

7.1 Meteorological Data Rescue

Chris Little, based on scenarios used for the WMO infrastructure requirements.

▲ Full use case description (click to collapse):

This is really one of several future, but realistic, meteorological scenarios to aim at.

National Hydro-Meteorological Services around the world are coordinated via the WMO (World Meteorological Organization), part of the United Nations system. WMO has the same status as ISO, and its standards and regulatory materials applies to all its 193 national meteorological services and are available in the six working languages (عربي | 中文 | Fr | Ru | Es | En). WMO has embarked on a long-term (think a decade or so) program to update the global meteorological operational infrastructure. This is known as the WIS (WMO Information System). The global infrastructure also has aviation, oceanographic, seismic and other users. The WIS includes a global, federated, synchronized, geospatial catalog, envisaged to encompass all hydro-meteorological data and services. Currently several nodes are operational, cataloging mainly routinely exchanged observations and forecasts.

Envisage an environmental scientist in Cambodia, researching the impact of deforestation in Vietnam as part of investigating the regional impacts of climate change. She submits her search keywords, in Cambodian, and receives responses indicating there is some data from the 1950s, printed in a 1960 pamphlet, in the Bibliothèque Nationale, a library in Paris, France, in French. She receives an abstract of some form that enables her to decide that the data are worth accessing, and initiates a request for a digital copy to be sent.

She receives the pamphlet as a scanned image of each page, and she decides that the quantitative information in the paper is useful, so she arranges transcription of the tabular numerical data and their summary values into a digital form and publishes the dataset, with a persistent identifier, and links it to a detailed coverage extent, the original paper source, the scanned pages and her paper when it is published. She also incorporates scanned charts and graphs from the original pamphlet into her paper. Her organization creates a catalog record for her research paper dataset and publishes it in the WIS global catalog, which makes it also visible to the GEO System of Systems broker portal.

[2.2 Spatial Data on the Web Best Practices](#), [2.3 Time Ontology in OWL](#), [2.4 Semantic Sensor Network Vocabulary](#), [2.5 Coverage in Linked Data](#)

[5.42 Spatial metadata](#), [5.7 Coverage temporal extent](#), [5.9 CRS definition](#), [5.10 Date, time and duration](#), [5.12 Different time models](#), [5.13 Discoverability](#), [5.18 Georeferenced spatial data](#), [5.23 Linkability](#), [5.29 Multilingual support](#), [5.32 Nominal temporal references](#), [5.34 Observed property in coverage](#), [5.35 Provenance](#), [5.36 Quality per sample](#), [5.37 Reference data chunks](#), [5.40 Sensing procedure](#), [5.39 Sensor metadata](#), [5.41 Space-time multi-scale](#), [5.45 Spatial vagueness](#), [5.54 Temporal reference system](#), [5.57 Uncertainty in observations](#), [5.8 Crawlability](#)

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