BDA for agricultural monitoring using Copernicus Sentinels and EU open data

EAP progress review - 7 October 2020

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Overall objectives

- show how federated EOSC resources can facilitate a range of Sentinel data applications across **agricultural** user domains (science, public, private)
- demonstrate the use of advanced Big Data Analytics approaches applied to multi-annual high resolution Copernicus Sentinel time series and EU open access reference data sets
- project the EOSC as the reference platform that will host the **permanent Sentinel data archive**, so that access by European science users will be guaranteed on a European e-infrastructure

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Status update

- Resources set up and in full use.
- EODC use for dedicated Sentinel-1 processing for "terrain flattening" (related to ARD discussions).

- EAP is parallel to functionalities used in EU Member States
- 11 MS are now using DIAS instances, benefiting from EAP dev
- DK and DE service companies are adopting the functionalities. The ESA SEN4CAP activity is aligning with the modular approach.

- Only few new technical developments.
- Abstract for EGI demonstration submitted (pending)

Next steps

- Online training on RESTful services (video tutorials in preparation)
- EGI JupyterHub review for training purposes (with Enol)
- JRC internal discussion on EOSC use beyond EAP (OCRE, others)

- 2020 data processing ongoing, new reference data has arrived
- Extend client-side image processing of RESTful data extracts
- Migrate some of that to server side (using k8s)
- Further integration of machine learning and data analytics
- Extending machine learning to image data (e.g. instance segmentation)

- Planning backups and migration options for end-of-project.

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Thank you

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