success story

Pilot 2:
Sustainable
Agriculture
National Scale

Monitoring global topsoil using space-borne EO data

WORLDSOILS is a project funded by the European Space Agency (ESA) aiming to develop a pre-operational Soil Monitoring System to provide yearly estimations of Soil Organic Carbon (SOC) at European scale, exploiting space-based Earth Observation (EO) data leveraging large soil data archives and modelling techniques to improve the spatial resolution and accuracy of SOC maps. The system is going to be implemented on a suitable cloud environment; while and an intensive verification and testing phase has been foreseen to ensure a robust operation. The system will be validated for a minimum of one year over three case studies areas, including the Region of Central Macedonia in Greece, that have been designed along with European national entities in charge of monitoring and reporting on soils.

The WORLDSOILS will rely on the proven scientific excellence of SpectraLAB Group to develop and deploy eXplainable artificial intelligence techniques to predict the soil properties test their suitability for transfer learning by fine-tuning and provide uncertainty maps.

We look forward to support the stakeholdets with a mandate on soils reporting, the proximal soil mapping community, the digital soil mapping community and EO experts for developing in close cooperation soil indices relevant for monitoring the global top soils as baseline information for downstream research, institutional and commercial applications and services (e.g. reporting, soil management systems, agricultural applications, …).

WORLDSOILS developed within the EO Science for Society slice of the 5th Earth Observation Envelope Programme (EOEP-5).

Useful links:

www.world-soils.com

#soil #XAI # earthobservation #soilhealth