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**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

The Secretariat has the honour to bring to the attention of the Committee of Experts on Global Geospatial Information Management the report prepared jointly by the International Hydrographic Organization, technical committee 211 of the International Organization for Standardization (ISO) and the Open Geospatial Consortium, which will be available in the language of submission only from the relevant web page of the Committee of Experts (https://ggim.un.org/meetings/GGIM-committee/14th-Session). The Committee is invited to take note of the report and to express its views on the ongoing work of the three standards development organizations in the innovation, adoption and implementation of standards for the global geospatial information community.

**Summary of the report**

At its thirteenth session, held from 2 to 4 August 2023, the Committee of Experts adopted decision 13/113, in which it expressed its appreciation for the continued alignment of the standards development organizations with the work of the Committee of Experts and welcomed the many examples of how countries were using the standards for advancing data access and interoperability, demonstrating the benefits of implementing geospatial standards to ensure standards accountability and compliance of practice in modern information systems and applications across many business and government sectors, such as smart cities, urban digital twins, intelligent transport systems and energy. The Committee encouraged the broad use of standards and the standards guide to support the implementation of standard-based solutions that ensure interoperability, data-sharing and flexibility to adapt to changing data sources and technologies, noting that the real value of standards was in their actual use in the process of implementation and operation.

* E/C.20/2024/1.

The Committee further encouraged Member States and the United Nations Global Geospatial Information Management regional committees to participate in the continued development, maintenance and advancement of geospatial standards in collaboration with the standards development organizations, to increase the quality, interoperability and application of standards, and to provide practical examples and best practices on the implementation of geospatial standards to support the measurement and monitoring of the Sustainable Development Goals.

In the report, the International Hydrographic Organization provides information on its continuing efforts to advance the S-100 Universal Hydrographic Data Model to support the creation and maintenance of interoperable maritime data product services that are compliant with the ISO 19100 series of geographic information standards. The organization reports that edition 5.1.0 was released in October 2023, and several S-100-based product specifications are being developed and implemented in collaboration with several international organizations, including entities of the United Nations system and partners such as the International Association of Marine Aids to Navigation and Lighthouse Authorities and the World Meteorological Organization. The International Hydrographic Organization also reports that it has established a freely available training resource on maritime spatial data infrastructure to assist its members in aligning their country-level work to the United Nations Integrated Geospatial Information Framework and the Operational Framework for Integrated Marine Geospatial Information Management.

Technical committee 211 of ISO, in the report, provides information on its activities with entities of the United Nations system and partners, including supporting the modernization of the geodetic infrastructure in coordination with the United Nations Global Geodetic Centre of Excellence. The committee discusses its progress in the development of the ISO 19152 Land Administration Domain Model, of which part 1 has been published and part 2 will be published later in the year. This development allows better integration of land and sea boundaries and supports the implementation the Framework for Effective Land Administration, as well as the Operational Framework for Integrated Marine Geospatial Information Management. The committee also discusses the development of ISO 19144 on land cover and land use, in conjunction with the Food and Agriculture Organization of the United Nations, of which parts 1 and 2 have been published and part 3 should be published by August 2024. The committee also highlights its work with the Expert Group on the Integration of Statistical and Geospatial Information on the review of the Global Statistical Geospatial Framework.

In the report, the Open Geospatial Consortium discusses its focus on developing and testing open geospatial application programming interface standards via pilots, projects and testbeds under its collaborative solutions and innovation programme, covering several areas including climate services, disasters, the marine environment, digital twins and the built environment. The Consortium emphasizes the integration of geospatial information with statistics and other data under the findable, accessible, interoperable and reusable data principles. The Consortium reports that it is witnessing an acceleration in the advancement of standards and the creation of new working groups, such as those relating to the geospatial indicator standardization effort. The Consortium further reports that it continues to enhance interoperability with its standards, as well as the International Hydrographic Organization and ISO standards, thereby ensuring a cohesive framework for geospatial data utilization and standardization, in support of the global geospatial information agenda.

Furthermore, in the report, the three standards development organizations provide an overview of their work to support the measurement and monitoring of the Sustainable Development Goals and present how they are working to practically strengthen their interaction with the regional committees, functional groups and

thematic networks of the Committee of Experts. The report also includes practical examples of the use of geospatial standards in support of the Goals, including a collection of user stories showing how standards have helped countries work towards specific Goals.