

ECOPOTENTIAL Second reporting period:
1st December 2016 - 31st May 2018

WP3 activities (Lead: Terradue)

“Earth Observation Data and Processes Infrastructure”

Task 3.1 EO Archive (Lead: CNR)

Objectives

1. Provide access to an inventory of past and current satellites data and products with their characteristics and time frames.
2. Provide access mechanisms to Earth observation (EO) data and products
3. Deliver products to the EO Archive with well-documented metadata, quality uncertainties and provenance information
4. Ensure the maintenance and motivated changes to the EO Archive

T3.1 Work progress and achievements for the reporting period

Evolution and operation of the EcoPotential EO Archive (FTP storage), maintained by CNR IIA, and managed for evolutions in coordination with WP4 Lead (CREAF). Support activity to users and interface with ReCAS operators. EO data sourcing and EO data products archival mechanisms have been exploited to operate the EO Archive capability in EcoPotential. FTP User accounts have been attributed upon request from EcoPotential partners. Partners in charge of EO-based products and In-Situ measurements have been contributing products to the EO Archive on a regular basis since June 2016.

CNR: operation and maintenance activities (storage, access rights, ...) of the EO Archive FTP service.

Terradue: Automation of the EO data delivery workflows for identified requirements from production managers. Evolutions of the Data Agency (Terradue Cloud Platform) in order to synchronize the data access and processing workflows done on Terradue Cloud Platform with the EcoPotential EO Archive.

CREAF: Updates to the definition of the EcoP conventions for the EO Archive FTP access (incl. Metadata). Coordination of partners uploads to the EO archive of data produced in WP4.

Milestones / Deliverables

No WP3 deliverable for the period.

Contribution to the PER D12.6 updates, and to the Technology Readiness Level (TRL) survey for the EO Archive service (Nov. 2017).

List of accepted publications

None related to the WP3 for the period.

Task 3.2 EO Data Processing tools (Lead: Terradue)

Objectives

1. Provide a Platform-as-a-Service environment, to implement, test and deploy applications for operational exploitation, using cloud computing resources.
2. Provide access to EO data – supporting the discovery and access to EO data by linking processors with specific collections or product types.
3. Provide application management tools to keep track of evolutive changes and release versions.
4. Provide configurable parallel processing capabilities, supporting operational exploitation.
5. Provide support for large-scale deployments – once a processor is integrated and successfully tested, it is ready to process large volumes of datasets if required.
6. Provide a standard interface – each application being accessible by an OGC WPS interface.

T3.2 Work progress and achievements for the reporting period

Evolutions and operation of the Cloud platform tools and services to enable better reactivity on the setup of processing campaigns, and to support more automated productions. Improved coordination and knowledge sharing with the EcoPotential partner CERTH on the handling of the Copernicus Sentinel-1 and Sentinel-2 data products.

Terradue: continued systematic uploads to the EO Archive FTP server, for Long Term Data Preservation over the EcoPotential Protected Areas (PAs). Data sourcing workflows improvements, in order to automate the reporting via systematic cataloguing of the products collected by running on the Cloud Platform “Data agency” and archived on the EcoPotential FTP archive.

- **Sentinel-2 L2A productions** running on terradue Cloud Platform (atmospheric correction based on sen2cor) for the WP6 support on the hydroperiod, announced on the WP3 Campfire Message Board on [July 11th](#) and [12th](#) 2017, with productions deliveries updates regularly posted on the [WP3 Campfire](#) tool, starting from August 3rd 2017.
- **Sentinel-1 time-series productions for Hydroperiod:** SNAP / OTB trade-off analysis
- **Sentinel-2 / Landsat-8 NDVI multi-annual productions:** feasibility study in cooperation with CERTH

Milestones / Deliverables

No WP3 deliverable for the period.

Contribution to the PER D12.6 updates, and to the Technology Readiness Level (TRL) survey for Terradue Cloud Platform Services (Nov. 2017).

Preparatory work on the Deliverable D3.2 “EO Data Processing tools” v2 .

List of accepted publications

None related to the WP3 for the period

Task 3.3 User-side access point by exploiting INSPIRE and in situ capabilities (Lead: ISPRA)

Objectives

Enable access to INSPIRE and in situ capabilities by building a user-side access point:

1. that provides the project partners and general users the data access information related to the marine and terrestrial sphere;
2. whose catalogue will be enriched year after year on the basis of the updating of the annual INSPIRE monitoring activity conducted by Member States;
3. information will be brokered and made available to the GEOSS Ecosystem SBA through interoperability process offered by the GEOSS Data Access Broker;
4. will contain also information related to the project outputs in form of INSPIRE compliant metadata model from all partners involved.

T3.3 Work progress and achievements for the reporting period

Operation of an infrastructure to access the available national environmental monitoring resources related to terrestrial and marine sphere, by means of multi-language approach and geographical filters applied to the targeted protected areas.

ISPRA: in order to exploit the efforts of European Member States in the frame of INSPIRE architecture implementation, ISPRA has built and delivered a user-side access point to provide information collected in the frame of the INSPIRE monitoring process, and that could be useful for the development of protected areas. The collected information is available to be brokered by the GEOSS DAB by the means of interoperability protocols.

Milestones / Deliverables

No WP3 deliverable for the period.

Contribution to the PER D12.6 updates, and to the Technology Readiness Level (TRL) survey for ISPRA User-side access service (Nov. 2017).

Preparatory work on the Deliverable D3.1 “User-side access to marine & terrestrial data” v2.

List of accepted publications

None related to the WP3 for the period.