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**Department of Economic and Social Affairs
Statistics Division**

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Global Forum on the Integration of Statistical and Geospatial Information

Summary-Report

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Introduction

1. In 2013, at each of their respective intergovernmental meetings, the United Nations Statistical Commission (STATCOM) and the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) “acknowledged the critical importance of integrating geospatial information with statistics and socio-economic data, and the need to develop a statistical-spatial framework, especially in the context of the on-going debate on the post-2015 development agenda”. They established an Expert Group on the Integration of Statistical and Geospatial Information to carry out work on developing a statistical-spatial framework as a global standard for the integration of statistical and geospatial information, inclusive of an international conference.
2. The United Nations Statistics Division, in collaboration with the Expert Group on the Integration of Statistical and Geospatial Information, convened the first Global Forum on the Integration of Statistical and Geospatial Information in New York, 4-5 August 2104, in conjunction with the 4th session of UN-GGIM. As a way of reaching out and developing best practices, bringing together both the statistical and geospatial professional communities, the Global Forum brought together more than 200 senior leaders, from 73 countries, to discuss the strategic vision and goals for the integration of statistical and geospatial information. It continued the global consultation and communication on the development of a global statistical-spatial framework initiated since the inception of the Expert Group in November 2013. A full list of participants is available at Annex 1.

Opening Session

3. Mr. Rolando Ocampo, from INEGI-Mexico, in his capacity of co-Chair of the Expert Group on the Integration of Statistical and Geospatial Information, declared the opening of the Global Forum and welcomed all the delegates. He then gave the floor to his co-Chair, Mr. Peter Harper, from ABS-Australia, to chair the opening session. Mr. Harper made a few opening remarks on the genesis of the Expert Group, the importance of its work to achieve the integration of statistical and geospatial information, as well as the desired vision for the future.
4. Mr. Stefan Schweinfest, UNSD Director, welcomed the participants, recalled the decisions adopted by the 44th Session of the Statistical Commission and the third Session of UN-GGIM which led to the establishment of the Expert Group, the organization of its first meeting in New York in November 2013 and the International Workshop in Beijing in June 2014. In his opening remarks, he emphasized that the establishment of the Expert Group, bringing together global statistical and geospatial experts to discuss and address common issues, reflects the recognition of the importance of the integration of geospatial information and statistics in supporting social, economic and environmental policy decision-making.

5. An agenda, as presented at Annex 2, was considered as the means to guide the issues and discussions by the experts.

Organization of work

6. The programme of the Forum has been prepared to be strategy-oriented. It consisted of an opening session to set the global context for the main theme of the Forum, and four subsequent sessions to discuss what has been done so far to achieve the vision of integration of statistical and geospatial information and how to get there. The Global Forum was indeed conducted through a combination of keynote speeches, by distinguished speakers, and various presentations by experts, representing the national statistical offices and the national geospatial information authorities, international/regional organizations and UNSD, as well as discussions during topic-oriented sessions. For papers and presentations see <http://ggim.un.org/Global%20Forum.html>.
7. Experts from both statistical and geospatial communities were compelled by emerging trends to look for the common ground, and their contributions were fully supportive of the need to integrate statistical and geospatial information, including through the development of a statistical-geospatial framework, the building of capabilities and expertise, the adoption of common terminology, and better coordination and cooperation. What follows is a summary of salient issues that were discussed during the sessions, the major outcomes and conclusions for the way forward.

Key Outcomes of the Global Forum

8. There was a general recognition by the participants that the Global Forum offered a good opportunity for a better understanding of future challenges and other required actions to be taken by both the national statistical offices (NSOs) and the national geospatial information authorities (NGIAs) in integrating statistical and geospatial information. It was noted that both statistical and geospatial communities are major contributors of information used for evidence-based decision-making across many sectors, both public and private, for which institutional coordination and cooperation between the statistical and geospatial agencies within a country are vitally important and key factors to the success of the integration.
9. It was acknowledged that in order to meet the objective of providing a forum for coordination and communication among representatives of both statistical and geospatial communities, with a view to closely working with 'Big Data' community, it was important to first define common terminologies and share agreed protocols. It was also noted that data collection, processing, analysis and operations are important, but more important are the access to and sharing of data, and particularly the communication of related information and knowledge sought by end users.
10. Participants stressed the fact that institutional integration within a country to support statistical and geospatial integration requires a strong political commitment. In this regard, advocacy of the benefits of linking socio-economic

data to a location and the value proposition of integrating statistical and geospatial information should be conveyed to decision and policy makers, allowing them to understand the need of national institutions for adequate resources to achieve the integration.

11. One of the recurrent key issues discussed were the various geographic classifications practices and approaches used to determine and represent geographical units for statistical purposes. In this regard, there is agreement on the need for a comprehensive study and methodological guidelines on the advantages, benefits, and appropriate use associated with a grid-based approach versus a population/administrative approach or a mixed approach to the compilation and dissemination of statistical data and information.
12. Participants stressed the challenges NSOs and NGIAs face in maintaining data confidentiality and privacy with the advancement of technology accompanied by greater demands for data accessibility. It was recommended that national statistical and geospatial organizations take extra steps to safeguard confidentiality not only in the micro-data provisions, but also with regard to small areas with GIS presentations and its corresponding spatial analysis capabilities. Confidentiality breaches can potentially happen with outsourcing requiring that safeguards by way of specific or explicit provisions in the contract with the service providers be provided and followed.
13. The benefits of developing, adopting and implementing technical standards and common metadata have been recognized by the participants from both statistical and geospatial communities, as they enable interoperability and facilitate the integration and use of diverse sources of statistical and geospatial data and services in all sectors of a global economy. It was noted that the development of common standards and metadata would make statistical and geospatial information more useable and more relevant to a wider range of stakeholders.
14. Geography is increasingly recognized as key to virtually all national statistics, providing a structure for collecting, processing, storing, aggregating and disseminating data. It was noted that many national statistics offices are already transforming, or are planning to transform, their statistical infrastructure, offering an opportunity to embed geography into their national systems and processes; such activities can contribute to the modernization of statistics. It was also noted that there is a strong spatial dimension to environmental economic accounting which can benefit from the integration of statistical and geospatial information.
15. Providing a greater geographic context for population census information was also an important driver that was noted by the participants. In this regard, there was agreement that the 2020 Round of Censuses offer an opportunity to enhance the geospatial capabilities of NSOs, including opportunities for efficiencies. The agreement on a course of action for the development of a statistical-geospatial information infrastructure in support of the 2020 Round of Censuses was stressed.
16. Participants recognized that adding a geospatial capability to statistics requires the codification of location attributes linked to socio-economic statistical information, known under the concept of geocoding. Geocoding, including

geocoding of addresses, was indeed recognized as a fundamental building block to maximising the spatial potential of statistical information. The Expert Group should agree on a common approach to geocoding address information, such as the addition of a geocoded reference (ideally latitude and longitude) in each data record in the data management system, and the use of a common set of hierarchical geographic boundaries that are based on population numbers, so that each geographic area within each level of the hierarchy contains similar population numbers.

17. It was noted that sharing best practice principles, particularly around innovative dissemination and analytical/modelling techniques, is another mechanism for developing a consistent approach to integrating socio-economic and geospatial information. The global analytics community has similar interests and objectives and could be a powerful ally in meeting the challenge of linking socioeconomic information to a location.
18. Participants confirmed the need for an overarching statistical-spatial framework as part of an overall information architecture at both the national and global levels. They recognized that when both statistical information and geospatial information are integrated within a statistical-spatial framework, the geo-statistical results can significantly improve the quality of official statistics and Population Censuses, and the measuring and monitoring of the sustainable development goals.

Conclusions and the Way Forward

Participants of the Forum concluded that:

19. As major contributors of information used as evidence-based decision-making across many sectors, both public and private, coordination and institutional integration between the statistical and geospatial agencies within a country is vitally important;
20. Geospatial data can significantly improve the quality (accuracy, relevance, accessibility) of official statistics, and population censuses are key enablers for demonstrating statistical and geospatial integration for all stages of a statistical cycle;
21. Both statistical and geospatial communities should have a common voice in information discussions, such as the Post-2015 Development Agenda; and
22. There is an urgent need for a mechanism, such as a global statistical-spatial framework, to facilitate consistent production and integration approaches for geo-statistical information.

Annex 1:

List of Participants

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209. Mr Neil **Fantom**
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210. Ms Anna **Burzykowska**
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211. Ms Lina **Bassarsky**
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ANNEX 2: Agenda

MONDAY, 4 August

9.30-9.50 Welcome and Opening Session – Opening of the Global Forum

- Opening and welcome [UN EG-ISGI Chairs]
- Opening Remarks [UNSD Director]
- Programme and other organizational matters [UNSD]

9.50-11.00 Opening Session – The global context

Keynote presentations:

- Distinguished Professor Nassim Nicholas Taleb – A broad view of future challenges and information needs
- Ambassador Múnera, Secretary General of the Association of the Caribbean States – challenges and information needs for the developing world
- Professor Paul Cheung - Using Location Information for Better Planning and Decision Support: Integrating Big Data, Official Statistics and Geospatial information

11.00-11.15 Break

11.15-13.00 Session 1 – Positioning for the future – Determining the desired vision for the integration of statistical and geospatial information

Chair: Mr. Li Pengde, China

Presentations:

- The Global perspective on what has been done so far to achieve the vision of integrated statistical and geospatial information, and how the journey is going: [Mr. Rolando Ocampo, Representative of UN-GGIM and EG-ISGI]
- A regional perspective on what has been done so far to achieve the vision of integrated statistical and geospatial information, and how the journey is going: [Mr. Ekkehard Petri-Eurostat]
- A country perspective: Ten lessons on the production of geospatial information in Mexico [Mr. Edouardo Sojo, Mexico]
- Articulation of the vision – what will the future look like if the vision for integrated statistical and geospatial information has been achieved [Mr. Peter Harper, Australia]

Discussion

14.30-
16.15

Session 2 – Achieving the vision – a global framework

Chair: Mr. Peter Harper, **Australia**

Presentations:

- Authoritative geospatial infrastructure and geocoding
 - NSDI datasets and use in statistics [Ms. Sharthi Laldaparsad, South Africa]
- Data management: geocoded unit record data
 - Confidentiality management and geocoded unit record data: lessons from the Eurostat population grid data [Ms Susanne Schnorr-Baecker, Germany]
- Common geographic boundaries
 - Small area geographies: administrative, functional and grid based geographies – one or many? [Mr. Tim Trainor, USA]
- Metadata interoperability
 - International cooperation to achieve interoperability between statistical and geospatial metadata [Mr. Mark Reichardt, OGC]
- Standards & guidelines
 - Dimensions of quality in statistical and geospatial datasets : common themes and concepts [Mr. Peter Harper, Australia]

Discussion

16.30-
18.00

Session 2 – Achieving the vision - roadmaps

Chair: Mr. Rolando Ocampo, **Mexico**

Projects/Programmes that signpost the way forward:

- Statistical-geospatial integration, the example of Sweden [Ms Marie Haldorson, Sweden]
- Measuring regional well-being: OECD work to improve territorial information [Ms Monica Brezzi, OECD]
- Data integration in the Philippines: responding to a national catastrophe [Mr. Candido Astrologo, Jr., Philippines]
- SEEA, accounts for the integration of economic, social and environmental statistics [Mr. Ivo Havinga, UNSD]

Discussion

TUESDAY, 5 August

9.00-10.30 Session 3– Population Census – an exemplar for integration

Chair: Mr. Tim Trainor, USA

Presentations:

- Geospatial technology and data providing improvements and efficiency in Brazil population census and household surveys
[Mr. Joao Bosco de Azevedo, Brazil]
- The Polish Modern Census : incorporating geospatial technology and data with administrative information
[Mr. Janusz Dygaszewicz, Poland]
- 2020 round of Population Censuses: incorporating geography into all stages of the Population Census [UNSD talking about plans for integrating geospatial into the 2020 round of Censuses – Ms Margaret Mbogoni]

Discussion

10.30-10.45 Break

10.45-12.00 Session 4 – How to get there – the strategic opportunities

Chair: Ms Monica Brezzi, OECD

Presentations:

- Cooperation, coordination and harmonization
[Mr. Siau Yong NG, Singapore]
- Leveraging information infrastructure modernization programs to integration of statistical and geospatial information
[Mr. Ian Coady, UK]
- A geographic census: comprehensive national and international datasets –
[Mr. Li Pengde, China]

Discussion

12.00-12.30 Concluding/Closing Session

Session facilitated by UN EG -ISGI co-chairs:

- Reflect on the content and discussions from sessions 1-4.
- Review the Expert Group priorities (from the EG Terms of Reference) and identify any additional priorities.
- Endorse the final priorities.

