



The Assimila data cube vision – geospatial data for environmental applications. Gerardo López-Saldaña, Jon Styles, Taylor Day.

Why do we need a data cube? categories: Access, Pre-processing and Analysis Access EO data

The difficulty associated with initially downloading or getting access to particular datasets from different data providers can limit exploitation of EO data.



The Assimila Data Cube provides a set of tools that access multiple data portals to either:

- Directly download the data to a local or remote storage
- Access the data in а environment for further processing.
- On the fly subsetting/reprojection
- On demand schedulers to create an up-to-date EO archive



Addressing environmental issues at large scale, e.g. country or continental level, requires the use of a vast amount of Earth Observation (EO) data and geospatial ancillary datasets. The challenges when working with EO data can be grouped in three broad

→ GET ERA5

→ GET ERAINTERIM

cloud

Generating Analysis-Ready-Data (ARD) using multiple data sources, each with different file formats, resolutions and projections can be a very complex task.







MODIS MCD43 climatology for DoY 100 (left) and 200 (right).

Pre-processing





All datasets stored in the data cube support smart spatio-temporal querying using latitude, longitude and time in natural language as well as traditional indexing using rows, columns and layers through a simple Python API.





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Analysis