Downstream Products Validation Part I

PROGRAMME OF THE EUROPEAN UNION
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Data-driven machine learning effective in reducing biases associated with existing Sentinel-2 LAI and FAPAR retrieval algorithms (GROUNDED EO) reliant on high quality and unbiased FRM for training

- *Getting the reference data right (Woody material typically ignored)*
- *Improving temporal coverage (Automated data collection & automated data processing)*
- Improving spatial representativeness (UAV as a platform to extend traditional measurement approaches to areas more representative of a satellite pixel
- *New missions & products = new FRM needs*

Developing a framework for FAPAR estimation and validation using Wireless PAR Sensor Networks measurements

- *Advantages of WSNs: Continuous Monitoring, Improved Spatial Coverage, Reduced Labor Costs, Real-Time Data Access, Non destructive*
- *WNs could be a validation Reference Measurements for satellite land products*
- *Different modeling approach could be useful (e.g., ML/ RTM)*
- *These PAR networks could also be useful for estimating LAI*

An open-source validation system for European Thematic Land Products from Copernicus Land Monitoring Service

- *Lack of reference data: mostly used for production and not enough left for validation*
- *Sentinel-2 is a valid source for assessment*
- *No access to certain national sources for reference data, so difficulties to validate certain thematic areas*
- *No harmonisation in the reference data (coming from different sources/ countries), so extra effort is needed for their usage*

Pixel-level validation of land cover maps - an outlook from the perspective of metrology

- *Uncertainty Propagation through the various classification steps, but some parts difficult to assess like training data suitability.*
- *Uncertainty estimation/accuracy assessment of categorical data has its own challenges.*