The Open Geospatial Consortium and ISO/TC 211 Geographic Information/Geomatics contribution of Geospatial International Standards in support of SDGs, Climate and the broader societal Environment

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SUMMARY

The Open Geospatial Consortium (OGC) with ISO/TC 211 Geographic Information/Geomatics continue their standards development supporting the Geospatial community, various United Nations programs, World Bank and National Mapping agencies.

OGC continues to ensure their standards reflect the current technology advances via their work program with its advancement of an open API Standards suite - a modernization and expansion of OGC's Web Services Standards.

This work on the OGC API Standards is now expanding the capabilities of the core Standards and beginning to offer new functionality, such as APIs for Moving Features and Discrete Global Grid Systems.

The rapid rise in use of Artificial Intelligence (AI) in geospatial data processing and analysis, has also initiated the development of Training Data Markup Language (TDML) for AI that provides a consistent metadata model to describe the source, provenance, and suitability of training and validation data for AI systems.

Another significant OGC program is the Collaborative Solutions and Innovation (COSI) program, which brings participants together to collectively work on solving common problems across multiple domains. The COSI program uses real-world scenarios and demonstrations of results and is closely connected to the standards program. Testing OGC and ISO standards using practical use cases results in improvements based on implementations and shortens the adoption cycle of new and existing

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standards.

Programs being covered by COSI are: Climate and Disaster Resilience; Federated Marine Spatial Data Infrastructure; Digital Twin of the Ocean; Urban Digital Twins Interoperability; Integrating geodata with Building Information Model (BIM) data; Geodatacubes and Integrity Provenance and Trust.

ISO/TC 211 is supporting the broader objectives of the 2030 Agenda for Sustainable Development: general purpose geospatial standards that are important for industry and infrastructure, and those standards in direct support of the UNGGIM, specifically in the areas of Geodetic Referencing, Land Administration, Land Cover and Land Use, and Addressing. For example, the UN Convention on Combating Desertification uses ISO 19144 to integrate land cover information; the standard was prepared and revised jointly with FAO.