Data sharing: more science unions must act

An investigation of 41 member unions and associations by the International Science Council's Committee on Data (CODATA) has revealed sluggish progress on data sharing. Just 25 members have sub-organizations committed to open data and only a few have produced standards for machine-readable data and metadata (<u>https://tinyurl.com/codatawg</u>).

Such standards are crucial to the 'findable, accessible, interoperable and reusable' (FAIR) data movement (<u>Musen, 2022</u>). The International Union of Geological Sciences (IUGS) and the International Union of Pure and Applied Chemistry (IUPAC) are forging ahead.

The IUGS Commission on Geoscience Information, for example, coordinates metadata outputs and vocabularies. These have been adopted by OneGeology, Infrastructure for Spatial Information in Europe and the US Geoscience Information Network, and are being extended to the IUGS Deep-time Digital Earth initiative (https://www.ddeworld.org).

Researchers in other disciplines would benefit from efforts similar to the IUPAC's. IUPAC is part of the European Union-funded WorldFAIR project (<u>https://www.worldfair-project.eu</u>), which is exploring FAIR practices in 11 domain or cross-domain case studies.

Xiaogang Ma University of Idaho, Moscow, Idaho, USA. max@uidaho.edu Lesley Wyborn Australian National University, Canberra, Australia. Simon Hodson CODATA, Paris, France.

Accepted for publishing as a correspondence on Nature. The final version might be slightly different.