Plan 2017-2020

In 2019, the Working Group on Data Integration completed the following two tasks according to the Work Plan 2017-2020:

- 1. **Draft a Policy Outreach Paper** on data integration topics aiming at responsible ministries but also at stakeholders that are responsible for coordinating the political agenda across ministries.
- 2. Analyse global, regional or national indicators (e.g. focusing on "accessibility") reflecting the European perspective (INSPIRE, Copernicus,...) reflecting "data integration" aspects and crosscutting issues.





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On 5-6 June 2019 the UN-GGIM: Europe Plenary accepted the following deliverables:

Policy Outreach Paper Leaflet **SDG Analysis Report** "An Informed World" "The integration of statistical and "The territorial dimension in SDG geospatial information - a call for geospatial indicators: political action in Europe" analysis and its integration with statistical data" Published in June 2019 Published in June 2019 (finally) published within the Conference of the European Forum Geography and Statistics (EFGS) on 10-11 October 2019, Manchester THE TERRITORIAL DIMENSION The integration of IN SDG statistical and geospatial INDICATORS: GEOSPATIAL DATA ANALYSIS information — a call for AN INFORMED WORLD | 2019 edition political action in Europe 2019 edition AND ITS INTEGRATION WITH STATISTICAL UN-GGIM EUROPE THE POWER OF | eurostat UN-GGIM EUROPE eurostat URL: URL: https://un-ggim-europe.org/wphttps://un-ggim-europe.org/wphttps://un-ggim-europe.org/wpcontent/uploads/2019/09/KS03194 content/uploads/2019/11/2019-05content/uploads/2019/05/UN_GGI 23ENC_new.pdf 23_Leaflet-An-Informed-M_08_05_2019-The-territorial-World final.pdf dimension-in-SDG-indicators-Final.pdf

After the finalisation of the work, the Working Group on Data Integration proposed to the Executive Committee to request feedback from the Members States / partner organisations on the recommendations captured in the Policy Paper.

Therefore, the Chair of the Executive Committee for UN-GGIM: Europe asked the Member States in March 2020 to provide comments and feedback until April 30, 2020. The Working Group is very pleased to inform the Plenary that 15 countries provided feedback and comments. BKG has prepared a short report of the feedback on the recommendations in the Policy Outreach Paper. The report has been forwarded to the UN-GGIM: Europe Executive Committee and to the responders for evaluation in June. As soon as the report has been finalized, it will be uploaded to the Working Group's website (see URL in chapter 3.1).





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3. Progress according to the new work plan 2019 – 2022

3.1. General management issues

On 5-6 June 2019 the UN-GGIM: Europe Plenary accepted the new tasks for the Working Group to be carried out in the next 2-3 years.

This report summarizes the outcome and findings for months 06/2019 to 05/2020.

Considering the strategic importance of the objectives of the Working Group, it should be noted that – besides the European Environment Agency (EEA) membership – most organizations are either geospatial/mapping or statistical institutions constituting a solid relationship between these two communities.

Within the reporting period one physical meeting of the Working Group on Data Integration took place: the Kick-off meeting for the next working phase 2019-2022 on 30 to 31 October 2019 in Frankfurt (DE).

After this physical kick-off meeting several web meetings have been conducted for both tasks assigned to this Working Group.

Eurostat kindly provided work space on Eurostat's (Confluence) wiki for the Working Group. All documents will be uploaded and the progress reporting will be conducted through the wiki. The EuroGeographics sharing platform 'basecamp' will not be used within this work plan.

All final reports/ deliverables of UN-GGIM: Europe Working Group on Data Integration are and will be available through the following URL: https://un-ggim-europe.org/working-groups/working-group-data-integration/

3.2. Tasks according to the Work Plan 2019–2022

The new Work Plan 2019-2022 comprises the following tasks

- Primary Tasks:
 - Analysing further SDG indicators –focusing on Earth Observation, and can include as part of a sub-task 'Requirements and practices from National Statistical Offices for the use of earth observation data for national statistics'
 - o Advisory Group for global and European data integration issues
 - Analysis of (future) trends in data capture, creation, maintenance and management –using Linked (Open) Data methods to enhance data integration
- Secondary Task:
 - Consider options of how the Regional Committee can support Post-Census 2020 activities and use synergies with UNECE/WG Data Integration to explore ways of how to manage data integration post Census 2020.

Up-to-now the secondary task has not yet been tackled.

It is worth noting, that all tasks are continuously cross-checked with the UN-GGIM: Europe Secretariat, other working groups and ongoing activities (e.g. UNECE, GEO).

3.3. Subgroup I / Task 1 – SDG Analysis

Statistics Portugal leads this Subgroup1/Task 1.





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The 'Subgroup I – SDG Analysis' will provide methodological, operational and technical guidance in the use of spatial data and statistics to compute SDG indicators, focusing on a European and national perspective, and reflecting on solutions which may contribute to reduce the statistical burden and increase the level of detail of SDG Indicators. Special attention will be given to the contribution of Earth observation (EO) using the European Copernicus program and to environment-related SDG indicators. For all solutions, spatial referencing using fundamental data themes (according to UN-GGIM recommendations) is crucial.

For this purpose, the subgroup I will consider pan-European initiatives and data sets available as reference to select the indicators, namely to develop two lines of work:

- To provide a comparative analysis (benchmarking) between pan-European and national methodologies, data sources and results, considering also the sustainability of data sources (space and time);
- 2. To analyze the combination of pan-European with national data sources to extract new relevant information for indicators computation (e.g. higher spatial disaggregation or new dimensions of segmentation).

The scope of work to be developed should take advantage of specific national data sources and identify pros/cons of different methodologies by also considering the "fit-for-purpose" approach. The applicability to other parts of the world (compatible with IGIF¹) should also be pursued.

Based on this, the work will start by taking the following indicators as a reference:

- 3.6.1 | Death rate due to traffic injuries (tier I)
- 6.6.1 | Change in the extent of water-related ecosystems over time (tier I)
- 11.2.1 | Accessibility to public transports (tier II)
- 11.3.1 | Ratio of land consumption rate to population growth (tier II)
- 11.6.2 | Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (tier I)
- 11.7.1 | Access to public / green areas (proxy) (tier II)
- 14.5.1 | Coverage of protected areas in relation to marine areas (tier I)
- 15.1.1 | Forest area as a proportion of total land area (tier I)
- 15.3.1 | Proportion of land that is degraded over total land area (tier I)
- 15.4.1 | Coverage by protected areas of important sites for mountain biodiversity (tier I)

Figure 2 - SDG indicators as a reference for Subgroup I

The selection and analysis of the SDG indicators should benefit from the different institutional background and technical expertise of Working Group members. Additionally, this list should benefit from an articulation with the UNECE as well as the European Environment Agency (EEA) and Eurostat's SDG working group. Furthermore, the information exchange with the IAEG SDG WG GI² will be continued. Finally, the work will benefit from the discussions and main findings of subgroup II dealing with Data integration methods.

The subgroup I will have the same target group as in their previous tasks, i.e. the high level management / decision makers of NMCA's and Statistical offices in Europe.

² Inter-Agency and Expert Group on the Sustainable Development Goal Indicators Working Group on Geospatial Information (IAEG SDG WG GI)





¹ UN-GGIM Integrated Geospatial Information Framework (IGIF)

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Outputs

The expected outputs of this subgroup include:

- the development of standard methodological/technical documents for each indicator compiling the solutions analysed and presenting normative methodological guidance on the use of EO for the computation of SDG indicators; and
- ii) the production of flyers/leaflets synthesising and illustrating the approaches analysed and the main results.

A more detailed 'Concept Note' on tasks and outputs of 'Subgroup I – SDG Analysis' has been finalised and will be uploaded to the Working Group's website in June.

3.4. Subgroup II / Task 2 - Data Integration Methods

The Subgroup II/Task 2 is led by Eurostat.

Data integration methods are already existing, applied and well documented. Moreover the technology is rapidly evolving. The objective of the subgroup II on data integration methods is to summarize the situation and provide a global perspective with recommendations for possible use, completed with an impact assessment at social, economic and organizational level. This will be an incentive for discovering, encouraging and initiating the use of the data integration methods and facilitate the decision-making process of the countries, seeking for new approach in their data capture, creation, maintenance and management.

The task comprises a quick scan regarding different data integration methods used across Europe addressed to the target group of high level management / decision makers of the NMCA's and National Statistical Offices in Europe. "Table Joining Services" (TJS), "Linked Data" (LD) or "geocoding" are already known and used methods, but all best practices (if available) will be considered in addition, if they can be used in this publication. The benefits, adequacy of each method to use cases will be scanned and best practices will be used in the report. Next to the adequacy of each method to use cases, the subgroup II will show realistic examples of these methods.

Moreover than a technical assessment of the different methods, an impact assessment at economic and organization level will be investigated in order to facilitate the decision-making process.

The subgroup II will have the same target group as in their previous tasks, i.e. the high level management / decision makers of NMCA's and National Statistical Offices in Europe.

Outputs

A short report resulting in a management summary (brochure) will be the final deliverable. Preferable a brochure or video could be extracted from the Wiki pages used for compiling the information. Depending on the topic discussed, the main output will be determined in detail at a later point.

The outcome and findings from subgroup I "SDG Indicator Analysis" and subgroup II "Methods of Data Integration" will be conciliated and a conclusive report for future actions will be prepared.

A more detailed 'Concept Note' on tasks and outputs of 'Subgroup II – Data Integration Methods' will be finalised in June and then be uploaded to the Working Group's website in June.

4. Related Activities of the Working Group supporting the work plan 2019 – 2022

According to the work plan the Working Group has contributed to following activities:





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4.1. Contribution to the global IAEG SDG WG GI

The Working Group will continue to contribute and provide European expertise to the global Inter- and Agency Expert Group on the SDG Indicators – Working Group Geospatial Information (IAEG SDG WG GI) in the timeframe 2019-2022. Due to the fact that the request by the UN-GGIM Secretariat for "geospatial experts" was addressed to representatives of Members States the UN-GGIM Regional Committees are not represented anymore in the IAEG SDG WG GI. The roles of the nominated experts for UN-GGIM: Europe, Fabio Volpe (IT) and the Pier-Giorgio Zaccheddu (DE) in this global WG GI thus terminated.

Germany (through the National Statistical Office) withdrew its representation from the IAEG SDG WG GI. Italy (by Fabio Volpe) and Denmark (by Olav Eggers) confirmed their membership in the WG GI. As both experts from Italy and Denmark are members of the Working Group on Data Integration as well, a good information exchange can be guaranteed and has already been established in the past months (by web conferences, telephone calls, etc.) for the benefit of both interest, the global and the European one.

The IAEG-SDG WGGI has renewed its membership and issued its updated Work Plan. For the time being, there is no specific output generated by the new WGGI. The Plenary will be informed about the new objectives, the new work plan and the released documents through a separate report submitted by the WGGI members.

The UN-GGIM: Europe Executive Committee accepted that its Working Group on Data Integration functions as 'Advisory Group' to the IAEG SDG WG GI in order to continuously contribute to global and regional data integration issues addressed by the IAEG SDG WG GI. This consultancy and advice comprises geospatial experts in Europe to be included in global reviews and requests.

4.2. Contribution to the global UN EG ISGI

The UN-GGIM: Europe Executive Committee accepted that its Working Group on Data Integration functions as 'Advisory Group' to the global UN Expert Group on the Integration of Statistical and Geospatial Information (UN EG ISGI) to contribute to global and regional data integration issues.

4.3. Support of European coordination activities

This consultancy and advice would comprise (mainly) the support of European coordination activities towards the implementation of the Integrated Geospatial Information Framework (IGIF) and other geospatial activities by the European Commission (particularly Eurostat ones).

The UN-GGIM: Europe Executive Committee accepted that its Working Group on Data Integration functions as 'Advisory Group' to the Eurostat-funded GEOSTAT-4-project. The series of GEOSTAT projects aim to foster a better integration of geospatial information and statistics, in order for the statistical community to provide more qualified descriptions and analyses of society and environment. The previous GEOSTAT 3 project focused on the development of the European version of the UN-GGIM Global Statistical Geospatial Framework (GSGF) for the European Statistical System (ESS). These objectives coincide with the aims of UN-GGIM: Europe, and the regional entity was pleased to contribute to the GEOSTAT 3 project.

With a formal letter by the UN-GGIM: Europe Executive Committee addressed to the GEOSTAT-4 project consortium in February 2020, UN-GGIM: Europe continues the collaboration with the GEOSTAT 4 Project, with a role in providing advice on the evaluation of GEOSTAT 4 project outputs. The Chair of the Working Group on Data Integration has been assigned as the lead contact for this collaboration.

The European activities of the European Commission through the EuroGEO³ initiative will be monitored and synergies with the activities of the Working Group on Data Integration be elaborated. Some Working Group

³ EuroGEO is Europe's part of the Group on Earth Observations (GEO) - a worldwide network working to build a Global Earth Observation System of Systems (GEOSS).





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members are active within EuroGEO and the global GEO initiative and will report on data integration activities, particularly on those related to the national and regional SDG monitoring using earth observation data. The latter is of particular interest to 'Subgroup I – SDG Analysis'.

The UN-GGIM: Europe Data Integration issues - focusing on SDG analysis – were supposed to be presented by the Working Group at the next EuroGEO Workshop on 8-10 June 2020 in Paris (France). But, due to the COVID-19 pandemic this activity had to be postponed.

5. Next steps

In the upcoming months the Working Group will

- Further elaborate the new work items for the Working Group according to the current Work Plan
- Continuously contribute to global and regional data integration issues addressed above

