Expert Group on the Integration of Statistical and Geospatial Information

GeoStatistical Integration for Now and the Future: the EG-ISGI Strategic Plan and Vision for 2030

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Submitted as a background document to UN-GGIM

The EG-ISGI has developed the paper 'GeoStatistical Integration for Now and the Future: the EG-ISGI Strategic Plan and Vision for 2030'. In adopting a strategic approach that encompasses multi-year guidance, the Expert Group aims to support others, including UN-GGIM Regional Committees and the UN system, in aligning their yearly work plans to enhance the implementation of the GSGF. The Expert Group is seeking the review of UN-GGIM on this vision, before it is circulated to the Statistical Commission's 57th Session in March 2026. Please provide all comments on the document to the co-Chairs of the EG-ISGI (olive.powell@ons.gov.uk and claudio.stenner@ibge.gov.br) and the Secretariat (mark.iliffe@un.org) by Friday 26 September 2025.

Acronyms

AI - Artificial Intelligence

ECOSOC – United Nations Economic and Social Council

EG-ISGI – United Nations Expert Group on Integration of Statistics and Geospatial Information

GSGF - Global Statistical Geospatial Framework

HLG-IGIF - High-Level Group of the Integrated Geospatial Information Framework

IAEG-SDGs - Inter-Agency and Expert Group on the Sustainable Development Goal Indicators

IT - Information Technology

NGIA - National Geospatial Information Agencies

NSO - National Statistical Offices

SDG - Sustainable Development Goal

UNGEGN - United Nations Group of Experts on Geographical Names

UN-GGIM – United Nations Committee of Experts on Global Geospatial Information Management

UN-IGIF - United Nations Integrated Geospatial Information Framework

UNSC – United Nations Statistical Commission

UNSD – United Nations Statistical Division

Introduction

The Mandates of EG-ISGI

The EG-ISGI is entrusted to coordinate activities relating to the integration of statistical and geospatial information within the UN system and at a global level; to advise and support the UNSC and UN-GGIM with strategic recommendations to support the implementation of ECOSOC resolutions. In this regard, the EG-ISGI has the objectives to provide technical guidance to enhance the availability of high-quality, timely, and reliable integrated statistical and geospatial information; ensuring high-level coordination among representatives of both the statistical and geospatial communities in advancing global efforts towards this integration; and playing a leadership role in raising awareness and underscoring the importance of integrated, fit-for-purpose information to inform policy and decision-making across social, economic and environmental, domains.

Over the last decade, the mandate of the EG-ISGI has been built and reinforced by a series of decisions and resolutions from ECOSOC, UNSC and UN-GGIM: including UNSC decision 44/101, UN-GGIM decision 3/107 (both in 2013); General Assembly resolution 70/1 "*Transforming our world: the 2030 Agenda for Sustainable Development*" (2015); ECOSOC resolution 2016/27 (2016); UNSC decision 48/108 (2017) and ECOSOC resolutions 2022/3 and 2022/24.

Purpose of the document

This document presents the vision and the strategic plan to accelerate the integration of statistical and geospatial information across Member States, thereby contributing to the production of high-quality statistics that are better suited to inform decision-making and support the implementation of the 2030 Agenda. It proposes strategic goals and actions intended not only to strengthen the delivery of geostatistical integration within Member States but also to accelerate the implementation of ECOSOC resolutions 2022/3 and 2022/24. It suggests leveraging the UNSC and the broader framework of the ECOSOC subsidiary bodies to support wider and more effective geostatistical integration, hereby promoting closer alignment to ECOSOC decision 2022/334.

Several of these actions aim to expand the role of the EG-ISGI, while supporting the overarching objectives of ECOSOC, including the activities of its subsidiary bodies, primarily the UNSC and UN-GGIM, whilst recognizing the role of others in the broader intergovernmental data ecosystem, such as UNGEGN.

The aims of this Strategic Plan and Vision

This forward-looking plan has been developed in consideration of the strategic objectives of the UNSC and UN-GGIM, relating to data integration, while being cognizant of both today's and tomorrow's global context.

Leveraging the growth of geospatial data

Geospatial information is the digital data that connects people to place. Geo-enabled technology (including mobile phones, 'Internet of Things' devices, or Earth observations) has contributed to the growth of datasets that can be localized and can support the understanding of interlinkages between society, the economy, and the environment. For example, Earth observation data from satellites help monitor land cover changes; credit card transactions record where money has been spent; and mobile phone data can support the understanding of population movement.

The availability and granularity of such datasets are expanding at an exponential pace, with a number of them being made available as open data. This development presents a significant opportunity to enhance the production of timely integrated statistics and geospatial information, underpinned by rigorous quality assurance measures.

A greater need for geospatial and statistical data integration

Geospatial information is increasingly recognised as essential to various national and global development agendas, anchored by the 2030 Agenda. Its integration with statistical data has become vital to establish a comprehensive information ecosystem that supports informed decision-making. The integration of statistical and geospatial information offers numerous benefits. Location is a critical attribute to statistical data, and the most efficient way to combine existing datasets with the vast amount of emerging geospatial datasets available. Integrated geostatistical information allows more precise and context-aware decision-making by providing detailed insights into trends and patterns at local levels. This granularity enables policymakers to tailor interventions more effectively, addressing the specific needs of different communities. Furthermore, NSOs and NGIAs, which are at the forefront of generating integrated geostatistical data, are enabling evidence-based decision-making by providing more insightful data.

The 2030 Agenda for Sustainable Development

The 2030 Agenda creates an imperative to understand, sustain, and develop the three pillars for development: Economy, Society, and Environment. Positive outcomes in these three areas are maximized by enabling data-driven, evidence-based decision-making within both the public and private sectors. The successful and efficient implementation of the 2030 Agenda necessitates the seamless integration of statistical and geospatial information.

The SDG Geospatial Roadmap[1], adopted by the UNSC by its decision 53/101, highlights the importance of Geospatial Information as a means of accelerating the implementation of the SDGs. The roadmap provides simple and actionable guidance to the IAEG–SDGs, Member States, and SDGs Custodian Agencies to bridge this gap and realise the innovation potential that using geospatial information and its associated technologies can bring to the SDGs. The report "Rescuing the SDGs with Geospatial Information: How geospatial information can transform the production, measurement, monitoring and dissemination of SDG indicators"[2], presented in the 56th Session of the UNSC, reinforces this position.

An increasingly complex and challenging global context

As the world faces increasingly frequent, intense, and complex challenges — from the escalating climate crisis and rising natural disasters to political and economic instability, and both ongoing and emerging conflicts — the resulting instability is driving significant population movements, both within countries and across borders.

These cascading crises underscore the urgent need to integrate environmental and socioeconomic data within their geographic context. Such integration is essential for supporting climate adaptation, enhancing resilience, ensuring food security, and managing natural risks — among many other pressing issues confronting the global community. The EG-ISGI fully recognizes the critical role it can play as a bridge between the statistical and geospatial communities and denotes the vital role that both UN-GGIM and UNSC can play in addressing these challenges.

By way of example:

- The paper "Applying geospatial information to climate challenges"[3], launched at the seventh High Level Forum on UN-GGIM, detailed the role of geospatial information in climate resilience.
- The COVID-19 pandemic has underscored the need for geospatially integrated statistical data, highlighting gaps that require attention and ongoing resolution for future pandemic preparedness. The UNSC and UN-GGIM provided numerous resources across their respective work programmes; however, regardless of the output, the role of geospatially integrated statistical data was considered a key resource.

In this respect, it is essential to note that while the GSGF was developed to support and guide geostatistical integration in meeting the integrated data needs of the population and housing censuses and the 2030 Agenda, the GSGF is demonstrably applicable to all cases and scenarios.

[1] The SDGs Geospatial Roadmap. See: https://ggim.un.org/documents/SDGs-Geospatial-Roadmap.pdf.
[2] https://unstats.un.org/UNSDWebsite/statcom/session_56/documents/BG-3e-Rescuing-the-SDGs-with-Geospatial-Information-E.pdf.
[3] https://ggim.un.org/documents/Geospatial_Information_for_Climate_Resilience.pdf

A changing statistical and geospatial information landscape

The production of geospatial and statistical information is evolving within an increasingly complex environment. Until recently, generating such information required a highly centralized and resource-intensive structure, positioning NSOs and NGIAs as the dominant entities within this ecosystem. The number of actors involved in data production was relatively limited, resulting in a simpler governance framework for integrating statistical and geospatial information. However, this ecosystem is undergoing a profound transformation, a shift that is expected to accelerate in the coming years. Several key developments are driving this transition:

- Greater availability of open-source Earth observation data, coupled with increased processing and storage capacity, along with advancements in algorithms, assisted by ever-increasing capabilities enabled by exponential computing power and more complex and capable AI.
- Enhanced use of administrative records for the production of both statistical and geospatial information.
- Greater decentralization of data production, with a growing number of stakeholders contributing to the ecosystem. This shift is driven by improved access to Earth observation data, sensor networks (including mobile technology, the Internet of Things, and smart city infrastructures), non-traditional administrative records, crowdsourced data, big data sources, and advanced processing tools.
- Decreasing reliance on traditional data collection methods, such as household surveys and interviews, in statistical production.
- More efficient designs and integrated traditional data collection methods, from census to household surveys and interviews, in statistical production.
- Expanding adoption of IT methodologies for statistical production, such as web scraping and AI-assisted administrative records linkages.

This evolving landscape will continue to coexist with traditional statistical and geospatial production methodologies in the near term. However, the expectation is that the emerging model will progressively gain prominence. In parallel, the demand for geospatially enabled statistical information will continue to rise, as such integration is increasingly essential for informed decision-making and the generation of new insights.

Robust governance supported by the UN-IGIF and GSGF Frameworks

These developments underscore the growing complexity of governance in statistical and geospatial information management. National information systems must adapt to ensure a cohesive and integrated approach to handling both domains. In this regard, the geospatial community has positioned the UN-IGIF as a key mechanism to guide this evolving landscape. Together, the GSGF and UN-IGIF frameworks guide countries in integrating statistical data within their national data systems, ensuring that data production keeps pace with evolving demands and technological innovations. By doing so, they help prepare for the future and support the implementation of ECOSOC resolution 2022/3.

The review of the work of ECOSOC subsidiary bodies

The UN General Assembly resolution 75/290A requests that ECOSOC strengthen the oversight and coordination role of its subsidiary bodies to ensure the relevance of technical and expert analysis and inform efforts to implement the 2030 Agenda. Further, the resolution also requests that subsidiary bodies support the implementation of the 2030 Agenda, emphasizing an integrated and action-oriented approach.

In response, the ECOSOC produced a set of recommendations[4] that have identified possible actions for implementing the General Assembly Resolution. Further, ECOSOC resolution 2022/334 invites the President and Bureau of the Council, the Chairs and Bureaux of ECOSOC subsidiary bodies (its functional commissions and expert bodies – such as UNSC, UN-GGIM, and UNGEGN), all Member States, and the Secretariat to implement the recommendations. Among the principles that guide these ECOSOC recommendations, the following stand out as being particularly relevant to the EG-ISGI, especially as it seeks to implement its mandates:

- Give priority to actions that will increase the UN's ability to better support Member States in achieving the 2030 Agenda and the SDGs;
- Minimize the amount of additional work that Functional Commissions and Expert Bodies will be expected to perform as a result of the review; and focus, instead, on efforts to improve coordination and alignment of their work, increase their efficiency and effectiveness, and avoid duplication; and,
- Improve the sharing of learning and best practices and promote cooperation and interlinkages between these bodies as well as with ECOSOC and other UN processes, so as to maximize the benefits of the work of ECOSOC and relevant subsidiary bodies for Member States.

The ECOSOC also includes recommendations to its subsidiaries to enshrine the key principle of the 2030 Agenda "Leaving No One Behind" and to strengthen their coordination and cooperation where appropriate. In this regard, it is essential to emphasize that the integration of statistical and geospatial information is a priority action to enable countries to advance towards the 2030 Agenda, based on the principle "Leaving No One Behind". Thus, through an integrated approach across the various domains of the UNSC, as proposed in this strategic plan, the implementation of geostatistical integration can lead to a reduction in additional workload, improved coordination, enhanced efficiency and effectiveness, and the avoidance of duplication of efforts.

[4] Summary of recommendations by the Vice-President of the Council https://ecosoc.un.org/sites/default/files/d7-files/files/files/en/2022doc/VP_summary_of_Recommendations-FINAL_27May7AM.pdf

The EG-ISGI Strategic Plan and Vision for 2030

This Strategic Plan comprises three strategic goals related to the implementation and sustainability of geostatistical integration, which supports the broader implementation and operationalization of the GSGF. In turn, the actions outlined in this Strategic Plan focus on enabling countries to achieve their national priorities and the ambitions of the 2030 Agenda through enhanced evidence-based decision-making processes. This Strategic Plan aims to enable the EG-ISGI to better support NSOs in enhancing their capacities, resulting in improved capability in integrating geospatial and statistical information. Enhanced capability can be achieved by expanding the available information and its geographic disaggregation, as well as improving the quality of the statistics produced. Furthermore, it also represents an effort by the EG-ISGI to provide greater support to the UNSC and UN-GGIM in the implementation of ECOSOC Decision 2022/334, as well as to the UNSC in the implementation of resolution 2022/3 and to UN-GGIM regarding resolution 2022/24.

Taking into consideration the UNSC work programme, the *in draft* UN-GGIM Strategic Framework 2025-2030[5], and the 2024 strategic plan of the HLG-IGIF[6] the three goals of this Strategic Plan are:

- Goal 1: Improve and Encourage Communication, Coordination, Exchange and Sharing
- Goal 2: Promote Data Governance, Availability and Accessibility
- Goal 3: Develop Capacity, Accelerate Implementation

Goal 1: Improve and Encourage Communication, Coordination, Exchange and Sharing – Building Bridges, Connecting Communities

Outcome: Accelerated implementation of the GSGF through coordinated, efficient, and effective engagement with and between entities of the UN system, and the functional, regional, and thematic groups of UNSC and UN-GGIM.

Focus Actions

- **Promote the greater prominence of geostatistical integration within the agenda and work programme of the UNSC.** To ensure more coordinated, coherent, and efficient use of resources, while also reflecting the need to further disseminate the geostatistical integration agenda within NSOs.

[5] Strategic Framework 2025-2030: information session and survey presentation https://youtu.be/2EllQEyjF4U
[6] https://ggim.un.org/meetings/GGIM-committee/14th-Session/documents/Background_document_HLG-IGIF_Strategic_Plan_June2024.pdf

- **Work towards the establishment of a Friends of the Chair Group[7] on the Integration of Statistical and Geospatial Information -** This group would focus on coordination and be tasked with monitoring and providing strategic guidance on matters related to the integration of statistical and geospatial information across the functional groups of the UNSC, in line with the definition of these groups. It will follow a strategy defined in collaboration with the Bureau of the UNSC. This group will promote regular discussions on the progress of integrating statistical and geospatial information and explore ways to accelerate the adoption and implementation of the GSGF.
- **Provide a unified vision for NSOs to implement the GSGF in an integrated manner across different statistical domains -** Currently, geostatistical integration is often implemented in silos or in an *ad-hoc*, uncoordinated, or inconsistent manner. It is imperative to align the recommended principles and standards for integration (provided by the GSGF) with NSOs in a consistent manner and also to facilitate the implementation of these standards across the various statistical domains (social, environmental, and economic) within NSOs.

Goal 2: Promote Data Governance, Availability and Accessibility

Outcome: Facilitated data governance within NSOs, which enhances efficiency and effectiveness and reduces duplication of efforts; increases data availability, improves data for policies and decision makers; and accelerates the implementation of the 2030 Agenda.

Focus Actions

- **Standardize the approach to integrating statistical and geospatial information across various statistical domains** to ensure coherence, promote consistent messaging, and enable more effective implementation in member states, as well as throughout the thematic statistical domain.
- **Explore ways to leverage UN-IGIF for data governance in the UNSC -** Facilitate the sharing of best practices and lessons learned between the geospatial and statistical communities.
- **Promote collaboration between NSOs and NGIAs -** Encourage the implementation of the EG-ISGI's Memorandum of Agreement, enabling countries to establish or formalize cooperation agreements between NSOs and NGIAs, thereby contributing to the strengthening of data governance.

[7] "Friends of the Chair groups focus on coordination, which entails liaising among multiple stakeholders in order to coordinate statistical activities in the relevant domain", according to Reference Framework for Groups under the Statistical Commission, endorsed by Statistical Commission in its 51st session. See https://unstats.un.org/UNSDWebsite/statcom/session_51/documents/BG-Item3w-Framework-E.pdf.

- **Promote collaboration between the private data sector and NSOs and NGIAs -** Promote collaboration between NSOs and NGIAs with other sources of data, including those from the Earth observation and mobile phone communities, in cognizance that national sources of data are not the sole source of data within a country, whether current or historical.

Goal 3: Develop Capacity, Accelerate Implementation

Outcome: Broad dissemination and the accelerated implementation of the GSGF and UN-IGIF, adoption of these frameworks by NSOs, capacity development for their implementation, enhancement of literacy for understanding integrated statistical and geospatial information, and improved implementation of the 2030 Agenda by Member States.

Focus Actions

- **Greater and more consistent inclusion of key geospatial frameworks within current UN statistical functional groups, resources, and publications -** Update and ensure that all key handbooks (including the Handbook on Management and Organization of National Statistical Systems) reference the GSGF and UN-IGIF. Furthermore, ensure that global frameworks, such as the GSGF and the UN-IGIF, are treated as a foundational component of the overall statistical production process rather than as an ad hoc effort. In the absence of such coordination, efforts may become fragmented, resulting in inefficiencies, duplication of work, and obstacles to geostatistical integration within the NSOs.
- **Systematic insertion of the GSGF and UN-IGIF into ongoing capacity-building programmes and training materials of the UNSD -** Promote and raise-awareness of the importance of geostatistical integration and the GSGF. As a core component of statistical production, geospatial information must be integrated into the overall strategies and actions undertaken within this scope.
- **The inclusion of geospatial and geostatistical components in ongoing initiatives related to statistical and data literacy –** Convene and contribute to fora to advance the understanding that geographic context fundamentally transforms the interpretation and meaning of statistics.