Data challenges at large scale for climate change research.

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In the climate change domain data volume, velocity and variety represent three key dimensions for scientific research at large scale. Several challenges have to be faced at an infrastructural level to address data sharing, access, movement, distribution, processing, analysis, visualization, and curation issues. Metadata management is another face of the same medal and involves a lot of community-driven activities regarding controlled vocabularies, specifications and standards. In such a dynamic, and distributed environment, non-functional requirements like interoperability (at different levels: data formats, metadata schema, service interfaces) and efficiency (e.g. for large scale data analysis) are very challenging too.

The talk will highlight the main data challenges, issues and requirements related to the climate change research community (including open data aspects). As an example, an overview about the Coupled Model Intercomparison Project Phase 5 (CMIP5) experiment and main results will be presented and discussed.

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Session Classification: Towards an Open Data Cloud (http://go.egi.eu/data)