



Environment Climate Data Sweden – Facilitating a wider sharing of environment and climate data

T. Klein (1), J. Langner (1), B. Broman (1), J. Svensson (1), B. Frankenberg (1), T. Langborg (2), and C. Bennet (1)

(1) Swedish Meteorological and Hydrological Institute, Norrköping, Sweden (thomas.klein@smhi.se), (2) National Supercomputer Centre of Linköping University, Sweden

The global society is facing significant challenges. Earth is a complex system of systems, where humankind's activities have become a critical parameter, as is demonstrated by global environmental and climate change. Full and open sharing of environment and climate data is a critical prerequisite to advance the scientific understanding of environment and climate and the connections to humankind's socioeconomic activities. In addition, data sharing is vital for the design, implementation, monitoring and evaluation of environmental policies, informed decision making and, eventually, sustainable development. Full and open data access facilitates new ways to analyze, integrate and combine data from many different sources. This is in particular evident in the geosciences, where the complexity and level of integration of Earth system models is advancing rapidly.

At the same time, many research communities are lacking resources, knowledge and in some cases motivation to allow for a professional stewardship of data. Insufficient coordination and a low priority of tasks such as data collection, storage and documentation put many important research data at risk of being lost. A recent hearing of Swedish environment and climate researchers found that researchers often have difficulties to get a good overview of relevant data within and beyond their field of study. Furthermore, it can be difficult to access and integrate relevant data. As a consequence, Sweden is establishing a new research infrastructure for environment and climate data called ECDS (Environment Climate Data Sweden, www.ecds.se). ECDS is a joint undertaking of the Swedish Research Council and the Swedish Meteorological and Hydrological Institute, in collaboration with the National Supercomputer Centre of Linköping University, Sweden. ECDS aims to facilitate the search, publication and long-term accessibility of data for research. The ECDS-infrastructure consists of a clearinghouse mechanism, allowing for the search and publication of relevant data, and a supporting service. In cooperation with the Swedish Storage Initiative SNIC/Swestore, ECDS will also assist Swedish scientists in need for data storage facilities. Already, ECDS has become the host for Swedish IPY-data, and many more datasets are expected to be shared through ECDS in the coming years. This presentation will provide an overview of the background to ECDS and the achievements of the initiative during its first years.