

Automated Remote Sensing Algorithms for CAP's Cross Compliance and Greening requirements checks

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Subsidy payments associated with the relevant agrarian policies, Cross Compliance (CC) and Greening conditions imposed by the CAP, require systematic and timely monitoring of the agricultural landscape. Fittingly designed earth observation methods, in terms of computational efficiency, large scale coverage and spatial resolution, can offer reliable solutions.

In this regard, the RECAP project (Horizon 2020) aims to develop an improved remote monitoring of CAP CC obligations. Within this context, the National Observatory of Athens (NOA), as a partner of RECAP, has developed a Remote Sensing platform that implements on-demand, robust, transferable and efficient automated processing chains, towards evidence-based decision making in the CAP.

Accurate crop identification, at the lowest level of crop type definition, serves as the main pillar of the overall system. The methodology uses a parcel-based, Sentinel 2 image time-series approach under a supervised classification scheme. Crop maps are then straightforwardly used for conformity checks on CAP's Greening 1 and Greening 2 requirements. We additionally implemented an automated water pollution risk estimation method that enables the identification of prone to noncompliance parcels, under CC SMR 1 specifications. Burnt Scar Mapping algorithms have also been developed to directly address CC GAEC 6, detecting parcels of burnt crop residue or stubble. Finally, the RS solutions developed in RECAP will be thoroughly tested throughout a set of pilot activities that will take place in the next nine months.