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Geospatial information for sustainable development

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Note by the Secretariat

Summary

The present paper contains the report jointly prepared by the Secretariat and the Working Group on Geospatial Information of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators for consideration by the Committee of Experts on Global Geospatial Information Management.

At its fourteenth session, held in New York from 7 to 9 August 2024, the Committee of Experts adopted decision [14/107](#), in which it welcomed the report jointly prepared by the Secretariat and the working group on geospatial information of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, and efforts to ensure that the contributions of the global geospatial information management community are aligned with the needs of the 2030 Agenda. The Committee also reaffirmed that geospatial information was critical for sustainable development and would be for the post-2030 global development agenda, urged the working group to stress and address the importance of integrating all relevant forms of geospatial information, including Earth observations and in situ data, essential to help countries to meet the ambitions of the 2030 Agenda and to leave no one behind, and in that regard to note that many countries still struggled, and needed support, to collect, integrate and apply geospatial information needed for the indicator framework of the 2030 Agenda.

In the report, the Secretariat and the working group provide information on the efforts made to strengthen the use of geospatial information in addressing the needs of the 2030 Agenda, the Sustainable Development Goals and other global development agendas. The working group also discusses the outcomes of the fifty-sixth session of the Statistical Commission, including its submission of a background document entitled “Rescuing the SDGs with geospatial information: how geospatial information can transform the production, measurement, monitoring, and dissemination of SDG indicators” and the progress made in the implementation of its work plan 2025. The report also includes information on activities aimed at ensuring that the contribution of the global geospatial information community remains aligned with the 2030 Agenda and other global development agendas.

* [E/C.20/2025/1](#).

I. Introduction

1. With less than five years remaining to achieve the Sustainable Development Goals (SDGs), progress is threatened by persistent data gaps, structural inequalities, and the compounded effects of global crises—including the lingering impacts of the COVID-19 pandemic, climate change, armed conflicts, and geopolitical tensions. As highlighted in the Secretary-General's 2025 progress report, “progress remains slow and uneven, and signs of transformative global momentum are yet to emerge”.

2. Since the adoption of the 2030 Agenda for Sustainable Development, the Committee of Experts has consistently underscored the vital role of geospatial information in advancing sustainable development. Through the efforts of its functional groups—particularly the Inter-Agency and Expert Group on SDG Indicators' Working Group on Geospatial Information, geospatial information has been positioned as a key enabler in the production, monitoring, and dissemination of SDG indicators, especially at subnational and local levels.

3. In response to the urgent need to accelerate SDG progress, the Working Group developed the paper “Rescuing the SDGs with geospatial information: how geospatial information can transform the production, measurement, monitoring, and dissemination of SDG indicators”. Launched on the margins of the 56th Session of the Statistical Commission, the paper serves as a core contribution to the 2025 Comprehensive Review of the Global Indicator Framework, advocating for the formal recognition of geospatial information—including Earth observations and in situ data—as a valid and complementary source for SDG monitoring and reporting.

4. At its fourteenth session, the Committee of Experts adopted decision 14/107, which, *inter alia*, reaffirmed that geospatial information was critical for sustainable development and would be for the post-2030 global development agenda, welcomed the continuing development of a paper entitled “Rescuing the SDGs with geospatial information: how geospatial information can transform the production, measurement, monitoring, and dissemination of SDG indicators”, urged the working group to stress and address the importance of integrating all relevant forms of geospatial information, including Earth observations and in-situ data, essential to assist countries to meet the ambitions of the 2030 Agenda and to leave no one behind, and in that regard to note that many countries still struggled, and needed support, to collect, integrate and apply geospatial information needed for the indicator framework of the 2030 Agenda. The Committee also emphasized the importance of cooperation and coordination to ensure that the contribution of geospatial information for sustainable development remains relevant.

5. This report outlines the Working Group's main activities in 2025, including discussing the outcomes of the 56th session of the Statistical Commission, including its submission of a background document entitled “Rescuing the SDGs with geospatial information: how geospatial information can transform the production, measurement, monitoring, and dissemination of SDG indicators” to the Inter-Agency and Expert Group on the SDG Indicators and the progress made in the implementation of its workplan for 2025. It also highlights the Secretariat's continued efforts to align the global geospatial community with the implementation of the 2030 Agenda and other international development frameworks. Points for discussion are found in paragraph 29.

II. Activities of the Working Group on Geospatial Information of the Inter-Agency and Expert Group on Sustainable Development Goals Indicators

56th Session of the Statistical Commission

6. The 56th Session of the United Nations Statistical Commission was convened in New York from 4 to 7 March 2025. On 20 February 2025, ahead of the main intergovernmental session, the Working Group convened a virtual side event titled “*Rescuing the SDGs with Geospatial Information*”. The event gathered global experts from National Statistical Offices (NSOs), National Geospatial Information Agencies (NGIAs), custodian agencies, as well as Earth observation and analytics communities, including presenters from the Japanese Space Agency “JAXA”, Digital Earth Africa, Place Foundation, the University of Utrecht, and the United Nations Sustainable Development Solutions Network (UNSDSN). The side event featured the official launch of the paper, as a call to action to showcase its ambition to “bridge the geospatial digital divide” in SDG monitoring. Participants emphasized the urgency of integrating location-based data into the core of SDG reporting systems. The ensuing panel discussion highlighted:

- (a) The strategic alignment of the Working Group’s guidance with the theme “Better Data, Better Lives”;
- (b) The need for investment in technical infrastructure and capacity-development to implement geospatial methodologies;
- (c) The value of interactive resources like Storymaps as a means of fostering peer learning and national innovation; and,
- (d) The advocacy for inclusion of geospatial metadata and Earth observation sources in the upcoming 2025 Comprehensive Review of the Global Indicator Framework of the SDGs.

7. In its decision 56/105, the Statistical Commission, *inter alia*, expressed its appreciation for the work of the Inter-Agency and Expert Group’s Working Group on Geospatial Information, and stressed the need for continued support for countries to develop capacity in those areas and encouraged the Inter-Agency and Expert Group to continue its collaboration with custodian agencies and partners on the implementation of, and capacity-development on, the indicator framework and work on data innovation, data integration and the use of non-traditional data, such as small area estimation, geospatial information and citizen data.

8. In the intersessional period, the Working Group has continued to play a pivotal role in advancing the integration of geospatial information into the SDG indicator framework. Building on the guidance of the Committee of Experts and the outcomes of previous sessions, the Working Group will continue to prioritize strategic actions that emphasize the geographic dimension of sustainable development and reinforce the utility of geospatial information to support national reporting and decision-making processes.

Seventh meeting of the Working Group

9. Hosted by UN-Habitat at the United Nations Office in Nairobi, Kenya, the Seventh Meeting of the Working Group on Geospatial Information of the IAEG-SDGs was convened jointly with the eighth Meeting of the Expert Group on the Integration of Statistical and Geospatial Information. The meeting convened 30 representatives from 11 Member States (consisting of representatives from both national statistical offices and national geospatial information agencies from Brazil, Finland, India, Indonesia, Ireland, Kenya, Mexico, Namibia, Sweden, the United Kingdom, and the United States of America), and two (2) SDG custodian

agencies (UN Environment Programme and UN-Habitat), and the United Nations Economic Commission for Africa to take stock of its progress against the 2025 work plan.

10. Meeting participants discussed strategies to facilitate collaboration between the Working Group and the Expert Group and identified concrete goals to support the further implementation and operationalization of the SDGs Geospatial Roadmap. In recognition of recent efforts to strengthen interregional dialogue and engagement, plans were drafted to facilitate communication and coordination between relevant working groups within the regional bodies. In this regard, the co-Chair of the Working Group, Ireland, is participating in the Expert Group's Task Team on the Advancement of Global Statistical Geospatial Framework (GSGF), leading its sub-task team on Localized geostatistical modelling. This is intended to enhance the production and dissemination of the Sustainable Development Goals, facilitating interactions between the global geospatial and statistical communities. The team is working to develop guidance to support data modelling for small geographic units, highlighting the importance of disaggregating SDG indicators by geographic location. Further information can be found within the report of the Expert Group presented at this session (E/CN.20/2025/12).

Work Plan 2025 and process to develop its Work Plan 2026

11. Following the adoption of the SDGs Geospatial Roadmap¹ in 2022, the opportunity for geospatial information to support the production, measurement, monitoring, and dissemination of geospatially integrated SDG indicators is stronger than ever. Accordingly, the focus of the Working Group in 2024 was on activities that promote and raise awareness of the transformational opportunity of geospatially enabling the SDGs, anchored by a discussion paper "Rescuing the SDGs with Geospatial Information: How geospatial information can transform the production, measurement, monitoring and dissemination of SDG indicators".

12. Guided by its Work Plan 2025, the Working Group has continued its work to promote the SDGs Geospatial Roadmap through convening events and seminars, redoubling its efforts to collate the many use cases of how geospatially integrated SDG indicators are, or can be produced, monitored, measured, and disseminated to highlight where geospatial information has a direct or significant contribution. Following this fifteenth session of the Committee of Experts, the Working Group will undertake a process of consultation amongst its members and the Inter-Agency and Expert Group to develop its annual 2026 Work Plan.

13. A notable highlights of the forthcoming work plan 2026 are proposed to be:

- (a) The consideration of 'geospatial reporting indicators'. The Working Group has engaged the Open Geospatial Consortium's nascent Standards Working Group on Geospatial Reporting Indicators² as a means of developing recommendations that enhance the role of geography within the global indicator framework of the SDGs. This would also potentially act as a precursor to the elaboration of 'lessons-learned' to ensure that future global development agendas include geospatial information as a foundation, and not, perhaps as an afterthought. This would consider characteristics of 'statistical indicator frameworks' and 'geospatial reporting indicators', with the intent of fostering the development and adoption of open standards-based geospatial indicators for the SDGs; and

¹ The SDGs Geospatial Roadmap: [English](#) | [French](#) | [Spanish](#)

² OGC Geospatial Reporting Indicators Standards Working Group Charter. See: <https://portal.ogc.org/files/107038>

- (b) Deepened engagement with the United Nations Food and Agriculture Organization (FAO) on the gender dimension of the SDG indicators 5.a.1 “(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure” and 5.a.2 “Proportion of countries where the legal framework (including customary law) guarantees women’s equal rights to land ownership and/or control”. The Working Group, with the International Federation of Surveyors (FIG) and FAO have discussed the need to improve the reporting on this indicator and seek to develop concrete guidance on how to improve the indicator methodology, that leads to enhanced reporting and data availability.

14. The Committee of Experts is invited to express its views and contribute to this future Work Plan to ensure that countries have the capabilities and capacities to collect, integrate and apply geospatial information needed for the indicator framework of the 2030 Agenda.

The paper on ‘Rescuing the SDGs with geospatial information: how geospatial information can transform the production, measurement, monitoring, and dissemination of SDG indicators’

15. The paper “Rescuing the SDGs with geospatial information: how geospatial information can transform the production, measurement, monitoring, and dissemination of SDG indicators” was adopted by the Working Group at its seventh meeting in September 2024. This strategic deliverable, which had been under development throughout 2023–2024, was prepared for submission to the IAEG-SDGs in advance of its fifteenth meeting and subsequently presented at the 56th session of the United Nations Statistical Commission in early 2025. This is provided as a background document to this report for the Committee of Experts to take note.

16. The paper is positioned as a call to action for the global statistical and geospatial communities. Developed under the leadership of the Working Group, the paper seeks to catalyze urgent progress toward the SDGs by unlocking the transformative potential of geospatial information in sustainable development data ecosystems. It addresses a critical question: how can we better disaggregate, analyze, and apply location-based data to improve SDG monitoring and ensure that no one is left behind? In this regard, the paper offers practical guidance on how SDG indicators can be disaggregated by geographic location, enabling a more inclusive, geospatial information-based approach to development. It highlights the growing demand for geospatial information as a means of identifying geographic disparities, target policies at the local level, and monitor change over time. It also underlines that progress on the SDGs must be informed by where things happen—since development outcomes are inherently related to a place. To operationalize this vision, the paper outlines six strategic recommendations:

- (a) Revise SDG metadata to integrate geospatial methodologies, data sources, and spatial dimensions of indicators.
- (b) Leverage Earth observation and geospatial data to address persistent data gaps and complement traditional statistical sources.
- (c) Enhance indicator production through integrated statistical and geospatial information systems.
- (d) Foster institutional collaboration between national statistical offices (NSOs), geospatial agencies (NGIAs), and other relevant entities.
- (e) Recognize and promote global authoritative geospatial datasets as legitimate inputs to support consistent and scalable reporting.

- a) Strengthen capacity and provide technical guidance to ensure countries—particularly those with limited resources—can adopt and apply geospatial tools effectively

17. The structure of the paper reflects its action-oriented nature. It opens by outlining why geospatial information is critical to rescuing the SDGs, then presents the “what”—a conceptual and practical overview of disaggregating SDG indicators by location—and the “how”, through the six recommendations above. It further explores opportunities and challenges faced by countries, particularly in terms of institutional readiness, technical capacity, and data accessibility. The paper highlights key stakeholders involved in this agenda, including NSOs, NGIAs, custodian agencies, Earth observation communities, and international organizations. The paper also emphasizes the frontiers of SDG data, exploring how new data technologies and global geospatial data sets, including Earth observations (such as satellite imagery), AI-based mapping, and cloud-based analytical platforms, can be leveraged to enable more localized, timely, and disaggregated SDG monitoring. These tools are especially powerful in contexts where traditional data collection is constrained or outdated.

18. Ultimately, the paper aims to influence the statistical community of the further value of geospatial information and urge them to unlock the full value of geospatial information to implement the 2030 Agenda. It calls for the international community to act decisively, through integrated action, innovation, and investment to ensure that geospatial information is recognized not only as a technical layer, but as a foundation for global development.

The Storymap – Consolidating national experiences of good practice in the production, analysis and dissemination of SDG indicators

19. To bring the strategic vision of the Rescuing the SDGs with Geospatial Information paper into practice and to highlight its ‘shortlist’, the Working Group has consolidated several interactive ‘Storymaps’ that showcase real-world use cases and good practices in the application of geospatial approaches for SDG indicators. The 2025 edition of the Storymap is publicly available online see: <https://Storymaps.arcgis.com/stories/a9bfa199b8c14f959b538d9a8898b8eb>.

20. The Storymap assembles diverse national case studies contributed by Member States, custodian agencies, and partners, offering pragmatic examples of geospatial methods applied to indicator production across different SDGs. Featured experiences include:

- SDG 2.4.1 (Sustainable agriculture): Spatial mapping of crop extent and productivity to inform agricultural monitoring in Denmark and Mexico.
- SDG 6.6.1 (Water-related ecosystems): Use of satellite-based waterbody classification and hydrological modelling in Malaysia.
- SDG 11.3.1 (Land use efficiency): Urban growth monitoring and built-up land change analysis in Ireland.
- SDG 15.3.1 (Land degradation neutrality): Tracking land cover change and degradation in Sub-Saharan Africa, with contributions from regional consortia.

21. Each Storymap entry includes a hybrid mix of methodological outlines, data sources (satellite imagery, national surveys, land cover datasets), institutional arrangements, and “lessons learned” that highlight successes, operational challenges, and scale-up potential. The narrative emphasizes how geospatial tools enhance geographic granularity, data timeliness, and policy relevance, allowing countries to address subnational disparities more effectively.

22. The consolidated Storymap is purposefully designed as a dynamic and scalable resource. It invites practitioners to contribute new case studies, fostering a continually expanding repository of knowledge that supports cross-country collaboration and peer learning. Its open and interactive format enhances the visibility of national initiatives and strengthens capacity development across the global geospatial and statistical communities. By synthesizing applied evidence across diverse SDGs and geographic contexts, the Storymap demonstrates the added value of geospatial information in national SDG reporting, promotes South–South cooperation through shared methodologies, and informs the ongoing refinement of the Working Group’s Shortlist of geospatially enabled indicators.

23. Looking ahead, the Working Group will continue to promote the Storymap as part of its 2025 workplan, integrating new case study submissions, refreshing existing entries, and showcasing the resource during key events and capacity development sessions.

Activities in the intersessional period

24. As part of its efforts to raise awareness and promote the integration of geospatial information into sustainable development frameworks, the Working Group actively participated in key global and regional forums throughout the reporting period. These outreach activities helped amplify the core messages of the SDGs Geospatial Roadmap, global geospatial frameworks like the United Nations Integrated Geospatial Information Framework (UN-IGIF) and the GSGF, and raised-awareness on the “Rescuing the SDGs with Geospatial Information” paper. In seeking opportunities to engage a broader community of stakeholders, specific forums targeted included:

- (a) In November 2024, the Working Group participated in the UN World Data Forum held in Medellín, Colombia, where it highlighted the role of geospatial information in enhancing data ecosystems and ensuring that no one and no place is left behind.
- (b) At the Seventh High-level Forum on United Nations Global Geospatial Information Management, members of the Working Group engaged with senior representatives from Member States and expert bodies to advance collaboration on the use of location-based data for the SDGs.
- (c) In March 2025, the Working Group contributed to the international webinar “The Nexus between SDGs and Professional Education in the Geospatial World,” co-organized by FIG and the SDG Task Force. The discussion focused on translating global geospatial goals into country-level actions and national capacity development strategies.
- (d) In June 2025, the Working Group has been invited to contribute to the European Space Agency’s Living Planet Symposium (LPS25), which was held in Vienna, Austria. A dedicated Agora session titled “Leveraging Earth Observation Data to Help Rescuing the SDGs” will showcase the Working Group’s work and further highlight the strategic importance of Earth observations and geospatial tools in accelerating SDG implementation.

III. Activities of the Secretariat

25. As denoted in Economic and Social Council resolution 2024/22, all activities of the Secretariat are engaged “for the achievement of its operations focused on the Sustainable Development Goals and the Integrated Geospatial Information Framework, to strengthen and ensure its continued effectiveness and benefits to all Member States”. Each agenda item of this present session underscores this point.

In addition to this corpus of work, the Secretariat wishes to highlight the following activities:

- (a) At the request of the Bhutanese Government, the Secretariat is supporting the Economic and Social Commission for Asia and the Pacific (ESCAP) in convening a national workshop aimed at strengthens the capability of countries to collect, integrate, process and disseminate data, geospatial information, and statistics to respond to emerging economic, social and environmental data. This includes promoting key resources developed by the Committee of Experts, including the UN-IGIF, the GSGF, and the SDGs Geospatial Roadmap. This builds on past work supporting geostatistical integration at the national level, grounded by the GSGF Self-Assessment Tool, over 2023 and 2024; and,
- (b) As part of the development of the Core Framework on Disaster-related Statistics, the Secretariat is participating in ensuring that global geospatial frameworks are commensurately recognized as part of this process. Furthermore, the Secretariat participates in the organizing group for the forthcoming Fifth Global Expert Forum for Producers and Users of Disaster-related Statistics, which is scheduled to be held virtually from 6 to 8 October 2025.

IV. Summary

26. Until 2030, the focus must be on implementing the 2030 Agenda for Sustainable Development, but we must also remain pragmatically realistic about our capacity and capability to realize the vision of this agenda. As previous reports under this agenda item have observed, the nature of our interconnected world emphasizes that sustainable development isn't just for 2030 – it's about preventing cascading systemic collapse. This was underscored in the report under this agenda item in 2023³, noting that “countries can benefit from the maturity of the many frameworks and resources that have been developed by the Committee of Experts since the 2030 Agenda and the SDGs were envisaged. These endeavors must be intensified to strengthen local-to-global resilience, uphold the aspirations of the SDGs and bridge the geospatial digital divide”. In this regard, the report emphasized that to “dismantle the barriers and divisions that hinder progress, the keyword is ‘integration’ ... It is essential to foster collaborative endeavors that unite communities to avoid fragmentation and break down silos. The maturity of the Committee of Experts’ frameworks, anchored by the UN-IGIF, demonstrates the very means, the ‘**what**’, countries can use to realize this ambition. The SDGs Geospatial Roadmap communicates the ‘**why**’. National Geospatial Information Agencies are the ‘**how**’ that brings everything together”.

27. In this regard, all opportunities to accelerate the implementation of the SDGs must be leveraged. The Working Group is aiming to redouble its efforts to communicate to the Inter-Agency and Expert Group on the SDG Indicators the message: ‘To accelerate the SDG process, we can leverage the proliferation of geospatial data by integrating it into the development of new indicators and enhancing existing ones’. In this respect, geospatial information provides valuable insights into various aspects of sustainable development, including environmental conservation, urban planning, disaster risk reduction, and social inclusion. By incorporating geospatial indicators into monitoring frameworks, we can capture spatial dimensions of progress and identify areas requiring attention or intervention. This may involve developing indicators that specifically leverage

³ E/C.20/2023/11/Add.1. Geospatial information for sustainable development and climate resilience See: https://ggim.un.org/meetings/GGIM-committee/13th-Session/documents/E-C.20-2023-11-Add_1_Sustainable_Development_and_Climate_Resilience_20Jul2023.pdf

geospatial data, refining existing indicators to include spatial components, or dismissing indicators that are not adequately supported by geospatial information. Additionally, leveraging geospatial data requires developing capacity among stakeholders, promoting data literacy, and fostering collaboration across sectors to ensure its effective utilization in advancing the SDGs.

28. There is now roughly four and a half years until 2030; a little over a decade since 2015. As the co-Chair of the Committee of Experts from Belgium, noted in her contribution to the ECOSOC Coordination Segment⁴ “geospatial information is a foundation for evidence-based decisions, by grounding decisions and actions in science and spatially intelligent data... The Committee of Experts is committed to improving the availability of and access to, geospatial information to address global challenges. Understanding precedes action, and geospatial information provides the critical knowledge needed to determine where to act... our community is committed to work with everyone to advancing national public digital infrastructure for our goals and the benefits of *people, places, and planet*”. Time is a precious resource. But, it is one resource we do not have in abundance. If we want to achieve our ambition to leave no one behind, we must accelerate our implementation of the Committee’s frameworks to enable countries to bridge the geospatial digital divide. We cannot afford not to.

V. Points for Discussion

29. The Committee is invited to:

- (a) Take note of this present report and express its views on the activities and progress of the Working Group and the Secretariat in advancing the role of geospatial information for sustainable development;
- (b) Take note of the paper ‘Rescuing the SDGs: How geospatial information can transform the production, measurement, monitoring and dissemination of SDG indicators’ and express its views on the focus and priorities needed to ensure that the contribution of the global geospatial information community to the implementation of the 2030 Agenda remains rigorous and relevant
- (c) Express its views and provide guidance on the development of geospatial reporting indicators for global development agendas

⁴ Conversation with Executive Secretaries of the Regional Commissions and Chairs of Functional Commissions and Expert Bodies on Accelerating the implementation of the 2030 Agenda and the Sustainable Development Goals including by leveraging the outcomes of the Summit of the Future. See: https://ecosoc.un.org/sites/default/files/2025-02/ECOSOC_UNGGIMcoordinationsegment_20250201VandenBergheENrev_clean.pdf