



Why do Geodetic Data need DOIs? First ideas of the GGOS DOI Working Group

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Only four years after the implementation of digital object identifiers (DOIs) for unambiguously identifying and linking to online articles, the first DOI for digital datasets was registered in 2004. Originally developed with the purpose of providing permanent access to (static) datasets described in scholarly literature (to allow reproducibility and scrutiny of research results), DOIs today are increasingly used for dynamic datasets (e.g. time series from observational networks, where new data values are added frequently given that the originally published data will not change), collections or networks. These DOIs (and other persistent identifiers) are mainly assigned for providing a citable and traceable reference to various types of sources (data, software, samples, equipment) and means of rewarding the originators and institutions.

As a result of international groups, like the Coalition for Publishing Data in the Earth and Space Sciences (COPDESS) and the Enabling FAIR Data project, datasets with assigned DOIs are now fully citable in scholarly literature - many journals require the data underlying a publication to be available before accepting an article. Initial metrics for data citation are available and allow data providers to demonstrate the value of the data collected by institutes and individual scientists - which makes them even more attractive.

This is especially relevant in the framework of evaluation criteria for institutions and researchers, that usually only consider scientific output in the form of scholarly literature and citation numbers. Compared to other scientific disciplines, geodesy researchers appear to be producing less "countable scientific" output. Geodesy researchers, however, are much more involved in operational aspects and data provision than researchers in other fields might be. Geodesy data and equipment therefore require a structured and well-documented mechanism which will enable citability, scientific recognition and reward that can be provided by assigning DOI to data, data products and scientific software.

To address these challenges and to identify opportunities for improved coordination and advocacy within the geodetic community, the International Association of Geodesy's (IAG) Global Geodetic Observing System (GGOS) has established a Working Group on "Digital Object Identifiers (DOIs) for Geodetic Data Sets". The GGOS DOI Working Group (with more than 20 members) officially started

with a first meeting during December 2019, co-located to the AGU Fall Meeting. Beginning with an assessment of DOI minting strategies that are already implemented, the GGOS DOI Working Group is designated to establish best practices and advocate for the consistent implementation of DOIs across all IAG Services and in the greater geodetic community.

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