

UC1a Earth Observation Monitoring and Traffic lights

Description of the Use Case

Use case's main objective is to demonstrate how the controls by monitoring can be implemented and deployed by the exploitation of EO data in relation with eligibility criteria based on support schemes under control, concluding in traffic light codes at parcel level.

The main business processes are:

1. Produce output from EO Classification Engines in order to produce the optimal classification results (Sen4CAP will be the primary EO Classification Engine while an additional EO Classification Engine will be attempted to be produced through Subcontracting)
2. Produce Eligibility Criteria coded as algorithms for Basic Payment Scheme, for Crop Specific payment for Cotton and for certain Voluntary Coupled Schemes and additionally a Business Rule Management System will be provided to build any desired eligibility Criterion additionally to the ones defined in the current Use Case
3. Produce a Decision Support System (NIVA – DSS) to conclude in traffic light codes in parcel level, which will also include a tool and a process to deal with yellow cases

Innovation in the Use Case

The main innovative aspects of UC1a is the Decision Support System, which:

1. will be open and capable to receive and plug-in other EO Classification Engines (registered external EO systems) aiming to enhance the assessment procedure of parcel declarations. This re-usability characteristics of the NIVA-DSS will also contribute significantly to the sustainability of the developed tool beyond the project end date.
2. will provide a Business Rule Management System in order to build eligibility criteria to be checked (decided by the Paying Agency)
3. will incorporate outcomes from third parties (registered apps – e.g. smartphone based Geo-tagged Photos, registered FMIS's) in order to handle parcels assigned with yellow traffic light
4. will incorporate data fusion techniques aiming to enhance the capability of such systems to receive large volume of different datasets and from diverse sources of information, improving the reliability and accuracy of the generated traffic lights with minimum human intervention.

Benefits

The principal benefits will be:

- ✓ For Paying Agencies:
 - the production of an easy-to-use tool tailored to the needs of every PA in order to facilitate the “monitoring” procedure;
 - reduced administrative burden;
 - lower error rate and less sanctions;
 - links with other systems;
 - effective implementation of a new 2021-2027 CAP



- ✓ For Farmers:
 - reduced administrative burden;
 - less sanctions;
 - transparency of the decisions.

Involvement of stakeholders

There are several stakeholders, either involved directly in UC1a or being affected by it's outcomes:

- Farmers;
- EU Member States' Paying Agencies;
- Agricultural software providers;
- Agricultural consultants;
- Farm Advisory Services;
- Policy makers, government bodies;
- Researches;
- Project Partners.