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## Committee of Experts on Global Geospatial Information Management

### Twelfth session

New York, 3–5 August 2022

Item 10 of the provisional agenda\*

### Integration of geospatial, statistical and other related information

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### Note by the Secretariat

#### Summary

The present paper contains the report of the Expert Group on the Integration of Statistical and Geospatial Information for consideration by the Committee of Experts on Global Geospatial Information Management.

At its eleventh session, held virtually on 23, 24 and 27 August 2021, the Committee of Experts adopted decision 11/106, in which it noted the continued efforts of the Expert Group to support the integration of geospatial, statistical and other related information to realise national priorities and global development agendas, and urged Member States to continue to implement and operationalise the Global Statistical Geospatial Framework as a tool for attaining geospatially enabled statistical data for the 2030 Agenda and the 2020 round of population censuses.

The Committee of Experts recognised that addressing the many data integration challenges presented by the global coronavirus disease (COVID-19) pandemic and other complex issues, such as climate change and disaster resilience, required the implementation of the Global Statistical Geospatial Framework at the national and regional levels. In this regard, the Committee expressed its appreciation for the significant progress in the development of the Implementation Guide of the Global Statistical Geospatial Framework and welcomed the many use cases and good practices describing how the Global Statistical Geospatial Framework has been implemented and operationalised within national and regional contexts. The Committee suggested that the future workplan of the Expert Group address the gaps identified by the global survey to diagnose readiness at the country level for implementing the Global Statistical Geospatial Framework and to develop the interlinkages between the Global Statistical Geospatial Framework and the Integrated Geospatial Information Framework. It also encouraged efforts to strengthen coordination with the United Nations Global Geospatial Information Management regional committees, the regional commissions and other regional stakeholders.

In this present report, the Expert Group includes information on its recent activities, including the endorsement of the Implementation Guide of the Global Statistical Geospatial Framework by the Statistical Commission at its fifty-third session in March 2022; a discussion of the ways in which the Expert Group is taking practical action guided by its workplan for the period 2022–2024, including

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\* E/C.20/2022/1

through the formation of task teams, and its plans for a seventh meeting of the Expert Group; and details its overall progress on operationalising the Framework to support the 2020 round of population censuses and the 2030 Agenda.

## I. Introduction

1. For nearly a decade, the Expert Group on the Integration of Statistical and Geospatial Information has worked at the forefront of efforts to support the integration of geospatial, statistical and other related information to realise national priorities and global development agendas. Primarily, the Expert Group's efforts have been directed into developing the Global Statistical Geospatial Framework (GSGF) as an operational framework that empowers countries to realise their national development priorities, implement the 2020 round of population and housing censuses, and achieve the ambition of the 2030 Agenda for Sustainable Development. Following the development and adoption of the GSGF, the Expert Group developed the GSGF Implementation Guide and undertook a global survey that assessed the readiness of over 90 countries in their implementation journey.

2. The demand for integrating statistical and geospatial information originally focused on censuses, incorporating the 2030 Agenda upon its definition in 2015. Today, statistical-geospatial integration has a much broader application, with its importance consummately recognised by decision-makers; yet, there is still much more that can and must be done to ensure that the benefits of integration are known. In part, the response to the COVID-19 pandemic illustrates the potential of statistical-geospatial integration, the actions taken by many countries globally underscore its importance. In this light, and guided by its mandates, the Expert Group aims to reposition itself to positively impact and contribute to the emerging needs of both the statistical and the geospatial communities.

3. In making decision 11/106 at its eleventh session in August 2021, the Committee of Experts urged Member States to continue implementing and operationalising the GSGF as a tool for attaining geospatially enabled statistical data for the 2030 Agenda and the 2020 round of population censuses. The Committee recognised that addressing the many data integration challenges presented by the global COVID-19 pandemic and other complex issues, such as climate change and disaster resilience, requires the implementation of the GSGF at the national and regional levels.

4. This present report informs the Committee of Experts on the Expert Group's activities and progress since the eleventh session, including the development, finalisation and endorsement of the GSGF Implementation Guide, which provides countries with practical guidance on how to implement the GSGF, supported by the collation of national and regional experiences of GSGF implementation; a discussion on how the Expert Group is taking practical action guided by its Work Plan 2022 – 2024, including the formation of Task Teams and its plans for a seventh Expert Group meeting; and details its overall progress on operationalising the GSGF to support the implementation of the 2020 round of population censuses and the 2030 Agenda, while looking to the future.

5. The Committee of Experts is invited to take note of the report and express its views on the Expert Group's progress in statistical and geospatial integration and urge countries to adopt the GSGF. Points for discussion and decision are provided in paragraph 36. **Error! Reference source not found.**

## II. Fifty-third Session of the UN Statistical Commission

6. At its fifty-third session, convened virtually on 28 February – 2 March and 5 March 2022, the United Nations Statistical Commission welcomed the report of the Expert Group and, in making decision 53/127, endorsed the GSGF Implementation Guide as an excellent resource for supporting the implementation and operationalisation of the GSGF for the production and dissemination of geospatially enabled statistical data. The Commission urged the continued

implementation and operationalisation of the Framework and noted that several countries, especially developing countries, still lacked the adequate capacity to integrate statistical and geospatial information. Moreover, the Commission noted the execution and analysis emanating from the global survey on readiness to implement the GSGF and how this was distilled into the Expert Group's work plan for 2022–2024.

7. As part of the fifty-third Statistical Commission's revised modalities, several countries provided written statements in response to the Expert Group's report complementing the diverse and inclusive discussion of the virtual session. These written statements further add to the body of evidence that countries have begun to implement and operationalise the GSGF while denoting the need to strengthen capabilities and capacities in integrating statistical and geospatial information.

### **III. Advancing the Expert Group's Work**

#### **Finalising the Work Plan 2020 - 2022**

8. In the intersessional period, the Expert Group diligently worked to complete its work plan for 2020 – 2022. The bulk of the progress was made through forming three task teams: Capacity Building; Privacy and Confidentiality; and Principles of the GSGF (composed of three work streams on Geocoding, Common Geographies and Interoperability). The task teams and work streams convened virtual meetings under the leadership of either its leads or the co-Chairs of the Expert Group. The main outcomes of this work were the GSGF Implementation Guide<sup>1</sup> and the Global Survey on Readiness to Implement the GSGF<sup>2</sup>. Building on the Committee's prior guidance, these documents were provided to the Statistical Commission as background documents to its report, with the Commission endorsing the GSGF Implementation Guide and noting the results of the Global Survey.

9. Activity A of its Work Plan, 2020 – 2022, called for the Expert Group to “support the development of the IGIF” through two tasks, the first being to “develop a matrix” which maps the interlinkages between the principles and key elements of the GSGF and the Strategic Pathways of the IGIF further to document the relationship between the GSGF and IGIF; the second being to document the interconnected relationship between the GSGF and IGIF and develop documentation that enables the mutual implementation of both frameworks. Initial work to identify the interconnected nature of the GSGF and IGIF was conducted through its Task Team on Privacy and Confidentiality. Still, the Expert Group is conscious that further work can be done in this area.

#### **General Promotion Activities**

10. Fostering international collaboration to support capacity development in developing countries is a key focus of the Expert Group. In this, the Expert Group aims to enhance the coordination of national and regional capacity development programmes and reduce the duplication of efforts. Throughout the year, members of the Expert Group have participated in global and regional fora to promote the implementation and operationalisation of the GSGF. On the margins of the fifty-third Statistical Commission, through a webinar, the Expert Group promoted the GSGF Implementation Guide in advance of its endorsement by the Commission.

11. The Global Survey identified that the localisation of the GSGF has been key to its broad dissemination, implementation and operationalisation. Translating the Expert Group's outputs

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<sup>1</sup> See <https://unstats.un.org/unsd/statcom/53rd-session/documents/BG-3x-EG-ISGI-GSGF-Implementation-Guide-E.pdf>.

<sup>2</sup> See <https://unstats.un.org/unsd/statcom/53rd-session/documents/BG-3x-EG-ISGI-Global-Survey-GSGF-Readiness-Analysis-E.pdf>.

and work is the first stage of this, with translations of the GSGF into Chinese, French and Spanish completed by members. The Expert Group urges its membership and the Committee of Experts to support the translation of the GSGF into other languages to ensure the widest possible awareness and accessibility for countries.

12. In the Americas, the Marco Estadístico y Geoespacial para las Américas<sup>3</sup> (MEGA) project aims to facilitate regional integration of statistical and geospatial information through common standards and geographies. Further, within the Americas, the ‘Central America Project’ provides technical assistance<sup>4</sup> to the countries of Central America. One of the key outputs of the Central American Project has been the launch of an e-learning platform<sup>5</sup> in English and Spanish that interactively enables countries to understand the GSGF’s value, application, infrastructure, and implementation requirements. Further, the United Nations Economic Commission for Latin America and the Caribbean (UNECLAC) has several projects that support the strengthening of efforts in the area of statistical geospatial integration regionally, including:

- (a) Conducting ongoing technical assistance activities as part of a UN Development Account Project to strengthen capacities to integrate statistical and geospatial information, fostering the implementation and operationalisation of the GSGF in five target countries in the region;
- (b) Implementing statistical geoportals (in alignment with Principles 4 and 5 of the GSGF) in eight countries, led by UNECLAC with the financial support of the European Union; and,
- (c) The extension of the CEPALSTAT tool with a new interface to encompass the Latin America and the Caribbean Region, with powerful geospatial functionalities to disseminate statistical data provided by the National Statistics Offices of the region, in consistency with the GSGF and its five principles.

13. In Africa, the African implementation of the GSGF is being supported by the United Nations Economic Commission for Africa’s (UNECA) project on ‘Support to Monitoring of Sustainable Development Goals (SDGs) and statistics in Africa’, funded by Eurostat. The GSGF specifically supports this project in guiding the implementation of geocoding systems and common geographies within pilot countries.

14. In Europe, the GEOSTAT 4 project<sup>6</sup> recently released its final results. The general objective of the GEOSTAT 4 project has been to foster the integration of statistical and geospatial information in a European context and, in particular, to facilitate a harmonised implementation of the GSGF among members of the European Statistical System and in the region at large. The project has developed a substantial repository of implementation guidance, including requirements and recommendations for each principle of the GSGF, reference architecture and several use cases. The material has been structured and is accessible through the GSGF Europe Information Service.<sup>7</sup>

<sup>3</sup> See <http://www.un-ggim-americas.org/mega/>.

<sup>4</sup> The Central American Project is led by the Committee of Expert’s Regional Committee of United Nations Global Geospatial Information Management for the Americas, financed by the Pan-American Institute of Geography and History (PAIGH), with the national geospatial information agency of Spain, the National Centre for Geographic Information (CNIG), and the US Census Bureau.

<sup>5</sup> The GSGF e-Learning tool is available in English: <https://www.ipgh.org/gsgf-e-learningtool.html> and Spanish: <https://ipgh.org/e-LearningTool-es/#/>

<sup>6</sup> <https://www.efgs.info/geostat/geostat-4/>

<sup>7</sup> <https://www.efgs.info/gsgf-europe-geostat-information-service/>

**Across the Committee of Expert's areas of work**

15. In its report to the Statistical Commission, the Expert Group identified specific areas of work where the integration of statistical and geospatial information is key, observing that the integration of statistical and geospatial information is becoming progressively more important to the substantive work of the Statistical Commission. In this regard, the Expert Group reiterated to the Commission and its subsidiary groups its willingness to cooperate and “be the bridge” to harness the potential that geospatial information can bring to the statistical community.

16. In their report to this eleventh session of the Committee of Experts, the Inter-Agency and Expert Group on the Sustainable Development Goals Indicators' Working Group on Geospatial Information discusses the development and adoption of the SDGs Geospatial Roadmap by the Statistical Commission. The Expert Group notes that some members also participated in developing the SDGs Geospatial Roadmap, with the implementation and operationalisation of the GSGF being enshrined as part of the Roadmap's Phase 1: Prepare and Plan, alongside other frameworks of the Committee of Experts.

17. Across the Committee of Expert's work, the interlinkages with the IGIF, particularly its Strategic Pathway 4: Data, are clear. Still, the Expert Group notes the strong role for integration across all elements of the Committee's work plan. By establishing Task Teams to advance its work plan 2022 – 2024, the Expert Group aims to strengthen and expand on these interlinkages.

## **IV. The Work Plan 2022 – 2024**

**Across the Committee of Expert's areas of work**

18. The Expert Group developed its Work Plan 2022 – 2024 to directly respond to the mandates provided to it by both the Committee of Experts and the Statistical Commission. The detail of this Work Plan was directly informed by the gaps identified by Member States in the responses to the Global Survey on Readiness to Implement the GSGF. In its deliberations and discussions leading up to the presentation of the Work Plan, the Expert Group was also informed by the broader landscape in which it now finds itself. It is in this light that the Expert Group has developed its Work Plan 2022 – 2024, which includes the following work packages:

- (a) Expand on the IGIF for the statistical domain;
- (b) Developing capacity-assessment tools and maturity models for statistical and geospatial integration;
- (c) Leveraging enterprise architecture in the integration of statistical and geospatial information;
- (d) Providing guidance on developing user-centric and other geographies; and
- (e) Carrying out activities to strengthen interlinkages with relevant groups in both the statistical and geospatial communities.

19. This Work Plan was developed through virtual meetings and offline deliberations amongst the Expert Group's members. The need to expand the IGIF for the statistical domain is paramount in this Work Plan. In its decision 11/106, the Committee of Experts suggested that the future workplan of the Expert Group should address the gaps identified by the global survey and develop the interlinkages between the GSGF and the IGIF. Additionally, in its report

to the Statistical Commission, the Expert Group reiterated the importance of the IGIF as the overarching Framework for the global geospatial information community and an enabling framework for the GSGF. Through the collated national experiences of implementing both Frameworks, captured within the GSGF Implementation Guide, the Expert Group has further identified the interlinked and interconnected nature of both the GSGF and IGIF, observing that the implementation of one fosters an enabling environment for the other and vice-versa.

20. The Expert Group invites the Committee of Experts to note the Statistical Commission's endorsement of the Work Plan 2022 – 2024, by its decision 51/127, made in March 2022, offering its perspectives on how the Expert Group can best advance the integration of statistical and geospatial information.

#### **Taking Stock of Current Progress**

21. Progress in actioning the Work Plan 2022 – 2024 has been slower than the Expert Group would have liked. In the intersessional period, many members have been heavily engaged in conducting their national census and overseeing other national issues. Thus, the leadership and composition of the Task Teams are yet to be fully ascertained, with the Expert Group planning a working meeting as a side event at this twelfth session to help resolve some of these fundamental issues. In this regard, the Expert Group wishes to invite the Committee to participate in this side event.

### **V. The 2020 Round of Population and Housing Censuses and the 2030 Agenda for Sustainable Development – Taking Stock and Looking Forward**

22. The establishment of a 'Statistical-Geospatial Expert Group' was requested by the Statistical Commission at its 44th Session in March 2013 (through its decision 44/101) and endorsed by the Committee of Experts at its third session in July 2013 (through its decision 3/107). These mandates jointly established the Expert Group. As one of the first functional groups created under the purview of the Committee of Experts, the Expert Group strives to play a leadership role in raising awareness and highlighting the importance of reliable, timely, fit-for-purpose, and integrated statistical and geospatial information to support social, economic, environmental, and resilience policy decision making, including at the sub-national and regional levels. From the perspective of the Committee of Experts, the Expert Group serves as a practical mechanism that facilitates joint work with the Statistical Commission to integrate geospatial and statistical information. The adoption of the GSGF in 2019 was a significant milestone in this regard, not just for the Expert Group but also for both the Statistical Commission and the Committee of Experts, in underscoring the importance and practical actions that ensue from mutual collaboration.

23. Responding to the demands of the 2030 Agenda and the SDGs necessitates developing the 'right' environment to produce the data that is the basis and means to understand, prepare and respond to the challenges yet to come. The Expert Group is conscious of the potential and utility of integrating statistical and geospatial information that must grow to meet today's and tomorrow's challenges. In their decision 48/108, the Statistical Commission strengthened the mandate of the Expert Group for it to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information.

24. The 2030 Agenda recognises that the constituent data for the SDGs must be high quality, accessible, timely, reliable and disaggregated data by income, sex, age, race, ethnicity, migration status, disability and geographical location, and by other characteristics relevant in

the national context. At this present session, just over seven and half years on from 2015, we find ourselves at the mid-point in our global journey towards attaining the broad ambition of the 2030 Agenda. Still, the data of the SDGs indicates that our progress was lagging before the emergence of COVID-19, in the Secretary-General's 2022 SDGs Report 2022<sup>8</sup>.

25. The national and regional experiences captured within the GSGF Implementation Guide demonstrate the vital role that the GSGF plays in facilitating the production of geospatially enabled statistical data for data-driven and evidence-based decision-making. Moreover, the role of the GSGF in underpinning the national development priorities of many countries while strengthening the prevention, response and recovery from COVID-19. Yet, the global survey also highlights that the potential of the GSGF is not yet universally realised, with many countries challenged by statistical-geospatial integration but lack the resources to dedicate to its implementation.

26. Looking forward, the role of the Expert Group vis-à-vis the 2020 round of housing and population censuses will naturally diminish; whether seeking to undertake their census or disseminate its results, many countries have either completed their census or are significantly advanced in their preparations. The Expert Group is hopeful that much of the data emanating from the 2020 round of census will help meet the increasing demand for geospatially enabled statistical data in the characteristics relevant to their national contexts and ambition of the 2030 Agenda. But, the Expert Group is conscious that the demand for geospatially enabled statistical data exceeds the current capacity of many national and regional institutions, necessitating change and transformation to meet existing and new demands.

27. In emergent areas of work, such as Disaster-Related Statistics and Climate Change, the response, whether at a local or global level, is based on integrating geospatial, statistical and other related information. As the GSGF is the means that will enable progress in these domains and others, the Expert Group urges the implementation and operationalisation of the GSGF to help provide the foundations for these novel work areas. Simultaneously, the Expert Group is aware of the broader set of needs and opportunities that will arise from the enhanced demand for statistical-geospatial integration on the broader work programmes of the Committee of Experts and Statistical Commission and looks forward to meeting these future challenges.

## **VI. Ongoing working modalities of the Expert Group**

28. At its sixth meeting, convened in Manchester in October 2019, the Expert Group welcomed Germany and Namibia as its new co-Chairs. Following the intense period of work over the past three years, Germany stepped down as co-Chair following the Statistical Commission, and Namibia will step down following the Committee's upcoming session. The Expert Group thanks both Germany and Namibia for their leadership over this especially challenging period. The Expert Group seeks to identify and acclaim new co-Chairs at a side event on the margins of this twelfth session. Further, the Expert Group welcomes new members to participate and help drive its work forward.

29. Due to the ongoing global impact of COVID-19, the Expert Group has been conducting quarterly (approximately) virtual meetings. Alongside these regular virtual meetings, ad-hoc meetings have been convened to support the work of the Expert Group, including meetings between the co-Chairs and the Secretariat, with its task teams and work streams convening virtual meetings as appropriate. As the immediate impacts and risk of COVID-19 subside and countries chart their course to establishing a 'new normal', the Expert Group is looking forward

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<sup>8</sup> <https://unstats.un.org/sdgs/report/2022/>



to convening its seventh plenary meeting in person and is investigating how best to accomplish this task.

30. Further, the Expert Group will seek to convene regional focal points following the twelfth session. This virtual meeting aims to highlight and foster discussion on the various approaches and capacities existing at the regional level, consequently strengthening the coordination and coherence of the integration of statistical and geospatial information among the Committee's Regional Committees and United Nations Regional Commissions.

## VII. Summary

31. The need for integrating statistical and geospatial information touches many emergent areas, from disaster-related statistics to climate change statistics, alongside more established areas of statistical work. In this, the Expert Group urges the Committee and the national institutions that constitute its membership to transform themselves to meet these future challenges. At the closing of the Expert Group's first decade, its highlight is the development of the GSGF. A bridge for both the statistical and geospatial communities, fostering the necessary transformation to meet the production and dissemination demands of the 2020 round of population and housing census and the 2030 Agenda.

32. Now, the Expert Group looks further to support the implementation and operationalisation of the GSGF by widening its application and importance beyond its initial scope. For example, Disasters and Climate Change do not respect administrative or gridded geographies, necessitating the demand for the Expert Group to provide insight into 'user-centric geographies' drawn from unit-level statistics while retaining the same levels of privacy and confidentiality that exist with using more 'traditional' geographies.

33. There are lessons to be learned from the decisive actions undertaken by countries to respond to COVID-19, such as by standing-up dashboards that integrate statistical and geospatial information for real-time decision-making, only serve to underscore the importance of and raise awareness for statistical-geospatial integration. The immediacy by which countries transformed elements of their statistical and geospatial institutions to meet this emergent challenge communicated the potential of the integration of statistical and geospatial information, with some countries increasing the level of resources (including staffing) in this area.

34. Looking beyond COVID-19, we are now in a 'new normal'. This new normal is not singularly focused on the recovery from COVID-19, but also necessitates action against the climate emergency already upon us. But, unlike COVID-19, we know the impact of climate change today and can forecast what it can be tomorrow. In this regard, we understand the exact role that geospatially enabled statistical data can play. Yet, the capacity for statistical-geospatial integration remains unequally distributed, data gaps remain, and some countries lag behind. The Expert Group urges members of the Committee of Experts to participate in its work to ensure that we can meet the challenges in front of us.

35. As countries seek to bridge their data gaps, the GSGF offers a practical framework for countries to leverage and build on. As the current availability of geospatially enabled statistical data does not meet the stated demand of countries, efforts must be intensified, guided by the GSGF, for countries to meet their national priorities and global agendas. In this regard, the Expert Group will seek to apply itself, guided by its Work Plan 2022 – 2024 and its prevailing mandates, and seeks the ongoing support and views of the Committee of Experts.

## **VIII. Points for discussion**

36. **The Committee of Experts is invited to:**
- (a) Take note of this present report, express its views on the Expert Group's progress, and provide its guidance regarding the Expert Group's future work;**
  - (b) Note the endorsement of the GSGF Implementation Guide by the Statistical Commission;**
  - (c) Continue to urge Member States to adopt and implement the Global Statistical Geospatial Framework, especially given the added dimensions of COVID-19, and other emergent concerns necessitating the integration of geospatial, statistical and other related information; and,**
  - (d) Consider and recommend options available to Member States and partners to actively support the work of the Expert Group, particularly through participation and resources.**