

---

# Economic and Social Council

2 July 2015

---

## Committee of Experts on Global Geospatial

### Information Management

#### Fifth session

New York, 5-7 August 2015

Item 7 of the provisional agenda\*

### Implementation and adoption of standards for the global geospatial information community

## Implementation and adoption of standards for the global geospatial information community

### Note by the Secretariat

#### Summary

The present paper contains the report of the Open Geospatial Consortium (OGC), the technical committee 211 of the International Organization for Standardization (ISO/TC211), and the International Hydrographic Organization (IHO) on the implementation and adoption of standards for the global geospatial information community for consideration by the Committee of Experts on Global Geospatial; Information Management.

At its fourth session, held in New York from 6 to 8 August 2014, the Committee of Experts: adopted decision 4/110, in which it welcomed the joint efforts of the Open Geospatial Consortium, Technical Committee 211 of the International Organization for Standardization and the International Hydrographic Organization to produce a standards guide and a companion document on the importance and availability of technical standards for the geospatial community. The Committee agreed that the standards guide and the companion document are important methodological guidelines to assist Member States in implementing and adopting geospatial standards; and noted that there was still a need to continue to raise the awareness of geospatial standards and related policies, and that relevant case studies and best practices were important means of demonstrating the value to decision makers. The Committee of Experts took note of suggestions by Member States to build on the standards guide and companion document to include case studies, the business value proposition, data capture and quality issues, and related policies, and requested the Secretariat to work with international standards organizations and report to it at its next session. The report describes the initiatives by the international standards organizations to continue their collaboration and build on the standards guide and the companion document, by focusing on the enrichment of the areas of case studies, business value proposition, data capture, quality issues and related policies. The report also provides suggestions for the Committee of Experts to consider on the best means for continuing to raise awareness of geospatial standards and related policies, particularly in the implementation of the post-2015 development agenda. As agreed at its fourth session, the Committee of Experts will have the final published standards guide and companion document before it at its fifth session.

---

\* E/C.20/2015/1

## **I. Introduction**

1. At its third session, held in July 2013, the Committee of Experts adopted decision 3/106 (E/2013/46) in which it noted the close degree of cooperation between the international standardization bodies and stressed the importance of standards for effective data sharing, as well as the need for the full involvement of Member States in the development and maintenance of standards. In addition, the Committee emphasized the importance of implementing and adopting standards within national legal and policy frameworks, and noted the need for developing countries to receive support from the standardization bodies in these efforts. The Committee of Experts requested the Secretariat to continue its work with the standardization bodies and the Member States and report back to the Committee in the future.

2. At its fourth session, held in August 2014, the Committee of Experts adopted decision 4/110 (E/2014/46) in which it welcomed the report prepared by the Open Geospatial Consortium (OGC), Technical Committee 211 of the International Organization for Standardization (ISO/TC211) and the International Hydrographic Organization (IHO), and expressed its appreciation for their efforts in producing the standards Guide and Companion document. In addition it agreed that the background documents entitled “A guide to the role of standards in geospatial information management” and “Companion document on standards Recommendations by Tier” are important methodological guidelines to assist Member States in implementing and adopting geospatial standards within their national frameworks.

3. At its fourth session, the Committee of Experts noted that there is still a need to continue to raise the awareness of standards and policies related to e-government agendas, and that relevant case studies and best practices are an important means of demonstrating value and benefit to decision makers. The Committee took note of the suggestions by a number of Member States to build on the Guide and Companion document to include the following areas: case studies; business value propositions; data capture and quality issues; and related policies. The Committee agreed to publish the Guide and Companion document as UN-GGIM reports, and acknowledged the offers by Member States to have them translated. The Committee requested the Secretariat to continue its work with existing standardization bodies and the Member States and report to the Committee at this fifth session

4. The present report provides an update on the follow-on work from the production of the Guide, including case studies showing the value of geospatial standards, preliminary work towards standards interoperability between the statistics and geospatial community and standards requirements for the Sustainable Development Goals. The Committee of Experts is invited to take note of the report and to express its views on the way forward for the implementation and adoption of standards for the global geospatial information community. Points for discussion and decision are provided in paragraph 20.

## **II. Adoption and Implementation of Standards in Geospatial Information Management**

5. Since the second session of the Committee of Experts, the issues related to standards setting in the global geospatial information community have been extensively discussed (see E/20/2012/46 decision 2/103, and E/20/2013/46 decision 3/106). The work carried out by OGC, ISO/TC211, IHO and other relevant international organizations has been

recognized as valuable to the geospatial information community. These organizations are developing consistent and precise technical geographic standards that form the core building blocks to enable data and information interoperability and to facilitate the integration and use of diverse sources of geospatial data and services.

6. The benefits of developing and implementing technical standards have been recognized by the global geospatial community as they bring uniformity, compatibility and interoperability to millions of processes, devices, and applications in all sectors of a global economy. It has been also recognized that the lack of standards, or not using existing relevant standards, could be harmful, as has been experienced, for example, in numerous cases of disaster management.

7. While some countries are adopting and implementing international standards, many others are progressing very slowly or not at all, whether for a lack of resources, lack of knowledge of the standardization processes or both. Despite the progress being made, many challenges remain with the adoption and implementation of existing standards, especially in national legal and policy frameworks, chief among them being the lack of understanding at the political/policy level. There is a general recognition from Member States' experts that mechanisms are needed that emphasize and support the adoption and implementation of global geospatial standards, and in particular, reach out to the policy makers.

### **III. The Guide and Companion Documents**

8. The development of the Guide and Companion documents involved collaborative efforts by the standards organizations and recognition should be given to Member States who provided inputs, and in particular the United Kingdom of Great Britain and Northern Ireland for providing services for formatting and e-publishing and to Canada for translation into French..

9. The Guide and Companion document have formed the basis for numerous education workshops across the globe, including the Standards Capacity Building Workshop for the Caribbean being conducted immediately prior to the fifth session of the Committee of Experts. These are becoming a recognized resource for the geospatial community in promoting best practice for utilizing and implementing geospatial standards.

10. The Guide states that reaping the benefits of standards adoption is a journey and organizations, institutions and information communities are likely to be starting this journey at different points in the capability/maturity continuum. In order to assess the benefit of the Guide and the Companion documents, OGC, ISO/TC211 and the IHO invite the Member States to provide feedback on the use of the documents in their countries, in particular in terms of the key benefits obtained and how the documents are being used.

11. In response to the comments provided by the Member States at the fourth session of the Committee of Experts, OGC, ISO/TC211 and the IHO have begun an investigation into case studies and examples that demonstrate the value of using geospatial standards. This is intended to be a complement to the existing Guide and Companion Documents. A discussion paper on the preliminary findings will be available as a background document to this report and will be discussed at the standards side event on the margins of this fifth session of the Committee. OGC, ISO/TC211 and the IHO welcome participation and support from the Member States in this investigation.

## **IV. Geospatial Information Standards Activities**

12. The Guide aims clearly to support the adoption and implementation of geospatial information standards by countries and calls on the policy makers in those countries to invest in geospatial standardization. In this regard, it stresses that stakeholder organizations must make clear statements regarding the commitment to using standards and if at all possible this commitment should be documented in procurement policy. To maximize the value of investments, organizations should use procurement language that requires vendors to offer standards-based solutions.

13. It is also worth noting that the Secretariat will convene a side event on standards on the margins of the fifth session of the Committee of Experts, to be held in New York in August 2015, to brief the Member States on case studies highlighting the value of the use of geospatial standards and good practice in adopting them. Member States are also invited to deliver briefs on their developments and progress towards adoption of geospatial standards.

14. The Committee is invited to provide an update on how Member States have used the existing documents - "The Guide to the Role of Standards in Geospatial Information Management" and its companion technical document, in their own nations as methodological guidelines to assist Member States in implementing and adopting the existing standards within national legal and policy frameworks in geospatial information.

15. In efforts to develop closer collaboration between the geospatial standards community, the revised terms of reference for the OGC and ISO/TC211 Joint Advisory Committee were approved at the 95<sup>th</sup> Technical Committee Meeting of the Open Geospatial Consortium and the 40<sup>th</sup> ISO/TC211 Plenary.

16. Following meetings between OGC, ISO/TC211 and IHO, an invitation will be extended to ISO/TC69 - Application of Statistics, to develop an active liaison with the geospatial standards organizations to assist in the work of the United Nations Expert Group on the Integration of Statistical and Geospatial Information.

## **V. Sustainable Development Goals**

17. In recognition of the impending adoption of the 17 Sustainable Development Goals (SDGs) OGC, ISO/TC211 and the IHO would like to emphasize the important role that geospatial information standards will play in the decision making processes, and measurement and monitoring of the global efforts towards the achievement of the SDGs.

18. The ability to sustainably manage land, the environment and sea and water areas across the planet is reliant on high quality geospatial data that can be easily shared, communicated and utilized across multiple purposes. The adoption of common principles and the consistent application of international geospatial standards can enable decision makers to access the location based information they need to enable their nation the best pathway to achieving the 17 goals.

19. The SDGs also present the possibility that new or modified standards are required. OGC, ISO/TC211 and the IHO encourage Member States to review their standards requirements as they determine how they will pursue achieving the SDGs in their own

country and invite them to participate in the standards development processes of OGC, ISO/TC211 and the IHO to assist in the development of any new or enhanced standards as may be required.

## **VI. Points for discussion**

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

**(a) Take note of the report and work done by the international standards organizations;**

**(b) Adopt the published “Guide to the Role of Standards in Geospatial Information Management” and the “Technical Compendium” as the international geospatial standards best practice for spatial data infrastructure and encourage all Member States to implement the recommended standards appropriate to their countries’ level of SDI maturity;**

**(c) Encourage Member States to adopt and implement the available standards and to work in cooperation with the international standardization bodies, including participation, as appropriate, in the work programs of the OGC, ISO/TC211 and the IHO;**

**(d) Encourage Member States to offer translation services to enable the Guide and Companion documents to be accessible in all languages;**

**(e) Provide guidance on the way ahead for the further development of harmonized standards between the statistics and geospatial communities;**

**(f) Encourage Member States to participate in the international geospatial standards development processes of OGC, ISO/TC211 and the IHO to ensure that the geospatial standards required to achieve the SDGs are available.**