HMC Earth and Environment - Developing a Robust Framework for Seamless Semantic Interoperability in Earth and Environmental Research

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The HMC Earth and Environment Hub is dedicated to establishing a robust framework for seamless semantic interoperability in the field of earth and environmental research. Our approach involves strategically coordinating processes within the Helmholtz Association. Standardizing and semantically annotating metadata and harmonizing existing semantic resources are crucial for bridging the gap across diverse and complex data sets. Our focus on semantic interoperability encompasses several key aspects: 1. Navigating semantic resources is challenging. We guide in evaluating and using existing vocabularies, terminologies, ontologies, and services, setting criteria for sustainability and recommendability. 2. Identifying and prioritizing crucial metadata for semantic annotation, we assess elements essential for meaningful data connections and explore relevant tools and vocabularies. 3. Building a unified data space requires consensus at national and international levels. We collaborate with networks, aligning processes, and adapting services to community needs. 4. Facilitating community collaboration is vital for harmonization. We moderate processes like agreeing on metadata schema and vocabulary, contributing to governance structure development. Our overarching goal is to create a collaborative environment that fosters effective semantic interoperability, streamlining the integration of diverse data sources within the earth and environmental research community.

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