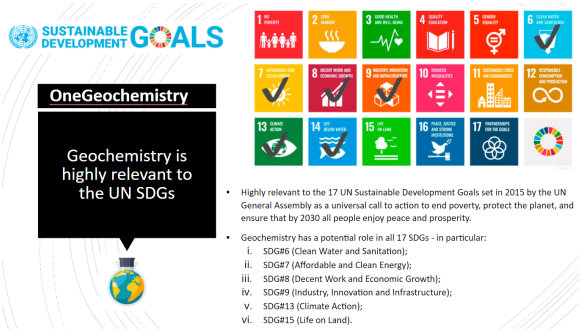
Goldschmidt 2022 Abstract
https://doi.org/10.46427/gold2022.10816

The OneGeochemistry Initiative

DR. ALEXANDER M PRENT[1], MARTHE KLÖCKING[2], LUCY PROFETA[3], KERSTIN A LEHNERT[3], KIRSTEN ELGER[4], DOMINIK HEZEL[5], GEERTJE TER MAAT[6] AND LESLEY ANNE I WYBORN[7]

[1]Curtin University
[2]Georg-August-Universität Göttingen
[3]Lamont-Doherty Earth Observatory, Columbia University
[4]GFZ German Research Centre for Geosciences
[5]Goethe-Universität Frankfurt am Main
[6]Utrecht University
[7]Australian National University

Presenting Author: alexander.prent@curtin.edu.au



Geochemical data underpins our interpretation and understanding of natural-geological processes taking place on and off planet Earth. Geochemical data has been produced since the 1800s and with the development of better analytical capability and computing power the rate of data production within this discipline is ever increasing. Laboratories, institutes and nations have realized that there is a need for data organization, although solutions are variable. Globally a number of national organizations concern themselves with storage and management of geoscience and geochemistry data, such as EarthChem, DIGIS/GEOROC, NFDI4Earth, MetBase, the AuScope Geochemistry Network and EPOS (working internationally within Europe). Their goal is to make geoanalytical data accessible in a FAIR format.

Making data FAIR on a national level is difficult and an ever evolving process, which often duplicates efforts by addressing problems already solved across the border. To create a global framework of reusable geochemical data the International Geochemistry community needs to come together to define the required, globally-agreed standards and best practices that will enable world-wide interoperability, reuse and open sharing of geochemical data. In order to achieve truly global FAIR data for geochemistry, existing and new initiatives from all continents need to link up and learn from each other.

OneGeochemistry is an initiative that aims to scope out the current status and practices of existing initiatives, link new with present and to provide advice for the community. As part of the CODATA/RDA WorldFAIR project, enthusiastic researchers from the aforementioned initiatives will formalize this global collaboration, make an inventory of current data infrastructures and terminologies and recommend a way of globally sharing high value data both within the geochemical community and externally with other communities such as biodiversity, oceans, hazards and social sciences. The OneGeochemistry initiative seeks to create a global geochemical data network that facilitates and promotes discovery and access of geochemical data through coordination and collaboration among international geochemical data providers. Which needs to be a community-driven effort, where expert groups form around each geochemical data type to determine a minimum set of variables and required vocabularies.