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#### **Items for discussion and decision: integration of statistical and geospatial information**

### **Report of the Expert Group on the Integration of Statistical and Geospatial Information**

#### **Note by the Secretary-General**

In accordance with Economic and Social Council decision 2019/210 and past practices, the Secretary-General has the honour to transmit the report of the Expert Group on the Integration of Statistical and Geospatial Information. In its report, the Expert Group summarizes the activities it has undertaken since the fiftieth session of the Statistical Commission, in accordance with Commission decision 50/124. The Expert Group has focused on finalizing the Global Statistical Geospatial Framework, revising its terms of reference and developing its workplan for the period 2020–2022 to support the wide range of implementation and adoption activities with respect to the Sustainable Development Goals and the 2020 round of population and housing censuses.

A key milestone for the Expert Group was the completion of the Global Statistical Geospatial Framework and its adoption by the Committee of Experts on Global Geospatial Information Management by its decision 9/106 at its ninth session, in August 2019. The Commission is invited to endorse decision 9/106 of the Committee of Experts regarding the adoption of the Global Statistical Geospatial Information Framework and to take note of the report of the Expert Group, including its progress in the integration of statistical and geospatial information, its revised terms of reference and its workplan for 2020–2022.

# **Report of the Expert Group on the Integration of Statistical and Geospatial Information**

## **I. Introduction**

1. Pursuant to Statistical Commission decision 44/101, the Expert Group on the Integration of Statistical and Geospatial Information comprises members of both the statistical and the geospatial professional communities of Member States and relevant international organizations. Since its establishment in 2013, the Expert Group has reported to both the Statistical Commission and the Committee of Experts on Global Geospatial Information Management at each of their respective annual sessions.

2. The overall objectives and functions of the Expert Group have been to pursue the implementation of the Global Statistical Geospatial Framework, support regional and global agendas such as the 2020 round of population and housing censuses and the 2030 Agenda for Sustainable Development. In addition, pursuant to decision 48/108 of the Commission, the mandate of the Expert Group was strengthened for it to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information.

3. In the present report, the Expert Group summarizes the activities it has undertaken since the fiftieth session of the Commission, including the decisions emanating from the ninth session of the Committee of Experts, held in New York in August 2019, and the main outcomes of the sixth meeting of the Expert Group, held in Manchester, United Kingdom of Great Britain and Northern Ireland, in October 2019. At its sixth meeting, the Expert Group reviewed and consolidated its programme of work following the adoption of the Global Statistical Geospatial Framework at the ninth session of the Committee of Experts, reviewed regional efforts with regard to the promotion and adoption of, and capacity-building activities relating to, the Framework, and considered broader issues relevant to statisticalgeospatial interoperability.

4. The Commission is invited to take note of the progress made by the Expert Group in the integration of statistical and geospatial information and to endorse decision 9/106 of the Committee of Experts regarding the adoption of the Global Statistical Geospatial Framework.

## **II. The Global Statistical Geospatial Framework**

5. In August 2014, at the Global Forum on the Integration of Statistical and Geospatial Information, it was noted that “there is an urgent need for a mechanism such as a global statistical-spatial framework to facilitate consistent production and integration approaches for geostatistical information”.<sup>1</sup>

6. The Global Statistical Geospatial Framework was developed as a result of this need. A framework for the world, it enables a range of data from both the statistical and the geospatial communities to be integrated. Through the application of its five principles and supporting key elements, the Framework enables the production of harmonized and standardized geospatially enabled statistical data. The resulting data can then be integrated with statistical, geospatial and other information to inform and facilitate data-driven decision-making to support local and national development priorities and global agendas, such as the 2020 round of population and housing censuses and the 2030 Agenda.

7. Following extensive development of the Framework by the Expert Group, which incorporated guidance and sought advice from both the Commission, representing the statistical community, and the Committee of Experts, representing the geospatial information community, this urgent need has been met, and the Framework will be submitted to the Commission as a background document to the present report.

8. In its report to the ninth session of the Committee of Experts, the Expert Group detailed the process of developing, refining and finalizing the Framework, including the broad global consultation, for which 75 responses were received from 64 Member and observer States and 3 from regional entities. In many cases, joint submissions were received from both national geospatial information authorities and national statistical offices. A total of 31 responses were received from developed countries and 41 from developing countries. Specifically, 49 responses were received from national statistical organizations, 32 of which were from developing nations.

9. To ensure the encapsulation of good practices and prevailing knowledge, the Framework is intended to be a living document under the stewardship of the Expert Group. The Expert Group will use its wiki<sup>2</sup> to continuously refine the Framework, develop additional material to support national and regional implementation efforts and provide a mechanism to support statistical and geospatial integration efforts. The wiki serves as a collaborative platform for

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<sup>1</sup> See [http://ggim.un.org/meetings/2014-Global\\_Forum/documents/Summary-Report%20of%20the%20Global%20Forum.pdf](http://ggim.un.org/meetings/2014-Global_Forum/documents/Summary-Report%20of%20the%20Global%20Forum.pdf).

<sup>2</sup> <https://unstats.un.org/wiki/display/ISGI/United+Nations+Expert+Group+on+the+Integration+of+Statistical+and+Geospatial+Information>.

Member States and others to openly view and share the material of the Expert Group.

10. The further development of the Framework, including its promotion, the development of implementation guides and the status of implementation are detailed below.

### **III. Ninth session of the Committee of Experts on Global Geospatial Information Management**

11. In its decision 9/106, adopted at its ninth session, the Committee of Experts welcomed the report of the Expert Group and noted the substantial achievement to support statistical and geospatial integration, to achieve national priorities and global development agendas and to further the Global Statistical Geospatial Framework under the leadership of Australia and Mexico. The Committee adopted the Global Statistical Geospatial Framework, encouraged the regional committees of United Nations Global Geospatial Information Management to support Member States in continuing their awareness-raising and promotion activities with regard to the Framework, and urged its implementation, including through the various regional geostatistical integration frameworks and initiatives.

12. The Committee of Experts requested the Expert Group to continue its work to develop the guidance on and support the promotion, awareness-raising and implementation of the Framework, and its work on statistical geospatial integration and coordination, in particular with regard to the Sustainable Development Goals and the 2020 round of population and housing censuses, and encouraged Member States and other stakeholders to participate in, and contribute to, these important elements.

### **IV. Sixth meeting of the Expert Group**

13. The sixth meeting of the Expert Group was held in Manchester on 8 and 9 October 2019, hosted by the Government of the United Kingdom through the Office for National Statistics and Ordnance Survey. The meeting was attended by 27 participants from 14 Member States (Australia, Canada, Germany, Finland, France, Ireland, Kuwait, Mexico, Namibia, Norway, Poland, Sweden, United Kingdom and United States of America), regional and international organizations (International Cartographic Association and Eurostat) and the Statistics Division of the Department of Economic and Social Affairs of the Secretariat.

14. At the meeting, the Expert Group discussed the adoption of the Framework by the Committee of Experts, developed a workplan for 2020–2022, reviewed its ongoing modalities, including initiating discussions on revising its terms of reference and appointing new co-chairs (Germany and Namibia), and discussed the Expert Group’s efforts with regard to the 2020 round of population and housing censuses and the 2030 Agenda.

15. While the adoption of the Framework was a key milestone for the Expert Group, significant progress has also been made in other areas of work. The meeting facilitated the sharing of knowledge and good practices. In addition, lessons were learned from the implementation of the Framework, updates were given from the regions, the requirements of developing countries for integrated statistical and geospatial information were identified and case studies examining how international collaboration fosters the strengthening of statistical and geospatial information were shared.

16. Fostering international collaboration to support capacity development in developing countries is a key focus of the Expert Group. The meeting enabled discussions on how the Expert Group can support the coordination of national and regional capacity development efforts to strengthen the integration of statistical and geospatial information and reduce the duplication of efforts. Translating the Expert Group’s outputs and work is the first stage of this, with translations of the Framework into Arabic, French and Spanish under way by members. The Expert Group urges its membership and the Commission to support the translation of the Framework into other languages to ensure the widest possible awareness and accessibility for countries.

17. To support the ongoing work of the Expert Group, the co-chairs have established a steering group composed of the co-chairs (Germany and Namibia), Australia, Mexico and the secretariat. The steering group will be assisted by the workplan, an important outcome of the meeting, which will help to guide the work of the Expert Group in the period 2020–2022.

## **B. Developing the Expert Group’s workplan for 2020–2022 (HÒA)**

18. To respond to the evolving needs of the statistical and geospatial communities, considering national, regional and global development priorities and agendas (such as the global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda), the Expert Group has developed a workplan to reposition itself towards the development of implementation materials and provide

key guidance for countries when implementing its outputs. The planned activities include the following:

- (a) Reviewing its revised terms of reference (to be undertaken and finalized by the Expert Group);
- (b) Reviewing the Integrated Geospatial Information Framework from the perspective of the Global Statistical Geospatial Framework, including:
  - (i) Providing feedback during the global consultation on the implementation guide of the Integrated Geospatial Information Framework (to be undertaken by the Expert Group);
  - (ii) Identifying the interlinkages between the strategic pathways of the Integrated Geospatial Information Framework and the Global Statistical Geospatial Framework and developing documentation that explains the relationships between these key statistical and geospatial frameworks (led by Australia and Ireland; the aim is to review the outputs of this work by mid-2021);
  - (c) Developing a communications strategy to improve the awareness, promotion and communication of the outputs of the Expert Group;
  - (d) Establishing the following three task teams that will work until mid-2021, with regular oversight by the steering group:
    - (i) Task team on capacity-building, to take stock of statistical geospatial integration activities to mitigate duplication, promote the coordination of projects and support the identification of good practices. Led by Sweden and Norway, the task team aims to deliver its outputs by mid-2021;
    - (ii) Task team on privacy and confidentiality, to develop guidance and recommendations taking into consideration emergent statistical and geospatial privacy and confidentiality issues. Led by France, the task team aims to deliver its outputs by mid-2021;
    - (iii) Task team on the principles of the Global Statistical Geospatial Framework, to provide guidance, recommendations and case studies to support the implementation of the Framework. Under the direction of the steering group, these are split into three work streams: geocoding (led by the co-chairs), common geographies (led by Canada) and interoperability (led by the United Kingdom);
  - (e) Considering mechanisms to increase engagement and participation of Member States in the work programme of the Expert Group. Led by the steering group, this area of work is to be coordinated with complementary initiatives,

including internationally and within the regions through regional working groups on statistical and geospatial integration;

(f) Supporting the development of country and regional case studies of good practices in integrating statistical and geospatial information to strengthen implementation and capacity development at the national and regional levels. This will be an ongoing activity, and all Member States and regions are urged to contribute to it, regardless of their membership status in the Expert Group.

19. The workplan is intended to position the Expert Group to support the increasing demand for integrated statistical and geospatial information, while fostering collaboration with the broader data ecosystem. Member States are urged by the co-chairs to volunteer and participate in the work of the Expert Group and to support it through the provision of resources to fully enable the potential of its work to be fulfilled.

### **C. Revising the Expert Group's terms of reference**

20. To deliver the ambitious workplan, and cognisant of the complementary work ongoing within the broader data ecosystem, the Expert Group has revised its terms of reference.

21. The revised terms of reference identify future areas of work at the global level, including harmonization with the ongoing work of the Integrated Geospatial Information Framework and the statistical domain working group of the Open Geospatial Consortium. At the regional level, this includes supporting regional initiatives, such as the GEOSTAT and MEGA projects. Considering the adoption of the Framework as a key outcome of the Expert Group's initial terms of reference, the Expert Group has revised and refined its objectives to deliver on its strengthened mandate for it to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information, provided by the Commission in its decision 48/108, adopted at its forty-eighth session, in March 2017.

22. Following initial revisions made at the meeting, the terms of reference have since been circulated for consultation within the Expert Group and finalized, and they will be provided as a background document.

### **D. Alignment with other initiatives and work of the Commission**

23. In reviewing the broader data ecosystem, the Expert Group considered the recent advancements within statistical enterprise architectures, including the Generic Statistical Business Process Model, and how a common architecture for

geospatially enabled statistical information can be developed. In Europe, this has supported work towards the creation of pan-European data sets that will enable comparative analysis of various levels of geography, whether administrative or grids, within and between countries.

24. Within the Expert Group, there are examples of North-South cooperation between national statistical offices. The Expert Group recognizes that there is a strong potential for it to foster South-South cooperation to enable localized capacity development. Through its task team on capacity-building, the Expert Group will develop materials to strengthen global, regional and national integration of statistical and geospatial information capacity. This will strengthen the Expert Group's ability not only to implement the Framework but also to promote and communicate other items of relevance.

## **V. Implementation of the Global Statistical Geospatial Framework**

### **A. Implementation at the regional level**

25. The Framework is being implemented in the light of enhanced awareness of the urgent need for integrated statistical and geospatial information. The Framework is already widely known at the national and regional levels, and although the Framework was adopted in August 2019, its five principles had been endorsed by the Commission in its decision 48/108, adopted at its forty-eighth session, following a global consultation in 2016.

26. At the regional level, working groups have been formed to focus on the regional statistical and geospatial integration efforts in each of the regional committees of United Nations Global Geospatial Information Management. Furthermore, the Framework is being implemented regionally within Europe (GEOSTAT 3, with the future iteration, GEOSTAT 4, under preparation), the Americas (MEGA) and Africa (African Spatial Statistical Framework).

27. The implementation of the Framework at the regional level is being facilitated through resolutions and declarations of intergovernmental statistical and geospatial information communities within Africa,<sup>3</sup> the Americas<sup>4</sup> and Asia and the

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<sup>3</sup> In the draft report on the fifth regional meeting of the Regional Committee of United Nations Global Geospatial Information Management for Africa, held in Kigali from 18 to 22 November 2019, Member States reiterated the critical need to move towards adopting the Global Statistical Geospatial Framework and the African Spatial Statistical Framework and to integrate seamlessly geospatial information and statistics and sectoral data in countries.

<sup>4</sup> Statistical Conference of the Americas, Declaration on the integration of geospatial and statistical information between the Statistical Conference of the Americas of the Economic Commission for Latin America and the Caribbean and the Regional Committee of United Nations Global Geospatial Information Management for the Americas. Available at <https://cea.cepal.org/10/sites/cea10/files/cea.10-declaration-integration-geospatial-information.pdf>.

Pacific,<sup>5</sup> which independently urge alignment between implementation at the regional level and development at the global level. This offers a good opportunity to develop and share good practices, support peer-to-peer learning and ultimately strengthen communication and engagement between global and regional efforts.

28. The Expert Group takes note of these resolutions and declarations. Furthermore, it urges Member States to participate in and contribute to the future development of its work and to adopt the Framework.

## **B. Supporting the 2020 round of population and housing censuses and the 2030 Agenda for Sustainable Development**

29. In its report to the Commission in 2018 (E/CN.3/2018/33), the Expert Group recommended that all statistical unit record data should be collected or associated with a location reference, and that ideally it should allow for geospatial coordinates with x- and y-values to be produced for each record. This recommendation was informed by the data collection needs of each stage of the census process, from preparation and collection to analysis and dissemination. The recommendation also has specific relevance to the 2030 Agenda with its need for geospatially enabled statistics to produce the indicators of the Sustainable Development Goals.

30. This focus provides the Expert Group with a useful framework to facilitate peer-to-peer knowledge exchange, capacity-building and technical assistance for development projects through its future workplan. The Expert Group will develop recommendations and guidance to support the use of geospatially enabled statistical data, ensuring that prevailing privacy and confidentiality concerns are taken into consideration. This will support the analysis and dissemination of statistical data emanating from the 2020 round of population and housing censuses, which in turn supports national and global development agendas.

31. Furthermore, the Expert Group seeks to promote, communicate and harmonize its future work with other initiatives, such as the statistical domain working group of the Open Geospatial Consortium, the High-Level Group for the Modernisation of Official Statistics, the Intersecretariat Working Group on Household Surveys and the working group on geospatial information of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, consistent with its mandate to be the overall coordination group for all activities in the area of the integration of statistical and geospatial information.

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<sup>5</sup> Regional Committee of United Nations Global Geospatial Information Management for Asia and the Pacific, resolutions adopted at the eighth plenary meeting of the Regional Committee, Canberra, 3–5 November 2019. Available at [www.un-ggim-ap.org/meetings/pm/8th/201911/Resolutions\\_8%20Plenary\\_UN-GGIM-AP.pdf](http://www.un-ggim-ap.org/meetings/pm/8th/201911/Resolutions_8%20Plenary_UN-GGIM-AP.pdf).

## **VI. Conclusion and the way forward**

32. In its decision 9/106, adopted in August 2019, the Committee of Experts adopted the Global Statistical Geospatial Framework as an important bridge that enables a range of data to be integrated from both the statistical and the geospatial communities. Through the application of its five principles and supporting key elements, the Framework enables the production of harmonized, standardized and geospatially enabled statistical data to support data-driven decision-making.

33. The Expert Group considers the adoption of the Framework to be a milestone for both the statistical and the geospatial communities, as well as an opportunity to foster and strengthen global, regional and national integration activities and agendas. Accordingly, the Commission is invited to endorse decision 9/106 of the Committee of Experts. The Expert Group is now focusing its work and future agenda on the development of resources to support the implementation of the Framework, while also supporting broader efforts to communicate and integrate statistical and geospatial information.

34. To achieve these goals and objectives, the Expert Group has revised its terms of reference and developed an ambitious workplan for 2020–2022 under the leadership of Germany and Namibia. Furthermore, the Expert Group extends its appreciation to Australia and Mexico, especially considering the milestones and work achieved under their leadership.

35. Through the efforts of the Expert Group, the Committee of Experts is continuing to work with the Statistical Commission to support the implementation of the Global Statistical Geospatial Framework as a globally consistent mechanism for enabling the integration of statistical and geospatial information.

## **VII. Action to be taken by the Statistical Commission**

36. The Commission is invited:

(a) To endorse decision 9/106 of the Committee of Experts on Global Geospatial Information Management regarding the adoption of the Global Statistical Geospatial Framework;

(b) To take note of the report of the Expert Group, including its progress in the integration of statistical and geospatial information, its revised terms of reference and its workplan for 2020–2022.

