EARTH OBSERVATION SYMPOSIUM (B1)
GEOSS and Carbon Monitoring from Space (6)

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THE GEOSS QUALITY ASSURANCE FRAMEWORK FOR EARTH OBSERVATION (QA4EO): ACHIEVEMENTS AND FUTURE IMPLEMENTATION.

Abstract

The Group on Earth Observations (GEO) has recognised that without a robust data quality assurance strategy it will be unable to achieve its goal of a Global Earth Observation System of Systems (GEOSS) that delivers "fit for purpose" products meeting the needs of the Societal Benefit Areas (SBAs) in a timely manner. A key requirement is to provide users with sufficient information to enable them to assess suitability for specific applications, enable sensor to sensor interoperability (past, present and future) and synergistic combination of data from a wide variety of systems: satellites, aircraft and in situ. In response to this need, the Committee on Earth Observation Satellites (CEOS) Working Group on Calibration and Validation (WGCV) has established the Quality Assurance Framework for Earth Observation (QA4EO), supported by a set of guidelines to achieve this GEO objective. QA4EO has one key principle: that data must have associated with them quality indicators (QIs) based on documented evidence of traceability to reference standards agreed by the scientific community (ideally SI). This paper highlights the large number of international activities being developed in the framework of QA4EO: workshops, harmonisation efforts to enhance interoperability, definition of specific procedures and methodologies. The future implementation of QA4EO across the heterogeneous GEOSS communities is a long term-objective that can be divided into technical, policy and financial aspects. The paper presents these issues and concludes with the future developments envisaged for QA4EO.