

The European Open Science Cloud for the Earth Observation Science Community.

Guido Lemoine

European Commission, Joint Research Centre, Ispra, Italy

guido.lemoine@ec.europa.eu

In the context of EuroGEOSS, European Earth Observation science teams are demonstrating use cases that showcase European expertise in large scale environmental monitoring applications as contributions to the Global Earth Observation system of systems. The European focus is soundly on the use of the European Union's Copernicus programme Sentinel sensors, which have gradually come into operations since 2015. These sensors are currently generating about 6 PB of data per year, under a full, free and open data license. The European data archiving and processing capacities are not [yet] matching those leveraged by large US companies, such as Amazon and Google, which integrate the data into sophisticated processing platforms that serve global monitoring needs of Earth Observation scientists. The European Open Science Cloud (EOSC) is projected as a suitable solution to address the needs of the European Earth Observation Science community. The presentation will detail the requirements and maps existing initiatives that may contribute to the establishment of the EOSC as a key facilitating platform. An essential element is to integrate experience from other "Big Data" science communities (high energy physics, astronomy, bio-medical imaging), in particular in resource federation, data organisation and massive parallel multi-tasking. We will outline the key players in the European Earth Observation domain and address some of the parallel needs of the non-scientific user domains, in particular those of the public sector.