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## Committee of Experts on Global Geospatial Information Management

### Seventh session

New York, 2-4 August 2017

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 sixth session, held in New York from 3 to 5 August 2016, the Committee of Experts adopted decision 6/107, in which it recognized the importance of the continuing work of the Expert Group on the Integration of Statistical and Geospatial Information. It reiterated that the 2030 Agenda for Sustainable Development and the 2020 round of population censuses are important drivers for the integration of geospatial and statistical information in support of evidence-based decision-making across many sectors. The Committee agreed to the amended terms of reference of the Expert Group with regard to its composition and terms of office and adopted the five guiding principles, as referenced in the report of the Expert Group, as the foundation of the Global Statistical Geospatial Framework. It looked forward to progress on the Framework being reported to both the Statistical Commission and the Committee of Experts for consideration and adoption at their next sessions in 2017. In its report, the Expert Group provides information on its recent activities and the preparation of specific country-level examples. The Expert Group also provides information on the endorsement of the Framework by the Statistical Commission at its forty-eighth session and the agreement of the Commission to the proposal that the mandate of the Expert Group be strengthened to become the overall coordination group for all activities in the area of statistical geospatial data integration.

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\* E/C.20/2017/1

## **I. Introduction**

1. Pursuant to Statistical Commission decision 44/101, the United Nations Statistics Division (UNSD) established the Expert Group on the Integration of Statistical and Geospatial Information in 2013, comprising members of both the statistical and geospatial professional communities from Member States. The Expert Group determined its modalities and programme of work and has since reported back to both the Statistical Commission and the Committee of Experts at each of their respective annual sessions.

2. The Expert Group's overall objectives and functions included "to pursue the implementation of the statistical-geospatial framework in the 2020 Round of Censuses with the understanding it would apply to other initiatives including other censuses, such as agriculture censuses, economic censuses, etc., and global initiatives such as the Post-2015 Development Agenda and Big Data". In addition, the Expert Group was tasked to "evaluate the statistical-geospatial framework developed by the Australian Bureau of Statistics, and determine if and how this could be internationalised".

3. At its sixth session, convened in New York in August 2016, the Committee of Experts adopted the five guiding principles of the Global Statistical Geospatial Framework (GSGF) as the foundation of the Framework, and looked forward to progress being reported to both the Statistical Commission and the Committee of Experts for further consideration and adoption at their next sessions in 2017. The Committee also reiterated that the 2030 Agenda for Sustainable Development and the 2020 round of population censuses are important drivers for the integration of geospatial and statistical information in support of evidence-based decision making across many sectors, whether public or private, at the national and global levels, and for increased institutional coordination and cooperation between the geospatial and statistical agencies and other stakeholders. The Committee of Experts further agreed to the amended terms of reference of the Expert Group with regard to its composition and terms of office and to the proposal to retain the current Co-Chairs for an additional three-year term.

4. This present report provides information on the endorsement of the GSGF by the Statistical Commission at its forty-eighth session, convened in New York in March 2017, and the agreement of the Commission to the proposal that the mandate of the Expert Group be strengthened to become the overall coordination group for all activities in the area of statistical geospatial data integration. The report also summarises the recent activities of the Expert Group since the sixth session of the Committee of Experts, including preparation of a template for specific country-level examples for each of the five principles of the GSGF and determining an Operational Model to further advance elaboration of the Framework. The Committee is invited to take note of the report and to express its views on the proposal for a Global Statistical Geospatial Framework, and the way forward. Points for discussion and decision are provided in paragraph xx.

## **II. 48th session of the UN Statistical Commission**

5. As a means to continue the critical dialogue between the statistical and geospatial professional communities, UNSD, in collaboration with the Expert

Group, convened a major Statistical-Geospatial Integration Forum<sup>1</sup> on the margins of the 48th session of the UN Statistical Commission in New York in March 2017. Entitled “The Data Ecosystem: Towards Integrative National Information Systems”, the forum brought together actors and experts to consider the delivery of integrated high-quality, accessible, timely and reliable data to support, track and inform on progress in the implementation of the 2030 Agenda at all levels. The Forum was supported by the United Nations Human Settlement Programme (UN-Habitat), the Group on Earth Observations (GEO) and the European Commission, Policy Development and Economic Analysis Unit (EC). With three themes in the agenda: 1) Integration of statistical and geospatial information; 2) Statistical and geospatial perspectives on the definition of settlements and cities; and 3) Geospatial and Earth observations in support of the global indicator framework; the Forum provided the global statistical community with practical examples as to why the integration of statistical and geospatial information will be key for the production of a number of the global indicators for the Sustainable Development Goals (SDGs), and that the Global Statistical Geospatial Framework (GSGF), a principles-based Framework developed by the Expert Group is now necessary.

6. As was advocated by the Committee of Experts at its sixth session, the Expert Group brought the five guiding principles of the Global Statistical Geospatial Framework before the 48th session of the UN Statistical Commission for endorsement. The Expert Group also sought comments on the Group’s progress in the consolidation and implementation of the Framework.

7. In making decision 48/108, the Statistical Commission expressed its gratitude to the Expert Group for the significant progress achieved in the work on the integration of statistical and geospatial information, and for the subsequent formulation of the Global Statistical Geospatial Framework. In endorsing the five guiding principles of the Framework, as developed by the Expert Group, the Commission had a view to the full framework being developed as an international standard at an appropriate time. The Commission also recognized the importance of the continuing work of the Expert Group and its focus on the consolidation and implementation of the Framework, including in the preparation of examples at the country level. In this context, the Commission commented on aspects of the Framework, particularly on the importance of standards, geocoding and privacy concerns, and that statistical data should be presented as aggregates, and not as individual data, and requested the Expert Group to take these comments into account.

8. In recognition of the increasing role of statistical and geospatial integration, particularly with regard to the SDGs and the 2020 Round of Population Censuses, the Statistical Commission agreed with the proposal that the mandate of the Expert Group be strengthened for it to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information. In this respect, the commission emphasized the need for the regional statistical bodies to develop and strengthen partnerships with the regional bodies of the Committee of Experts on Global Geospatial Information Management, given their growing importance in the context of integration of data from surveys, administrative sources and geospatial information for the SDGs, and also emphasized the need to streamline statistical production processes.

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<sup>1</sup> Statistical-Geospatial Integration Forum documents and presentations are available here: <https://unstats.un.org/unsd/statcom/48th-session/side-events/20170306-1M-geospatial-integration-forum/>

### **III. Consolidation and implementation of the Global Statistical Geospatial Framework**

9. The Expert Group considered the valuable feedback and guidance provided during each of the sessions of the Committee of Experts and the Statistical Commission where the five principles of the Global Statistical Geospatial Framework (GSGF) were adopted and endorsed (respectively). The Co-chairs of the Expert Group also considered the options for progressing the Framework that have been agreed to by the Expert Group, particularly noting the concerns that efforts by Expert Group members to progress the Framework should be well focused and managed to ensure good outcomes are achieved in an efficient manner, while actively involving all members of the Expert Group.

10. In response to these concerns, the Co-chairs proposed an Organisation Model for progressing the GSGF. This Organisation Model will allow the development of further detailed explanation and reference material that will support the consolidation and implementation of the Framework under the guidance of the Expert Group. The Model was considered during a WebEx Meeting of the Expert Group in May 2017, and was subsequently adopted by the Expert Group. The Organisation Model, and work completed under its umbrella, will ensure development of the Framework proceeds as requested by the Statistical Commission and the Committee of Experts.

11. Operating under the oversight of the Expert Group, the Organisation Model will be supported by five GSGF Principle Working Groups, each being led by two Expert Group members and with other members participating in the Working Groups. The GSGF Principle Working Groups will also reach out to relevant international and regional statistical and geospatial bodies and organisations that are willing to actively participate in the activities of the Working Groups. The GSGF Principle Working Groups will each manage and deliver an agreed work program, which will include specific development tasks for the principle, as well as the collection of relevant reference material, papers, guidelines, presentations, country implementation examples, etc. The Working Groups will also consider questions and issues, with regard to their respective principle, that arise during their work and the deliberations of the Expert Group.

12. The Expert Group agreed that the Working Groups will need to collaborate on cross cutting issues such as terminology, privacy and confidentiality, legal mandates, and technical standards. These issues apply across each of the five principles of the Framework and so harmonisation on these issues will be critical. The Expert Group also agreed that any information gathering from countries relating to the GSGF should be coordinated through the Expert Group and the Secretariat. This will principally occur through the use of a GSGF proforma that will gather information on current implementation or practices relating to the GSGF, and will be similar to one that Expert Group members have already completed.

13. The Expert Group has been conscious that the information gathered or developed through these Working Groups needs to be accessible for the countries seeking to implement the principles of the GSGF. To this end, the Secretariat has agreed to facilitate an area of the knowledge base on the UN-GGIM website that is dedicated to the GSGF.

14. The Framework's principle 'Statistical and geospatial interoperability' has been acknowledged as the most underdeveloped area with the GSGF. The current practices, standards and frameworks that underlie this principle have been an area of focus for the Expert Group and have been raised in a number of forums. As a result, the UN Economic Commission for Europe (UNECE) and UN-GGIM: Europe, under the Conference of European Statisticians' work programme for 2017, are organising a 'Workshop on Integrating Geospatial and Statistical Standards' from 6-8 November 2017 and hosted by Statistics Sweden in Stockholm, Sweden.

15. The objective of this Workshop is to create an opportunity to highlight how geospatial data sources, methods, and standards can be integrated into the production of official statistics, and to identify a plan for future collaboration to support integration and interoperability of statistical and geospatial standards. The Expert Group is working in partnership with the Workshop organisers to highlight the role of the GSGF and the need to make improvements in this highly technical but important area of interaction between the global statistical and geospatial communities.

#### **IV. Linkages with other major programs: the SDGs and 2020 Round of Population Censuses**

16. In response to the Statistical Commission decision to strengthen the mandate of the Expert Group, to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information, the Expert Group has considered points of linkage. These include topics as diverse as: the 2020 Round of Censuses, the 2030 Agenda for Sustainable Development, the new Urban Agenda, disasters, climate change, fundamental data, standards, interactions with regional committees, and capacity building in developing countries.

17. An existing focus of the Expert Group has been the 2020 Round of Population and Housing Censuses. Considering this mandate, the Expert Group has agreed to seek closer collaboration in the preparations for the 2020 Round of Censuses, and proposes that the Expert Group should actively contribute to the work of the 2020 Population and Housing Census Expert Group, participating in their meetings and in particular support the Census Expert Group on the preparation of the update of the "Handbook on Geospatial Infrastructure in Support of Census Activities". In support of this objective, the Expert Group has worked closely with the Secretariat to conduct an awareness raising side event entitled 'The 2020 Round of Population and Housing Census and the Global Statistical Geospatial Framework' at this seventh session of the Committee of Experts.

18. The 2030 Agenda for Sustainable Development has also been a key consideration for the Expert Group, and has recently discussed how it can make contributions to the global indicator framework for monitoring progress towards achievement of the SDGs. The Expert Group agreed that its main contribution to date had been the development of the Global Statistical Geospatial Framework, which will facilitate consistent production and integration approaches for geostatistical information. The support from the global statistical and geospatial communities for the GSGF, and its five guiding principles, will provide a strong basis for the geospatial dimension for all of the SDG indicators. The adoption of

the Framework by a range of other bodies considering plans to deliver data for the SDG indicators will need to be an area of focus for coordination by the Expert Group in the coming years.

19. The wide range of potential linkage points between statistical and geospatial information, and the number of bodies interested in this topic, pose a substantial challenge for the Expert Group. Therefore, the Expert Group has asked the United States of America to examine the current strategic focus areas of both the Statistical Commission and the Committee of Experts to ensure that there is close alignment with the areas of focus selected by the Expert Group. This will ensure precious resources are spent focusing on the most important linkages. This topic will be discussed at the next meeting of the Expert Group.

## **V. Meetings of the Expert Group**

20. The Secretariat organized a WebEx meeting for the Expert Group on 23 May 2017. The meeting attracted 17 participants from 11 countries, Eurostat and the Secretariat. The meeting reviewed: the outcomes of adoption and endorsement of the Global Statistical Geospatial Framework (GSGF); the strengthened mandate from the Statistical Commission; consideration of the GSGF Organisational Model to advance the Framework; linkages with other major programs, particularly the 2020 Round of Population Censuses; and planning for a productive physical Expert Group meeting in November 2017. Due to the success of the WebEx format, further meetings will be conducted using this medium.

21. An informal meeting of the Expert Group will be convened during this seventh session of the Committee of Experts. The Expert Group will convene its next formal meeting in Stockholm, Sweden, from 9 to 10 November 2017, immediately following the UNECE/UN-GGIM: Europe Workshop on Integrating Geospatial and Statistical Standards from 6 to 8 November 2017. At that time, the Expert Group will consider the outcomes of the seventh session of the Committee of Experts, receive the first reports from the five GSGF Principle Working Groups, and consider the expanded Expert Group mandate and how to prioritise and manage the linkages with other major programs integrating statistical and geospatial information.

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

22. Within many Member States, there has been for some time a clear recognition of the need to consider integrating alternative and new data sources and to link national information systems, especially statistical and geospatial information, to improve sub-national data, its disaggregation, and the relevance of the evidence on which decisions are made. Put simply, linking people, business and the economy to a particular place or geographic location can result in a fuller understanding of social and economic issues than is possible through a socio-economic information lens on its own. Through the efforts of the Expert Group, and driven by national needs, this recognition and understanding is promulgating. The geographic dimension is increasingly considered as a key enhancement to virtually all national statistics, as it provides the spatial framework and structure for collecting, processing, storing and aggregating the data.

23. The importance of these efforts have been further recognized and validated by the Economic and Social Council (ECOSOC) when, in adopting resolution

2016/27 entitled ‘Strengthening institutional arrangements on geospatial information management’ the Council acknowledged the importance of strengthening capacity-building in the area of geospatial information management and relevant statistical integration, especially in developing countries. Noting the increasing role and relevance of the Committee of Experts, the Council requested that the Committee report back to the Council, no later than in five years’ time, on the implementation of the resolution as well as on its continued efforts to work with the Statistical Commission to integrate geospatial and statistical information systems.

24. The Committee of Experts and the Statistical Commission have adopted the five principles of the Global Statistical Geospatial Framework, and have recognized the importance of the continuing work of the Expert Group, now with a focus on consolidation and implementation of the Framework. With respect to implementation, the Expert Group has been encouraged to focus on capability-building, knowledge management and sharing of good practices and use of technological tools. With respect to consolidation, the Expert Group has been encouraged to build on the work done by other bodies at the global and regional levels and to enable them in turn to build on the work of the Expert Group. The work represents a step towards establishing a global information infrastructure for pooling together multiple layers of data sources, including big data, with an explicit geospatial reference framework that is in keeping with the needs of the global community and development agendas.

25. While the principles of the Global Statistical Geospatial Framework are high level, they are flexible enough that they can be adapted and applied to a wide variety of country or regional contexts. By keeping the principles broad they are able to be applied to local circumstances, while still encouraging the use of international standards and methods. Countries such as Australia, Mexico, New Zealand, Egypt and the United Arab Emirates have produced similar frameworks for their use nationally. With this in mind, at the third meeting of the Expert Group in April 2016, members agreed to prepare country level examples detailing their application of the Global Statistical Geospatial Framework principles in preparation for broader global community input. A template for country examples for each of the five principles has been prepared by the Australian Bureau of Statistics and is presently being tested and validated through completion by the Expert Group. This template will be distributed globally in the near future, and will contribute to the knowledge management and sharing of good practices.

26. At its 48th session, the Statistical Commission agreed to a proposal that the mandate of the Expert Group be strengthened to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information. This poses a substantial challenge for the Expert Group and it will need to consider how it acts upon that “strengthened mandate” and what it means in practical terms. It could include having a more strategic and extended direction on how geography is embedded into statistics; strengthening partnerships with those bodies that integrate statistical and geospatial information in their work; and greater integration – including in the context of open data and a more harmonized manner of producing statistics with geospatial and other sources of data, etc. In order to work effectively in this broad area, the focus areas selected by the Expert Group will need to closely align with both the Statistical Commission and the Committee of Experts. This will also assist the Expert Group in targeting its efforts more broadly and ensure that the significant benefits that can be generated

from the integration of statistical and geospatial information serve the greatest needs.

## **VII. Points for discussion**

### **27. The Committee is invited to:**

**(a) Take note of the report and the endorsement of the Global Statistical Geospatial Framework by the Statistical Commission at its 48th session;**

**(b) Express its views on the Statistical Commission's emphasis for the regional statistical bodies to develop and strengthen partnerships with the regional bodies of the Committee of Experts;**

**(c) Express its views on the proposal that the Expert Group should actively contribute to the work of the 2020 Population and Housing Census Expert Group to promote the integration of statistical and geospatial information and the implementation of the Global Statistical Geospatial Framework; and**

**(d) Provide guidance on strengthening the mandate of the Expert Group to become the overall coordination group for all activities in the area of the integration of statistical and geospatial information, and the Expert Groups desire to align their efforts in this area with the strategic directions of the Statistical Commission and the Committee of Experts;**