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Open access and preservation of data on the coupled geosphere-biosphere system: the case of the H2020 Project ECOPOTENTIAL

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The H2020 ECOPOTENTIAL Project addresses the entire chain of ecosystem-related services, by focusing on the interaction between the biotic and abiotic components of ecosystems (geosphere-biosphere interactions), developing ecosystem data services with special emphasis on Copernicus services, implementing model output services to distribute the results of the modelling activities, and estimating current and future ecosystem services and benefits combining ecosystem functions (supply) with beneficiaries needs (demand). In ECOPOTENTIAL all data, model results and acquired knowledge will be made available on common and open platforms, coherent with the Global Earth Observation System of Systems (GEOSS) data sharing principles and fully interoperable with the GEOSS Common Infrastructure (GCI). ECOPOTENTIAL will be conducted in the context of the implementation of the Copernicus EO Component and in synergy with the ESA Climate Change Initiative. The project activities will contribute to Copernicus and non-Copernicus contexts for ecosystems, and will create an Ecosystem Data Service for Copernicus (ECOPERNICUS), a new open-access, smart and user-friendly geospatial data/products retrieval portal and web coverage service using a dedicated online server. ECOPOTENTIAL will make data, scientific results, models and information accessible and available through a cloud-based open platform implementing virtual laboratories. The platform will be a major contribution to the GEOSS Common Infrastructure, reinforcing the GEOSS Data-CORE. By the end of the project, new prototype products and ecosystem services, based on improved access (notably via GEOSS) and long-term storage of ecosystem EO data and information in existing PAs, will be realized. In this contribution, we discuss the approach followed in the project for Open Data access and use. ECOPOTENTIAL introduced a set of architecture and interoperability principles to facilitate data (and the associated software) discovery, access, (re-)use, and preservation. According to these principles, ECOPOTENTIAL worked out a Data Management Plan that describes how the different data types (generated and/or collected by the project) are going to be managed in the project; in particular: (1) What standards will be used for these data discoverability, accessibility and (re-)use; (2) How these data will be exploited and/or shared/made accessible for verification and reuse; if data cannot be made available, the reasons will be fully explained; and (3) How these data will be curated and preserved, even after the project duration.