Evaluation of the Webinar

#2: Data integration in Europe – Earth Observation and Geospatial Data for SDG and environmental indicators: Practical examples

23 May 2023

Synopsis

UN-GGIM: Europe | Line of Work on SDGs

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CONTENT

FIGURES

INTRODUCTION

During previous years, the UN-GGIM Europe Working Group on Data Integration has analysed current and future trends in geospatial data integration. With the new work plan, the Working Group on Data Integration has been assigned to coordinate the work for geospatial data integration within two 'Lines of Work': one on the needs and challenges to achieve the (1) 'Sustainable Development Goals (SDG)' and one on (2) 'Data integration (DI)'. The recommendations address technical and methodological bottlenecks, but also discuss challenges related to organisational setup, use of resources and capacity building.

The new webinar series will follow-up and focus on these main recommendations. Findings and challenges related to both data production, integration and analytical use will be considered. This webinar is designed as a scene-setter and introduction to the more focused settings that will follow later this year.

PARTICIPATING PARTIES

1. UN-GGIM Europe Line of Work 'SDG'

For the 'Line of Work' SDG the main aim is to maintain the active contribution of UN-GGIM: Europe on showcasing the added value of integrating geospatial data with other data to address SDG indicators, by building on the previous deliverables and focus on common problems and technical and methodological solutions.

In the last working phase, with input from the EEA, the focus was put on SDG indicators with environmental reference. As a conclusion Guidelines for SDG Indicator Calculation for four SDG indicators (11.2.1, 11.3.1, 15.1.1, 15.3.1) have been elaborated.

Presentation title:
Contribution from the UN-GGIM Europe Working Group Data Integration - Subgroup on SDGs

2. European Environment Agency (EEA)

The European Environment Agency (EEA) is an agency of the European Union that delivers knowledge and data to support Europe's environment and climate goals. Our core tasks are defined in the founding EU regulation and include supporting policy development and key global processes; offering analytical expertise and providing and maintaining an efficient reporting infrastructure for national and international data flows.

In collaboration with the partner network, 'European Environment Information and Observation Network (Eionet)', EEA **informs decision-makers and the public** about the state of Europe's environment, climate change and wider sustainability issues. Through a contribution agreement with the European Commission, the EEA coordinates the pan-European and local components of the Copernicus' Land Monitoring Service (CLMS) as well as the cross-cutting coordination of Copernicus access to In-Situ data.

Presentation title:
Copernicus Land Monitoring Service in support of SDGs

3. EuroGEO

EuroGEO combines the contributions of European members of the Group on Earth Observations (GEO), a partnership of more than 100 national governments, over 100 participating organisations and the European Commission. EuroGEO has been launched in 2017 and is enabling Europe to position itself as a global force in the context of Earth Observation. A number of Earth Observation research and innovation projects and activities, such as the one featured in the session, have been launched in support of the implementation of EuroGEO over the last years, as part of the European Research Programmes Horizon 2020 and Horizon Europe.

Presentation title:
Spatio-temporal enhancements of the air quality indicator SDG 11.6.2

4. EuroGeographics

EuroGeographics is an independent, international not-for-profit membership association for the European National Mapping, Cadastral and Land Registry Authorities. EuroGeographics is proud to represent the official providers of geospatial information across Europe, working with them to enable access to their data and expertise for the public good.

Today EuroGeographics members provide much more than traditional maps. From climate change and emergency response, to travelling by public transport, and buying and registering a home, their data is fundamental to everyday life, and to finding solutions to meet global challenges.

By using cutting edge technologies, EuroGeographics members collect, maintain and deliver high quality data and services that link information, gain insight and target action to address key environmental, social and economic issues. In doing so, they are enabling a data-driven society empowered by the use of their trusted maps, geospatial and land information.

Presentation title:
Geospatial data for SDGs

OBJECTIVES

The objective of this webinar was to showcase practical examples of how Earth Observation programmes, geospatial data and related activities can be used in the context of SDG monitoring or the preparation of environmental related indicators.

By this, we looked beyond the previous work of UN-GGIM and inform a variety of stakeholder groups on the various initiatives to create a common understanding and opportunities for future joint work.

OUTCOME OF THE DISCUSSION

Answers to questions raised during the webinar by the organisers via Slido:

Which challenges and limitations do you see in using EO data/geospatial data for SDG indicators? How can UN-GGIM Europe support?

Items raised in the answers:

- The usability of EO data depends on the type and scale of the data. Often more granularity is needed but not available.
- Access to EO data still needs improvement.
- Entry barriers are often too high due to lacking specialised capabilities to work with the data
- True integration with local socioeconomic data (e.g. income, age, information on buildings etc) is needed to localize the SDGs and make informed/just decisions. The High Value Datasets Directive is in the right direction. UN-GGIM could advocate for more open datasets with examples and governance discussions.

Which challenges and limitations do you see in using EO data/geospatial data for SDG indicators? How can UN-GGIM Europe support?

Items raised in the answers:

- A shift from detailed urban data to detailed rural data is needed to assess agriculture transition, energy transition, restore biodiversity and support climate adaptation and mitigation.
- EO data are not always easily usable especially within NSO that do not have this expertise.
- Regularity/sustainability in producing the indicators needs to be achieved; the status of the indicators vis-a-vis official statistic needs to be clarified.

Would you suggest UN-GGIM Europe generally develops further SDG indicator guidance beyond those already addressed?

Result:

Two thirds of the responding participants were in favour of that, showing the interest in UN-GGIM Europe developing further guidance on SDG indicators.

Can you propose and contribute to other SDG indicators developed from EO data than so far mentioned? If yes, which?

Answers:

Only few replies were received which did not indicate candidates with the exception of one mentioning of SDG 6.6.1 (Change in the extent of water-related ecosystems over time)

Questions and answers raised during the webinar by the audience via Slido:

To the EEA preentation:

- Do you have any protocol in place with countries to validate the different Copernicus datasets, to take into account national specific data/knowledge?

Answer:

There are well defined workflows that include countries in the validation of a subset of the CLMS data products, in particular our long-lasting product Corine Land Cover. Furthermore, the EEA has signed a Copernicus Services Agreement with EuroGeographics so the data from National Mapping and Cadastral Agencies can be freely used in the context of the Copernicus Land production and validation.

To the EuroGEO presentation:

- Do these workflows work against the universality and practicality of the current workflow?
- How do you account bias on the results shown for air quality in cities? What metrics have you used?
- Do you use satellite imagery as inputs to an air-quality model, or just for upscaling purposes?
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Answer:

Bias is always present which is validated by CAMS services, by fusing other dense sensor network data and by data from modelling communities (e.g Fairmode). Satellite imagery is part of the AQ modelling since a while, geospatial data is new to this modelling.

To EuroGeographics:

- How do you perspective the interaction between EU MS statistical obligations on providing LAU changes and EuroGeographics data on administrative boundaries?
- Is there a metadata catalogue of the EuroGeographics data?

Answer:

In the joint work of EuroGeographics and Eurostat, statistical units are combined with the national mapping agency data featuring in EuroBoundaryMap. The Open Maps for Europe contains metadata on all available datasets as part of the platform services.

Statements during the webinar <u>by the organisers/panelists</u>:

Jose (EEA): Mentions agreement with EuroGeographics increasing the usage of their authoritative data.

Andrus (EEA): Emphasises the role of Member State involvement through Eionet using the common EAGLE model and the role Copernicus data can play in supporting goal 15 and lists several examples.

Francisco (PT) asks Sallie (EuroGeographics) to extend on their production of pan-European datasets on which she mentions the opening up of these datasets through OpenData for Europe. This is now extended to large scale data.

Jose asks Evangelios (EuroGeo) on what should be done to implement indicators based on authoritative data on city level to complement the current AQ network. He refers to the growing availability of other sensor data and the need to have them recognised as trusted data.

Response on evaluation questions through Slido:

There was a low overall response rate (between 5% and 10% of the overall ca. 100 participants – depending on the questions) which allow only limited validity of the results:

- One half of the respondents came from NSIs, one third from NMCAs and some other organisations.
- The duration of the webinar (90min) scored 4.7 out of 5.
- Sufficient time for discussion scored 4.8 out of 5.
- Helpfulness of presentations scored 4.3 out of 5.
- Relation of presentation to participants work and applicability both scored 3.5 out of 5.
- Flow of presentation scored 4.3 out of 5.
- The level of presentation details was equally rated as “just right” and “a bit too much”.
- The webinar worked technically well.
- Expectations were met (2/3) or somewhat met (1/3).
- Further development of indicator guidance by UN-GGIM was supported.

CONCLUSION AND NEXT STEPS

The presentation of the EO use cases in support of SDGs to the UN-GGIM Europe stakeholders was a useful communication outreach that highlighted the value of EO data for the establishment of SDG indicators from several perspectives.

The value of EO data for establishing guidance in the previous work of the UN-GGIM Europe subgroup on SDGs was summarised in the first presentation by Statistics Portugal.

The presentation on the product portfolio of the Copernicus Land Management Service showed the current and upcoming potential for additional usage of EO data.

Under the EuroGEO umbrella, the National Observatory of Athens presented detailed processes and experiences related to the air quality indicator for which the inclusion of EO data became essential.

EuroGeographics in a journey through their member countries presented a variety of relevant national examples showing the value of geospatial data which should be further explored for European and thus Global SDGs.

The main outcome and findings are:

- EO data has become an essential part of the SDG data methodology and is increasingly used to innovate the way SDGs are monitored.
- This source of data complements the authoritative geospatial enhancing the value both sources contribute to SDG monitoring.
- Technically, the further usage of EO data is possible and beneficial but in practise often limited by resource constraints.
- More usage of Earth observation shall be explored as the availability is growing strongly. This can trigger the request for guidance on further environmental SDG indicators.
- Member Countries increase the availability of authoritative data which has to be taken up.
- Despite all these opportunities, resource constraints relating to budget, people's knowledge and lacking digitalisation in institutions exist and have to be addressed.