New approaches for the development of future activities

Survey analysis

UN-GGIM: Europe | Data Integration | Line of Work

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CONTENT

SCOPE

The organizing team has launched a survey to collect the feedback of the UN-GGIM: Europe Data Integration Working Group members to evaluate:

- if they are in line with the findings on the new approaches for the development of future activities;
- what priority they would consider for the future activities of the WG DI; and
- how activities could be better sustained.

The outcomes of the survey will serve as a base for drafting the future line of work and action list, which will also be in line with the revised UN-GGIM: Europe strategy.

The survey has been launched in May-June 2025 (see questionnaire in annex 2)

EXECUTIVE SUMMARY

The survey demonstrates that the participants are in line with the new approaches for the development of future activities.

The mission of the LoW on Data Integration (DI) is to raise awareness, promote and support the effective implementation of sustainable data integration processes within national institutions as well as at the European level. It is not about solving specific technical problems, but rather about providing analysis and recommendations at the strategic, organizational and managerial levels.

The integration processes between geospatial and statistical data are among the most advanced; the use cases identified can serve as examples for the development of common integration methods and techniques that can be used in other data domains and for various needs and applications such as climate change, land ownership, or economic infrastructure.

The LoW DI should emphasize the importance of authoritative geospatial and statistical data to European organizations (European Commission and Directorates-General), particularly in the context of European data spaces, and highlight the benefits of interoperability and integration of geospatial and statistical data.

Due to the strategic priority of the UN-GGIM: Europe's LoW SDGs, it would be beneficial to have closer collaboration between the LoW DI and the LoW SDGs, in order to avoid duplication of effort and creates a win-win situation. However, the LoW DI has a much broader scope than simply supporting SDG indicators, as they form the basis for many other topics to be studied using integrated geospatial and statistical data.

In that perspective, LoW DI should address the study and analysis of knowledge base infrastructures at a strategic and methodological level; mainly by identifying the role of geospatial and statistical information in connection with other thematic domains and by exploring how data integration between geospatial and statistical ones can be used in the context of SDG indicators and European data spaces.

Since the preliminary conditions to any successful and sustainable integration process are the availability of appropriate data (i.e. accurate, complete, harmonized, identified, without spatial and temporal gaps), it is essential to make those managers responsible for data production aware of the constraints and requirements of the integration process.

The main activities that should be tackled in priority are:

1. Address the managers (European/national organizations) in a more strategic way. Even if they are aware of the value of data integration processes, the steps to achieve this are not yet sufficiently systemic due to the lack of an established vision on institutional impacts (which serve their basic mission), a budget evaluation and a cost-benefit analysis. The role of the LoW DI will be to demonstrate the benefits of geo/statistical data integration with other data domains, in a pragmatic way with examples of successful integration cases in relation to European/national priorities.
2. The opportunity to raise awareness and train data production managers on the constraints of integration processes through workshops/webinars (and training sessions in cooperation with EuroSDR) on common methods and techniques for data integration.

How to better sustain the activities?

1. The results of LoW DI activities should be better presented at the level of UN-GGIM: Europe and better promoted at the global and European level. The LoW DI should participate as a stakeholder in other similar international working groups or projects.
2. Communication with the managers of our institutions (coordinator and advisor) should preferably be done at their conferences, events or high-level meetings. Short notes (one-two pages) summarising the work results that the LoW DI wishes to send them are also preferred than multi-pages documents.
3. The LoW DI cannot operate in isolation and must be able to exchange experiences and best practices with other similar working groups, projects or associations (e.g. UN EG-ISGI[1], GSGF-CARE[i2], EuroSDR[3], GREAT[4])

[1] UN EG-ISGI: United Nations – Expert Group on Integration of Statistical and Geospatial Information (see https://ggim.un.org/UNGGIM-Expert-Group-ISGI/)
[2] GSGF-CARE project (see https://www.efgs.info/projects/gsgf-care/)
[3] EuroSDR: a not-for-profit organisation linking National Mapping and Cadastral Agencies with Research Institutes, Universities and Companies in Europe (https://www.eurosdr.net/)
[4] The GREAT project: Green Deal Data Space (see https://www.greatproject.eu/)

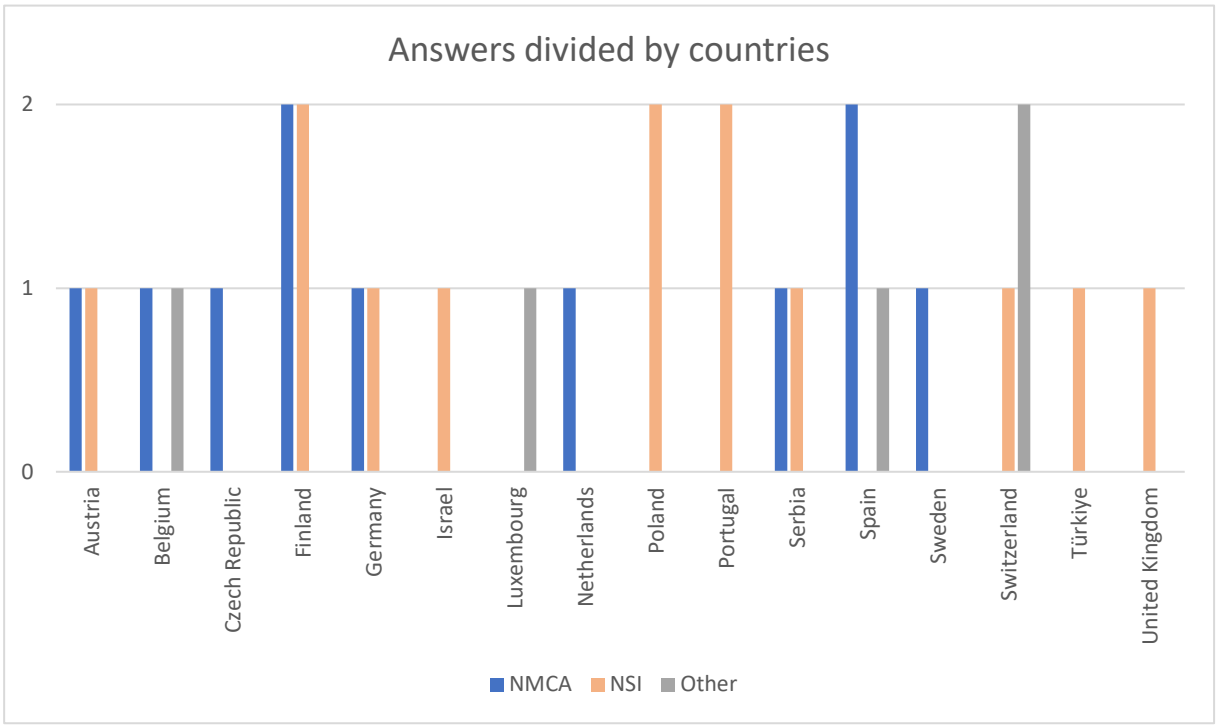
SUMMARY REPORTING

The chapter summarizes the statistics and comments for each question provided by the participants.

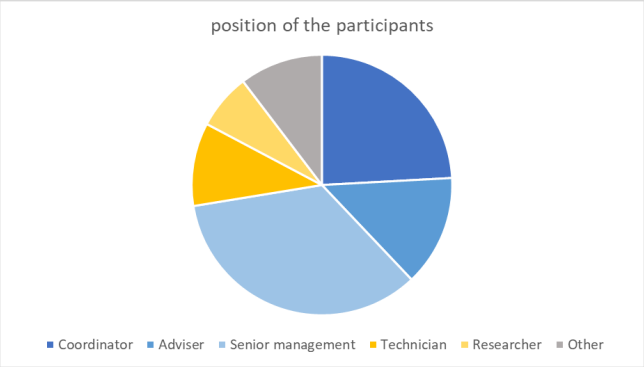
The first questions (1-4) are related to the identification of the participants. The following questions (beside question 13) are based on multiple choices (question X) that can be completed with comments (question X+1).

Identification of the participants

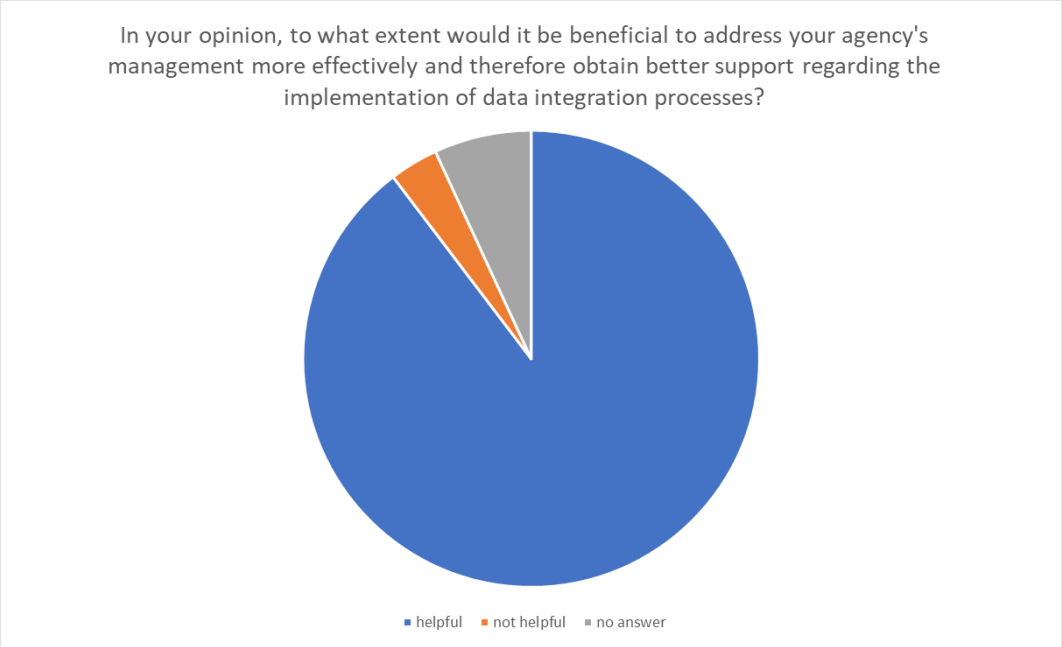
Of the 23 countries affiliated to the working group, 16 countries responded, mostly providing more than one response. We received a total of 29 responses, including from international organizations: EUROSTAT, UNECE and EARSC. Most of the participants come from the management body (coordinator, advisor and senior manager). All have read the document on the new approaches for the development of future activities.[5]



[5] See https://un-ggim-europe.org/wp-content/uploads/2025/06/2b.-UN-GGIM_Europe_DataIntegration_New-approaches-for-the-development-of-future-activities.pdf



Question 5+6: In your opinion, to what extent would it be beneficial to address your agency's management more effectively and therefore obtain better support regarding the implementation of data integration processes?



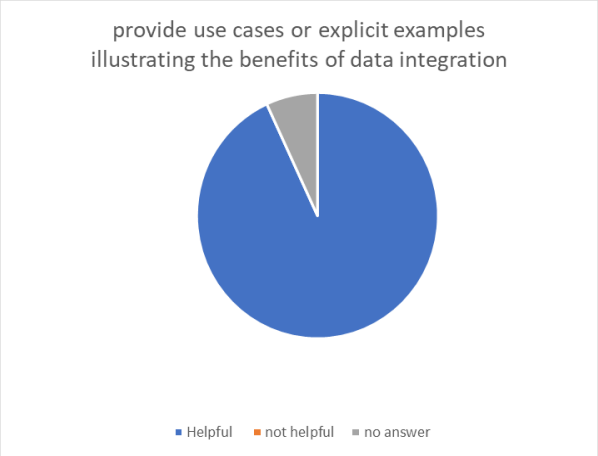
Almost all participants agree that it would be beneficial to address their agency's management more effectively in order to obtain better support regarding the implementation of the data integration processes.

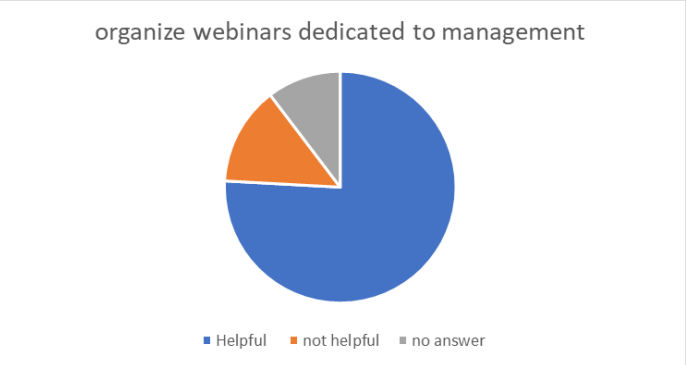
Addressing the management level more strategically is crucial. Even, if the decision-makers are already aware of the need and interest for enabling and improving integration processes between geospatial and non-geospatial data. For example, the statistical domain and many others often need a clearer picture of concrete institutional benefits, risks of fragmentation, budget considerations, and links to national priorities.

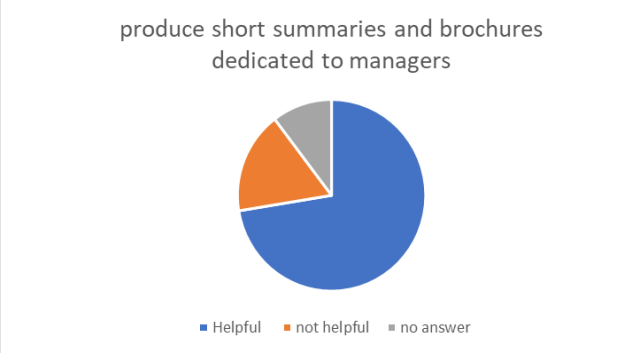
Moreover, national organisations should not be the only ones to be addressed but also the European level organizations (EU Commission and directorates), considering seriously the implementation of the data integration processes especially in context of Data Spaces.

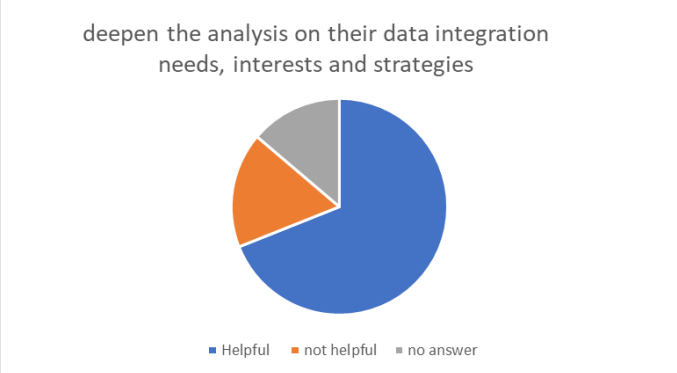
This work should underline the importance of authoritative geospatial and statistical data for many purposes and aim to ensure proper resourcing for related activities on the EU and national levels; not only at cross-organisation benefit but also at the benefit for each single organisation. This will help to argue for IT-infrastructure investments and increasing permanent costs. Outside geospatial and statistical domains, other data domains (and producers) like earth observation should be invited in the data integration processes.

Question 7+8: In your opinion, which of the following approaches could better address the direction/interest of your agency?









The best approach to educate leaders is to provide use cases or explicit success stories to illustrate the benefits. This is not about diving into the technical details, but about strengthening the translation of technical strategies into policy-relevant language by:

- Defining data integration as an instrument for organisational reform and demonstrate how the implementation of data integration processes, if better organized (e.g. between geospatial and statistical data), can lead to cost savings, especially in institutions dealing with complex areas such as land administration, property registration and land use planning.

A focus on the impact and requirements of new "data integration" methods (e. g. AI) could help to govern the development of the organization.

- Providing costs-benefits analysis, guidance for governance, mandate coordination, and resource allocation.

This direction would ensure higher engagement and stronger top-level support.

Recommendations for the choice of success stories have been provided. They should be chosen in alignment with national priorities. Use cases already identified in the GEOSTAT4 project might be valuable also in this context. Co-developing use cases with international public agencies (working with Earth Observation data) would also help to align the strategic value of integrated geospatial–statistical frameworks with EU policy priorities.

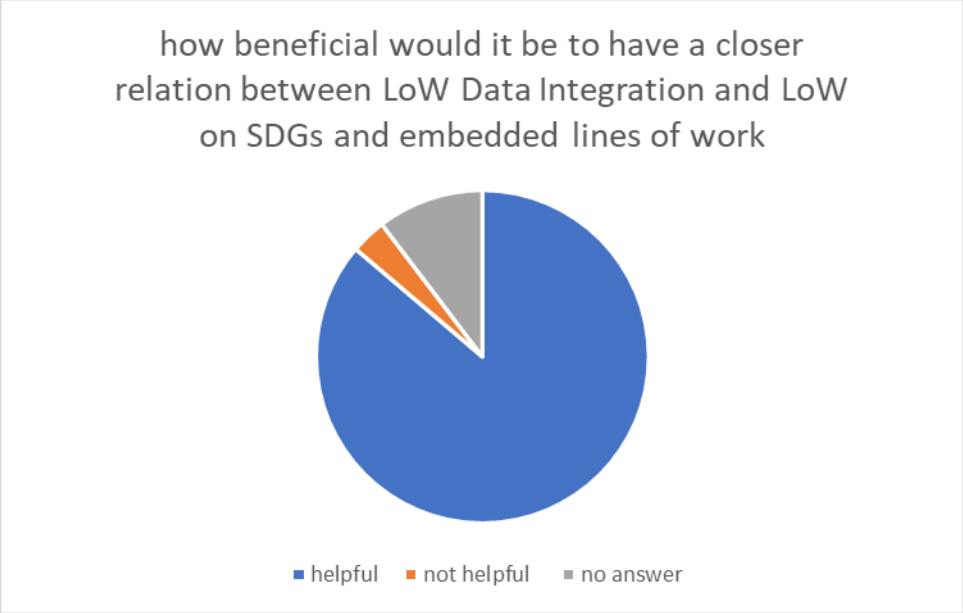
The way to communicate depends on the management level.

Communication with high-level decision-makers (coordinators and advisors) would be as follows: to provide short, focused guidance notes; travel to their conferences, events and high-level meetings and present the work of LoW DI.

In addition, the GSGF-CARE (EU Grant/GEOS 2024 project) project will include actions to promote communication with high-level decision-makers and related to integration issues.

Communication with managers in charge of production processes would consist of organising workshops/webinars and training sessions (capacity building) on the implementation of data integration processes by developing and demonstrating common data integration methods and techniques.

Question 9+10: In your opinion, how beneficial would it be to have a closer relation between LoW Data Integration and LoW on SDGs and embedded lines of work?



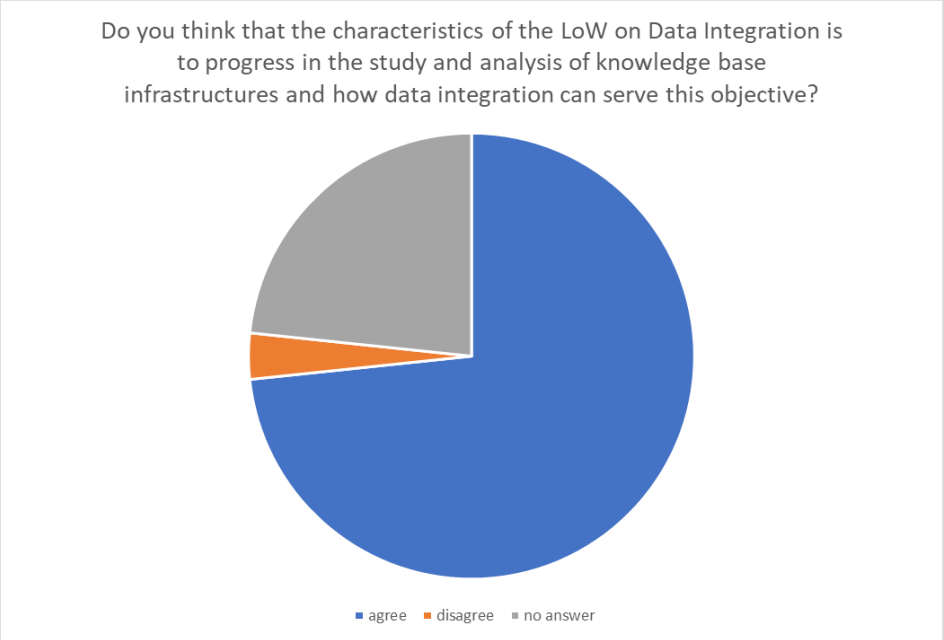
Participants clearly state that it would be beneficial to have a closer relation between LoW DI and LoW SDG.

Due to the strategic priority of the SDGs, it would be beneficial to have closer collaboration between these two LoWs. A win-win collaboration could be that explicit use cases of LoW DI could provide data integration methods and techniques to support the operational implementation of SDG indicators. On the other hand, work on the SDGs could be seen as a demonstration area and provide successful examples of data integration.

However, SDG indicators cover a wide range of areas other than geospatial and statistics and may not currently be part of the scope of our institutions (NSI/NMCA). It would be worth considering whether there should not be an explicit mandate for NMCAs (in addition to the mandate of NSIs) for the follow-up and review of a possible post-2030 agenda.

The calculation of SDGs indicators requires firstly accurate, comprehensive, harmonized and well identified core data without spatial and temporal data gaps.

Question 11+12: Do you think that the characteristics of the LoW on Data Integration is to progress in the study and analysis of knowledge base infrastructures and how data integration can serve this objective?



Nearly three quarters of the respondents agree that the characteristics of the LoW DI are to progress in the study and analysis of knowledge base infrastructures and to explore how data integration can be used for this purpose. However, this should remain at the strategic and methodological level.

The added value of these LoW lies in its ability to provide common conceptual ground, strategic guidance, and policy-relevant frameworks — not in replacing the roles of technical standardization bodies or domain-specific initiatives.

The LoW DI should:

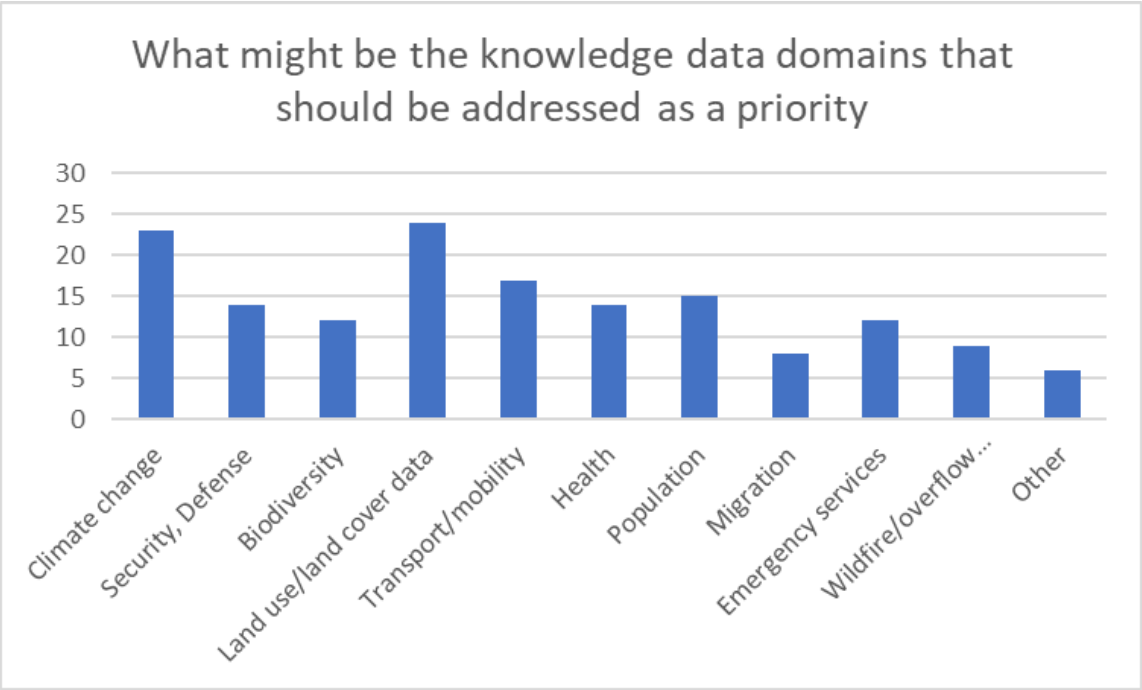
- Propose methodologies and recommendations for the integration of geospatial and thematic data that meet the needs of users (as a service).
- Promote strategic coherence between areas (e.g. environment, territory, statistics).
- Promote alignment with existing frameworks such as IGIF and FELA,
- And support governance and coordination models for interdisciplinary collaboration.

The current mechanisms for managing geospatial data and combining geospatial and statistical data should be made available in the data spaces of different domains.

In addition, adopting an agile approach with clearly defined SMART goals is essential to ensure tangible progress and adaptability.

However, progressing towards knowledge infrastructures first requires consolidating the data dimension (current vision of SDIs).

Question 13: What might be the knowledge data domains that should be addressed as a priority?

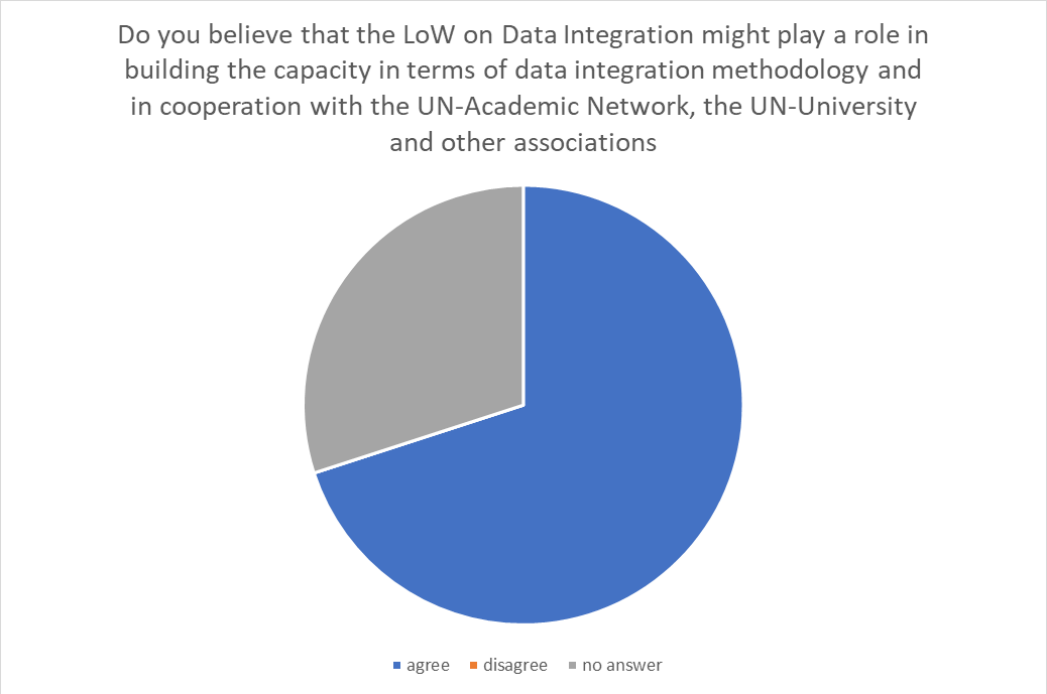


The data domains (or applications) that should be addressed as a priority have not found a consensual answer, depending on the core institutional business and national priorities. However, the main ones are climate change and land use/land cover, followed by security/defence, transport/mobility and population.

Other domains have been mentioned: e. g. earth observation, land property, postal addresses, dwelling/housing, energy resources and disaster risk management.

Regardless of the domain, selection criteria should give priority to those with a clearly defined spatial dimension and broad applicability, where both statistical and geospatial information are essential. This would demonstrate the benefits of data integration in a more effective and efficient manner.

Question 14+15: Do you believe that the LoW on Data Integration might play a role in building the capacity in terms of data integration methodology and in cooperation with the UN-Academic Network, the UN-University and other associations?



Nearly three quarters of the respondents support the idea but with some restrictions: the capacity building program should be implemented in a practical and targeted manner based on good practice examples from projects and well-identified use cases.

The LoW Data Integration (DI) should not only be involved in theoretical studies and research, unless it can help to progress in the implementation of well-identified use cases. The EuroSDR Association could provide support in this regard.

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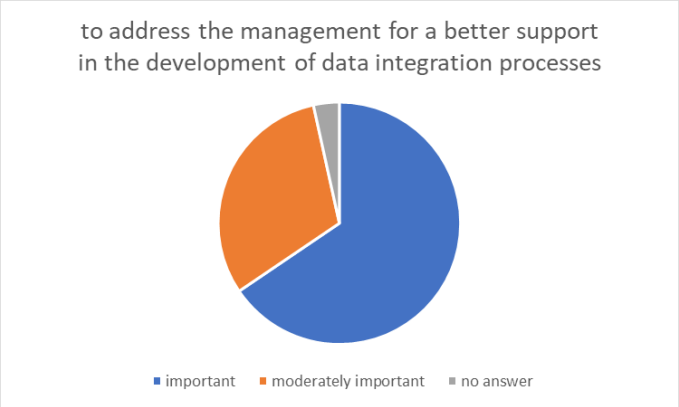
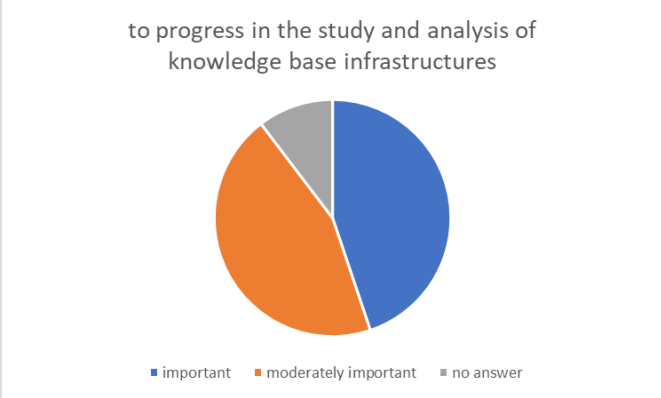
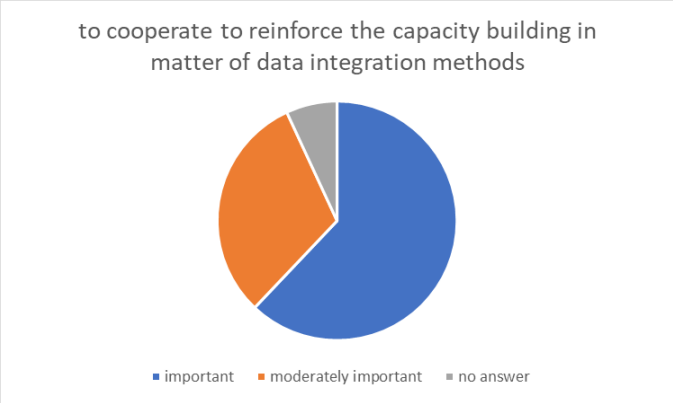
Question 16+17: Based on the previous questions, what are the activities that must be undertaken in priority:





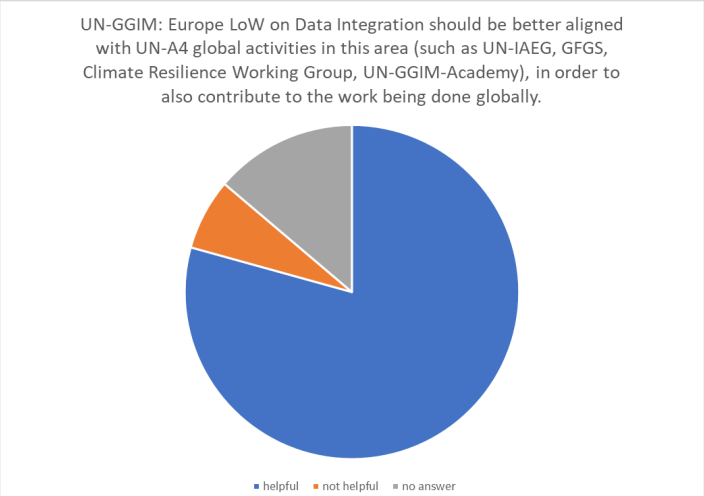


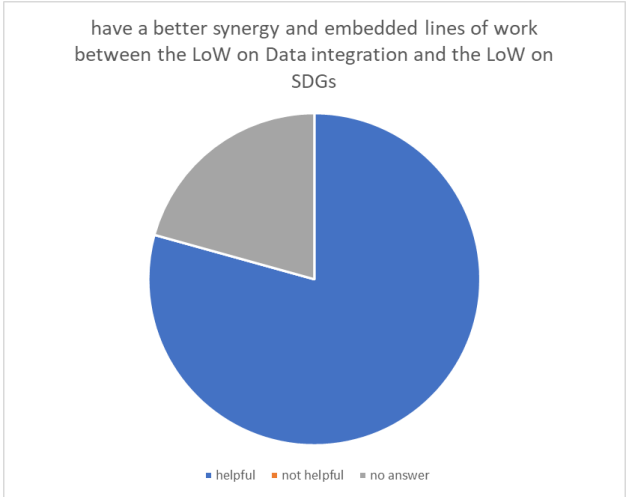
The priority is clearly to better address the management of our institutions in a more strategic way, but also at the national and European organisational level. This is to ensure better support and promotion in the development of data integration processes.

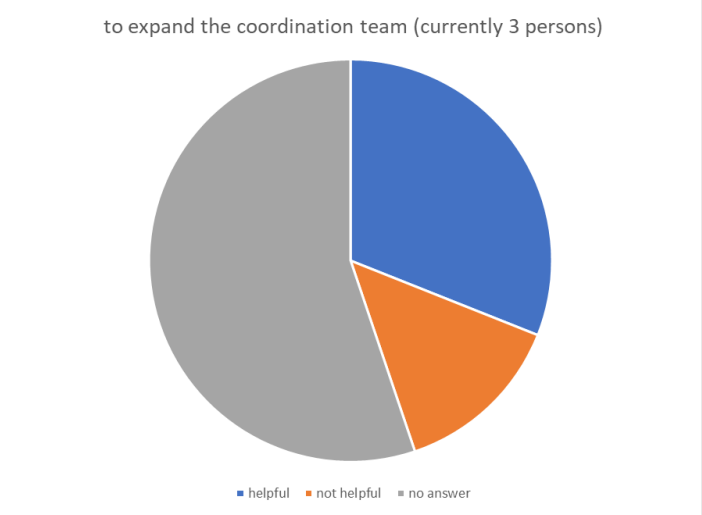
The second priority is the possibility of investing in capacity building on data integration methods, targeting the managers in charge of the production processes. This should take the form of workshops/webinars (and training sessions in cooperation with EuroSDR) on the implementation of data integration processes and by presenting common methods and techniques for data integration.

Progressing in the study and analysis of knowledge base infrastructures should probably not be considered sufficient on its own; rather, promoting use cases and success stories in this area is equally important.

Question 18+19: How could these activities be better sustained?







First, the LoW DI activities should be more visible internationally. LoW DI should be recognized by other similar international working groups or projects and possibly act as a stakeholder. One of such WG is the UN Expert Group on the Integration of Statistical and Geospatial Information (UN EG-ISGI).

It would be very useful to strengthen the collaboration between UN-GGIM: Europe and other European initiatives, such as in relevant projects like GSGF-CARE or in the development of Data Spaces in various knowledge domains.

Secondly, a better synergy between LoW DI and SDG makes sense if it avoids duplication of effort and creates a win-win situation.

We must be aware that activities related to data integration have a much broader scope than simply supporting SDG themes, as they form the basis for many other topics to be studied using integrated geospatial and statistical data.

ANNEX 1: COLLECTED COMMENTS BY PARTNER

Question 5 + comments

In your opinion, to what extent would it be beneficial to address your agency's management more effectively and therefore obtain better support regarding the implementation of data integration processes?

Serbia (NMCA): Addressing the management level more strategically is crucial for the success of data integration initiatives. While Serbia has recognized the value of integrated geospatial-statistical ecosystems—particularly through our national IGIF-aligned strategies—the experience shows that decision-makers often need clearer articulation of concrete institutional benefits, risks of fragmentation, and links to national priorities (e.g. digital transformation, climate resilience, and EU accession benchmarks).

Serbia (NMCA): The existing LoW deliverables are insightful, but their visibility and operational translation at the managerial level remain limited. Therefore, we believe that LoW should:

- Prioritize short, targeted policy briefs tailored to senior decision-makers;
- Showcase cost-benefit analyses and real impact stories (e.g. faster emergency response, optimized infrastructure planning);
- Strengthen alignment with national digital strategies and budgeting frameworks;
- Provide guidelines for institutional mandates and inter-agency governance models.

Finland (NSI): there needs to be a budgetary saving in focus, efficiency, cost-benefit analysis, and definitively AI.

Finland (NMCA): the focus should be on addressing the European level organizations (EU Commission and directorates) on benefits of geospatial and statistical data interoperability and integration, especially in context of Data Spaces. This work should underline the importance of authoritative geospatial and statistical data for many purposes and aim to ensure proper resourcing for related activities on the EU and national levels.

Spain (NMCA): it is necessary to continue to insist on the publication of INSPIRE theme data and that it coincides with the core data defined by UN-GGIM. In order to impute the development of EU-GKI it is necessary that the data are published in a standardised way.

Spain (CNIG): there is an agreement with NMCA and NSI to integrate some spatial data like Address or Transport Network data but it would be desirable that this integration be with other organisations, e.g. environment, health.

Austria (NMCA): Not only the global or cross-organisation benefit needs to be highlighted, but also the benefit for each single organisation is needed. This will help to argue for IT-infrastructure investments and increasing permanent costs.

Belgium (NMCA): The question is not 100% clear. Are you asking if it is helpful to have efficient communication material to convince the management or if it’s helpful if management is on board and gives support?

Either way, in both cases it would be helpful. For the first option, while NMCA’s and statistical agencies do not need to be convinced that data integration is important, for other data producers this is not always the case. Therefore efficient (managerial) communication material is helpful.

If it is the second, of course it is helpful because it is logical that it is beneficial that the management of a data providing institution is on board with the necessity of data integration.

EARSC: To reinforce this impact, EARSC recommends strengthening engagement with institutional management levels by highlighting successful public-private collaboration models, where Earth Observation data complements authoritative statistics to support Monitoring, Reporting, and Verification (MRV) across domains but also align the strategic value of integrated geospatial–statistical frameworks with EU policy priorities

By doing this, data integration will not be seen as a technical add-on, but as a strategic enabler of institutional modernization, particularly in land administration, urban development, and public services optimization.

Question 7 and comments

In your opinion, which of the following approaches could better address the direction/interest of your agency?

Sweden (NMCA): All options are helpful, but the most important ones are short summaries and brochures and use cases.

Luxembourg (EUROSTAT): All actions would be useful, but due to resource situation a prioritisation shall be done. Highest priority: provide use cases illustrating the benefits building upon above awareness raising towards management would be needed. It is difficult to mobilise them for webinars; our suggestion would be to go to their conferences and events and present it there. For example, the CES meetings including the joint UN-GGIM and CES session to be held next year.

Austria (NSI): Management would be better addressed during high level meetings. Maybe address or involve methods and/or quality departments. This could be a good way to spread the DI needs and skills.

Netherlands (NMCA): The management wants to see benefits but also what could have been possible benefits if integration was better organised.

Serbia (NMCA): We believe these two approaches are the most impactful, as they provide targeted, strategic-level communication that resonates with institutional leadership. In our experience, it is not necessary for UN-GGIM LoW to dive into detailed technical use cases, but rather to clearly understand the systemic value, institutional implications, and strategic benefits of data integration.

What would be far more useful is to strengthen the translation of technical strategies into policy-relevant language:

- framing data integration as an instrument of organizational reform,
- demonstrating alignment with national priorities (digitalization, public sector efficiency, EU integration), and
- providing guidance for governance, mandate coordination, and resource allocation.

This direction would ensure higher engagement and stronger top-level support, especially in institutions dealing with complex domains like land administration, property registration, and spatial planning.

Switzerland (NSI): In our experience, concrete use cases and success stories are particularly effective at raising awareness among decision-makers. Visualisations and sector-specific examples have the greatest impact. We would also welcome webinars and short summaries targeted at management as additional valuable approaches, especially if they highlight pragmatic optimisations or efficiency gains through real-world application examples.

Spain (NMCA): All actions are necessary. The Agency's managers and technicians change functions in their jobs, so information and knowledge of UN-GGIM's objectives must be continuous. This is not the case in the CNIG, but sometimes I contact another organisation, the person in charge may be new.

Finland (NMCA + NSI): In GEOSTAT 4 project, a significant amount of good practice use cases was created. Those use cases would be valuable also in this context. Further, the GSGF-CARE project (EU Grant/GEOS 2024 project) will have actions to promote high-level communication (senior management level) related to integration matters.

Portugal (NSI): Organize more practical workshops and training sessions (capacity building and capability development) based on use cases and explicit examples that illustrate the benefits of data integration.

Benefits of data integration are already broadly known and acknowledged, the key issue is to effectively implement it in the business production processes by developing and showing common data integration methods and techniques.

In principle, the analysis on the data integration needs, interests and strategies are already identified and reviewed by the organisations/agencies at different stages and contexts. Thus, deepen the analysis on data integration needs should not be a priority. The focus should be on implementation.

Portugal (NSI): I believe that the presentation of use cases which they identify with is the better way of approach: to present a solution to concrete problems.

Austria (NMCA): A focus on the impact and requirements of new "data integration" methods (AI?) could help to govern the development of the organisation.

Spain (NMCA): Any approach will be welcome and helpful, but the limitation is the lack of resources to manage them and put them in practice.

Germany (NSI): use cases and especially publications and products that are produced with georeferenced data

Belgium (NMCA): It’s a difficult question because the response is given from the point of view of my organisation, not what is important for the broader community. As an NMA we are already aware of the need for data integration. Therefore, brochures and short summaries for managers are not helpful for us, because our management already knows this. However, to convince other (non-geospatial) data producers it is helpful. The same goes for the last option, we are already busy with internal analysis (we are constantly evolving as an organisation in our role as geobroker, so we need to be aware about our data integration needs, interests and strategies).

Webinars are always interesting and so are use case and/or explicit examples."

Belgium (EARSC): EARSC strongly supports efforts to co-develop use cases with public agencies, ensuring that integration efforts are demand-driven and aligned with institutional strategies.

Question 9 and comments

In your opinion, how beneficial would it be to have a closer relation between LoW Data Integration and LoW on SDGs and embedded lines of work?

Luxembourg (EUROSTAT): SDG work could be seen as a demonstration area for the need of data integration.

Switzerland (NSI): In order to assess the true benefit of closer alignment, I would need more information on current overlaps and bottlenecks. In my opinion, accurate, comprehensive and harmonised core data is more important than processes when it comes to delivering SDG indicators.

Spain (NMCA): Integration will always be easier when data is published following the interoperability requirements of international standards (ISO) and European regulations and the benefit will be greater. I think that there is a need to further promote the publication of spatial data which are the basis in many thematic domains and the connectors of these domains.

Portugal (NSI): Link use cases and best practices of the LoW Data Integration to the several SDGs (LoW on SDGs) to facilitate the methodological development, calculation and operational implementation of the SDGs indicators.

Germany (NSI): In our case those topics are dealt with in different units. So, it would be rather not helpful in case of Germany (NSI).

Belgium (NMCA): Due to the pressing nature of the SDG's it would be beneficial to have a closer relation between these two LoWs. This will also result in (much needed) output (examples, guides, etc.) that can be used by policy makers in line with their efforts for obtaining the SDG's. It is important that, if this is pursued, this is also aligned with global initiatives on this theme."

Belgium (EARSC): EARSC strongly supports a closer linkage between the LoW on Data Integration and the LoW on SDGs, as this alignment would enhance the impact, scalability, and institutional uptake of both initiatives. Many of the SDGs indicators require multi-source data integration, where EO plays a vital role in filling spatial and temporal data gaps.

Switzerland (UNECE): it would be good to explore whether there should be an explicit mandate for NMCAs (in addition to the mandate of NSOs) for the follow-up and review of a possible post 2030 agenda.

Question 11 and comments

Do you think that the characteristics of the LoW on Data Integration is to progress in the study and analysis of knowledge base infrastructures and how data integration can serve this objective?

Luxembourg (EUROSTAT): The answer options are too few. A differentiation would be needed, at this level of generalisation is difficult to decide.

Serbia (NMCA): Yes, we support the ambition of the Data Integration LoW to contribute to the conceptual development of knowledge-based infrastructures and to explore how data integration can serve this goal. However, we believe that this should remain at the strategic and methodological level, without moving into the detailed development of technical standards or operational specifications. The added value of this LoW lies in its ability to provide common conceptual ground, strategic

guidance, and policy-relevant frameworks — not in replacing the roles of technical standardization bodies or domain-specific initiatives.

In our view, the LoW should:

- Propose high-level methodological frameworks for integrating geospatial and thematic knowledge,
- Foster strategic coherence across domains (e.g. environment, land, statistics),
- Encourage alignment with existing frameworks such as IGIF and FELA,
- And support governance and coordination models for cross-domain collaboration.

By staying at this level, the LoW can ensure its work remains broadly applicable, avoids duplication, and enhances its role as an enabler of institutional transformation rather than a technical implementation body."

Switzerland (NSI): Absolutely. The LoW on Data Integration should play a key role in identifying how geospatial frameworks can improve connectivity between different subject areas within a shared knowledge space. Additionally, adopting an agile approach with clearly defined SMART objectives is essential for ensuring tangible progress and adaptability.

Spain (NMCA): I think it is very necessary. Perhaps UN-GGIM could draft an ISO standard to give the principles, recommendations and requirements for Data Integration.

Finland (NMCA): The usability and use of Data Spaces for geospatial and statistical data integration between various data domains should be further investigated. Current standards and mechanisms for geospatial data management and combining geospatial and statistical data should be made available within data spaces of different domains.

Portugal (NSI): A deeper study and analysis of knowledge base infrastructures should be addressed when the geospatial data management situation will be more well-established and mature. Probably would not be suitable to move forward on knowledge infrastructures issues when the data dimension (current vision of SDI) is not properly consolidated.

Belgium (NMCA): It is difficult to answer this question. I believe it is not the role of the WG to study and analyse the Knowledge base infrastructures. I think it would be better to keep the focus of the LoW on investing in the development and implementation of standards and methodologies for data integration and awareness raising about this issue.

Belgium (EARSC): Yes, we believe that this Line of Work should continue advancing the understanding of how data integration frameworks and geospatial infrastructures (e.g., data cubes, data lakes, federated platforms) can underpin knowledge generation.

Question 13 and comments

What might be the knowledge data domains that should be addressed as a priority?

Serbia (NMCA): Based on our institutional experience, we believe the following knowledge data domains should be prioritized for integration due to their high societal relevance, cross-sectoral impact, and potential for supporting SDG monitoring and public decision-making:

1. Land and property (land administration, tenure, use, value): Foundational for legal security, taxation, housing policy, and spatial justice.

2. Population and social infrastructure (demography, education, health, accessibility); crucial for equitable service delivery and planning of public investments.

3. Economic infrastructure (transport, utilities, industrial zones, energy) ; Enables smarter infrastructure planning and sustainability assessments.

4. Urban-rural dynamics and functional regions; Essential for regional cohesion, smart specialization, and governance reform.

5. Disaster risk management and reduction

Switzerland (NSI): In my opinion, it is important to focus on a few core data domains with a clearly defined spatial dimension and broad applicability. Areas such as land use/land cover, population, and transport/mobility are particularly relevant as they form the basis of geospatial layers for a wide range of integration use cases. Focusing on these well-defined, spatially explicit domains enables the benefits of data integration to be demonstrated more effectively and efficiently. While broader or less spatially tangible domains such as migration or climate change are important, they should be addressed at later stages or through specific thematic initiatives.

Finland (NSI): Promoting accessible high resolution EO data would be important too.

Spain (NMCA): Postal addresses and geographical names are basic for data domains. When an action is performed on any domain, the first work is to know where the features are on the surface of the Earth.

Israel (NSI): Business, Dwellings

Finland (NMCA): No single knowledge domain is more important than the others; rather, geospatial and statistical capabilities should be made available across data spaces of all data domains.

Finland (NSI): No single domain is more important than the others; rather, geospatial capabilities should be made available across all domains

Portugal (NSI): Housing.

Spain (NMCA): Listed domains are heterogenous. Some of them are fields of applications, but others are datasets. Domains should be fields of applications, because datasets can be transversally used for more than one domain.

More ideas: Energy Resources -Water as a resource-Sustainable agriculture (in environmental and economic point of view)-Coast

Independently final selected domains, it should be mandatory to re-use any development just present in Europe (i.e. Copernicus, Directives INSPIRE + HDV, etc.) and involves experts with competences in the matters. Many competence institutions have valid spatial data infrastructures, but are not aware on UN-GGIM."

Switzerland (UNECE): The climate change data ecosystem is very fragmented and the statistical, and I assume the geospatial community as well, are not recognized as important stakeholders. Climate change adaptation is also an area where geospatially enabled statistical information is critical.

Question 14 and comments

Do you believe that the LoW on Data Integration might play a role in building the capacity in terms of data integration methodology and in cooperation with the UN-Academic Network, the UN-University and other associations?

Luxembourg (EUROSTAT): First part yes, second part no (UNAN).

Netherlands (NMCA): having more universities and other organizations involved would help progressing.

Serbia (NMCA): While we acknowledge the value of the UN-Academic Network and the UN-University system for theoretical advancement, we do not consider this the most effective approach for supporting capacity building in data integration. In our experience, practical, applied and institutionally grounded formats—such as targeted workshops, peer exchanges, and case-based webinars—are far more valuable for capacity development than high-level academic engagements.

We recommend:

- Focusing on inter-agency capacity building, especially between national mapping agencies, statistical offices, and ministries,
- Developing modular, use-case driven learning formats, rather than abstract frameworks,
- Encouraging real-world pilots and peer learning, rather than expanding into overly academic territories.

This approach keeps the LoW focused, efficient, and aligned with the operational needs of institutions tasked with implementing integration processes in real governance settings.

Finland (NSI): I assume there are already plenty of material for data integration. I can't say anything about "outstanding role".

Finland (NMCA+ NSI): LoW Data Integration could provide good practice examples from projects, e.g. how data integration can be implemented and achieved in real life.

Spain (NMCA): EuroSDR also can play a role of communication with EU Academia. Include/invite them for consultations or activities. EuroSDR also organize annually e-learning courses where topics of data integration can be included.

Germany (NSI): I think academia is very important. One the one hand for support in the GIS competences in the LoW for data integration and on the other hand they are also the "future" users of those integrated data.

United Kingdom (NSI): Not sure - as long as it is not duplicating work

Belgium (NMCA): It depends on the strategic vision of the regional committee whether this is an option or not. We have the reality of limited resources in all European Member States, we can’t do it all. The UN-academic network and UN-University can be implicated in the development of webinar series, but we should only invest in this if there are enough resources available.

Personally, I don’t think it is up to the LoW to provide intensive capacity development courses on this theme. If you want to do this in a correct manner, this will take a lot of time. But, introduction webinars should be developed (both for convincing management as for new technical personnel)!

Belgium (EARSC): The LoW on Data Integration can contribute meaningfully to capacity building by fostering cooperation between the EO industry, academia, and the statistical/geospatial communities. That said, while capacity building is valuable, it should not be the primary focus of the LoW. Efforts should remain centred on advancing integration methodologies and institutional uptake, with training and workshops serving as complementary support tools.

Question 16 and comments

Based on the previous questions, what are the activities that must be undertaken in priority:

Serbia (NMCA): To progress in the study and analysis of knowledge base infrastructures - There is clear value in progressing the conceptual development of knowledge infrastructures, especially in identifying the role of geospatial information in connecting thematic domains. However, the LoW should not aim to develop technical standards or overly detailed specifications. Its role should remain at the level of high-level methodology, conceptual frameworks, and strategic alignment with initiatives such as IGIF and FELA.

To cooperate to reinforce capacity building in data integration methods - Capacity development is important, but it must be implemented in a practical and targeted manner. Instead of academic or generic training, we suggest the LoW focus on case-based learning, institutional peer exchanges, and hands-on webinars addressing real integration challenges. This ensures relevance and avoids diluting the LoW's strategic focus through overly theoretical or academic initiatives.

I would like to take opportunity and to rise few more important activities which are crucial from my point of view:

Establishing institutional governance mechanisms for data integration

Promoting semantic and legal interoperability (not just technical)

Ensuring sustainability of data integration processes (not one-off projects)

User-oriented integration: enabling services and policy use"

Switzerland (NSI): In addition to the listed priorities, it is crucial to ensure that data integration efforts are based on high-quality foundational data. Without reliable input, even the best processes or infrastructures risk having a limited impact. Furthermore, cross-domain cooperation, especially via geospatial frameworks, should be promoted as a means of enabling knowledge interoperability.

Germany (NSI): it is also important to bring the "right" people together from statistical and geographical background.

Belgium (NMCA): All three lines are important, there is no clear order of priority. They all have certain elements that need to be tackled directly, but also elements that are not important (or are dependent on the future strategy of UN-GGIM: Europe). Therefore, I made them all 'moderately important'.

Question 18 and comments

In your opinion, how could these activities be better sustained?

Sweden (NMCA): It is important that not only the coordination team does all the work. Also, the other participants in the group LoW on Data integration should contribute more to get the work done.

Luxembourg (EUROSTAT): To few options to differentiate the importance. We need prioritisation and focus hereby too. Please consider ISGI at global level for data integration; Links between IGIF and GSGF will be addressed the next years.

Serbia (NMCA): Expanding the team per se is not a guarantee of better results. What matters is strategic focus, clear objectives, and engaging the right institutional partners.

Switzerland (NSI): Unfortunately, due to our limited involvement in these groups, we are currently unable to provide meaningful feedback on how these activities could be sustained more effectively.

Finland (NSI): Why to even create groups that are not aligned already? Of course, the work should be aligned.

Spain (NMCA): I think all options are useful, but I think it is better to have examples and guidance on how to integrate the data in UG-GGIM: Europe, as in Europe is where the publication of the data is more advanced.

Finland (NMCA + NSI): It would be highly valuable to strengthen the collaboration between UN-GGIM Europe and other European initiatives, such as coordinate participation in relevant projects like GSGF-CARE or the development of Data Spaces in various knowledge domains. In particular, closer cooperation between UN-GGIM Europe and the UN Expert Group on the Integration of Statistical and Geospatial Information (EG-ISGI) would be beneficial. Ideally, UN-GGIM Europe's activities in Europe could reflect and support the perspectives and goals of EG-ISGI. While current efforts are not in conflict with EG-ISGI's work, they have not yet been explicitly aligned with it either.

Germany (NSI): I believe the LoW DI is already aligned with UN-GGIM activities. I would not focus data integration solely on climate or SDG topics, because it is much broader and forms the basis for many other subjects to investigate using integrated geospatial and statistical data.

Belgium (NMCA): Expanding the coordination team is not necessarily a solution. It is important that those that are participating in the LoW do this in an active way and have clear dedicated time for this. Make sure that the work the LoW is doing reaches the broad public. An important part of the work should be communication.

Belgium (EARSC): Integrating with the LoW on SDGs would help align shared objectives and showcase practical examples of geospatial–statistical integration—an issue that is consistently highlighted in discussions on SDG monitoring and reporting.

ANNEX 2: QUESTIONNAIRE OF THE SURVEY

Survey of UN-GGIM Europe Line of Work (LoW) on Data Integration

The survey aims at collecting the feedback of the Geo/Statistical community to evaluate:
- if they are in line with the findings described in the strategy paper 2025 of the Data Integration LoW;
- what priorities should be considered for future activities of the LoW Data Integration; and
- how activities could be better sustained.

The outcomes of the survey will be presented at the UN-GGIM: Europe's Plenary meeting at Brussels in June. The deadline for the answers is **6 June 2025**.

1. Affiliation/Organisation *

- National Statistical Institute (NSI)
- National Mapping and Cadastral Agency (NMCA)
- Non-profit
- Government
- Private sector
- European organisation
- International organisation
- Academia
- Other

Please specify

2. Country *

3. Position *

- Coordinator
- Technician
- Adviser
- Senior management
- Researcher
- Student
- Other

Please specify

4. Are you aware of the UN-GGIM: Europe Line of Work on Data Integration? *

Yes

No

5. UN-GGIM: Europe LoW on Data Integration provides important impetus for the further development of the European Geospatial Knowledge Infrastructure (EU-GKI) and the use of spatial data for political decision-making processes as well as the monitoring of the UN-SDGs. *

	helpful	not helpful	no answer
	1	2	3
In your opinion, to what extent would it be beneficial to address your agency's management more effectively and therefore obtain better support regarding the implementation of data integration processes?			

6. If you have additional comments to question 5, please specify

7. In your opinion, which of the following approaches could better address the direction/interest of your agency? *

	helpful	not helpful	no answer
	1	2	3
- organize webinars dedicated to management			
- produce short summaries and brochures dedicated to managers			
- provide use cases or explicit examples illustrating the benefits of data integration			
- deepen the analysis on their data integration needs, interests and strategies			

8. If you have additional comments to question 7, please specify

9. Well defined data integration processes and GKI are the fundament for contributing to SDGs indicator calculation and -monitoring. *

	beneficial	detrimental	no answer
	1	2	3
In your opinion, how beneficial would it be to have a closer relation between LoW Data Integration and LoW on SDGs and embedded lines of work?			

10. If you have additional comments to question 9, please specify

11. The geospatial domain has the power to link knowledge across different thematic domains (within a common data space), due to its fundamental nature. It is therefore strongly recommended to invest in the development and implementation of standards and methodologies for data integration. *

	agree	disagree	no answer
	1	2	3
Do you think that the characteristics of the LoW on Data Integration is to progress in the study and analysis of knowledge base infrastructures and how data integration can serve this objective?			

12. If you have additional comments to question 11, please specify

13. What might be the knowledge data domains that should be addressed as a priority? Please check all that apply: *

- [ ] Climate change
- [ ] Security, Defense
- [ ] Biodiversity
- [ ] Land use/land cover data
- [ ] Transport/mobility
- [ ] Health
- [ ] Population
- [ ] Migration
- [ ] Emergency services
- [ ] Wildfire/overflow management
- [ ] Other

Please specify

14. The LoW on Data Integration may play an outstanding role in supporting the capacity building in terms of data integration methodology. This might be accomplished in cooperation with universities and other associations within the UN-Academic Network or the UN-Universities (https://unu.edu/). A more pragmatical approach by organising workshops or webinars should be preferred. *

	agree	disagree	no answer
	1	2	3
Do you believe that the LoW on Data Integration might play a role in building the capacity in terms of data integration methodology and in cooperation with the UN-Academic Network, the UN-University and other associations?			

15. If you have additional comments to question 14, please specify

16. Based on the previous questions, what are the activities that must be undertaken in priority: *

	important	moderately important	not important
	1	2	3
- to address the management for a better support in the development of data integration processes			
- to progress in the study and analysis of knowledge base infrastructures			
- to cooperate to reinforce the capacity building in matter of data integration methods			

17. If you have additional comments to question 16, please specify

18. In your opinion, how could these activities be better sustained? For each approach, please choose one of the following options: *

	helpful	not helpful	no answer
	1	2	3
- The UN-GGIM: Europe LoW on Data Integration should be better aligned with UN-GGIM's global activities in this area (such as UN-IAEG, GFGS, Climate Resilience Working Group, UN-GGIM-Academy), in order to also contribute to the work being done globally.			
- To have a better synergy and embedded lines of work between the LoW on Data integration and the LoW on SDGs			
- To expand the coordination team (currently 3 persons)			

19. If you have additional comments or other options to question 18, please specify

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