

Metadata generation, enrichment and linkage across the three domains health, environment and earth observation

Cross-domain research is often hampered by the lack of harmonized metadata schemas and standards. Metadata of different domains vary in origin, format and scope, so they cannot be merged routinely. In the interdisciplinary field of environmental epidemiology, an efficient linkage of health data with the multitude of environmental and earth observation data is crucial to quantify human exposures. To bridge the gap between the metadata of our different research fields, we aim to compile machine-readable and interoperable metadata schemas for exemplary data of our three domains Health (HMGU), Earth & Environment (UFZ), and Aeronautics, Space & Transport (DLR).

As use cases for metadata compilation, enrichment, and pooling, the project partners contributed with metadata of the child cohorts GINI and LISA (HMGU), drought monitor (UFZ) and land cover (DLR). UFZ and DLR will adopt as common standard ISO 19115: Geographic Metadata Information. For HMGU, we reviewed several metadata standards for health data (e.g. CDISC ODM, Snomed CT, HL7 FHIR) and started to upload our metadata to the NFDI4health StudyHub, an inventory of German health studies on COVID-19. In addition, we have developed a workflow to transform base cohort information in an ISO 19115 compliant manner without exposing sensitive information about participants' data.

Spatial and time coverage will be the main mapping criteria. The metadata of our three domains will be uploaded into an instance of GeoNetwork, a catalog application that we are currently setting up in a testing environment, where they can be jointly queried and searched. We aim to have a server version ready by the end of the project that can be augmented with additional metadata from our domains, but also from other fields, to facilitate interdisciplinary research.

Please assign your poster to one of the following keywords.

other

In addition please add keywords.

Health, environment, earth observation, mapping

Please assign yourself (presenting author) to one of the stakeholders.

Please specify "other" (stakeholder)

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Session Classification: Postersession I

Track Classification: Postersession