



<http://www.linkedeodata.eu>



Background

Lots of Earth Observation (EO) data has become available at no charge in Europe and the US recently and there is a strong push for **more open EO data**.

Open EO data that are currently made available by space agencies such as ESA and NASA are

not following the linked data paradigm. Therefore, from the perspective of a user, the EO data and other kinds of geospatial data that might be needed in the application can only be found in **different data silos**, where each silo may contain only part of the needed data.

Opening up these silos by publishing their contents as RDF and **interlinking them with semantic connections** will allow the **development of data analytics applications** with great environmental and financial value.



Main Innovation

The main objective of LEO is **design and implement software supporting the whole life cycle of linked open EO data and its combination with linked geospatial data**, and **develop a precision farming application** that heavily utilizes such data.

Expected Contributions

The **expected scientific and technical contributions** of LEO are the following:

1. To develop **publishing tools** that transform open EO data and metadata, made available by space agencies such as ESA, from their standard formats into RDF and make it available on the Web of data.
2. To develop **publishing tools** that transform open geospatial data and metadata from their standard formats into RDF and make it available on the Web of data. Open geospatial data (e.g., digital maps, administrative data, environmental data, etc.) are typically used together with EO data in applications such as precision farming and are made available by public agencies as well (e.g., the Bavarian Topographical Survey for our precision farming application).
3. To develop **tools that interlink open EO data sources and geospatial data sources** published as RDF on the Web.
4. To develop **tools for cross-platform searching, browsing and visualization** of linked EO data and linked geospatial data.
5. To demonstrate the value of the developed tools by:
 - a. Performing **large-scale publication and linking of open EO data** from the GMES Space Component Data Access warehouse managed by ESA, and relevant geospatial datasets made available by other public bodies in Europe.
 - b. Developing a **precision farming application** that shows how geo-information services based on linked open EO data, linked geospatial data and specialized algorithms can contribute to an environmentally friendly increase in the efficiency of agricultural production.

Project Information

Title

Linked Earth Observation Data for Precision Farming

Start date

October 1st, 2013

Duration

24 months

Partners

National and Kapodistrian University of Athens, Greece (Coordinator)

Centrum Wiskunde & Informatica, Netherlands

Space Application Services, Belgium

VISTA Geowissenschaftliche Fernerkundung GmbH, Germany

PC-Agrar Informations und Beratungsdienst GmbH, Germany

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