



Audit Support 2020

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Supporting the Audit Process with Sentinel

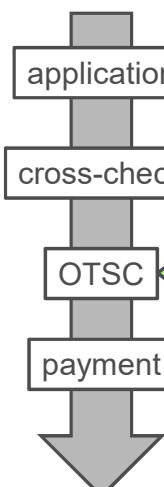
From 2019: positive interactions involving **JRC**, **DG AGRI (Audit)** and **PAs**

JRC: technology development

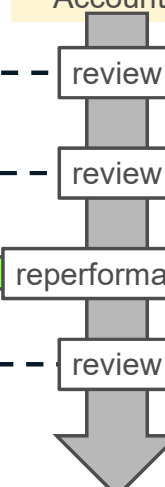
DG AGRI: promotion of CbM potential

PAs: not only data providers, but **active players**, interest in the technology, **independent verification** of inspection results

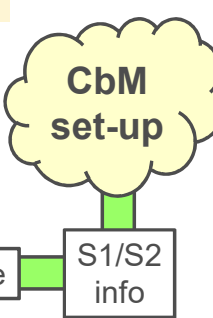
Paying Agency




Clearance of Accounts



JRC



←
→

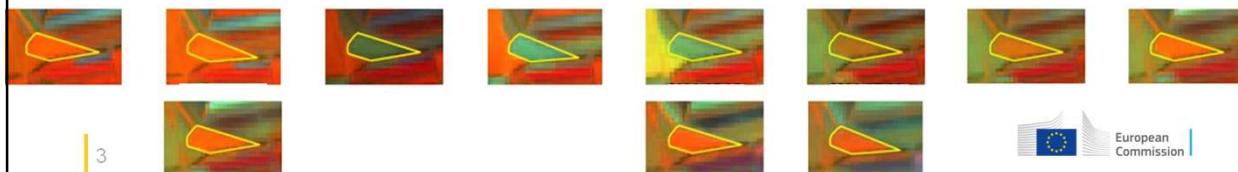


Typical Applications

Sentinel-based technology: targeted questions

E.g./

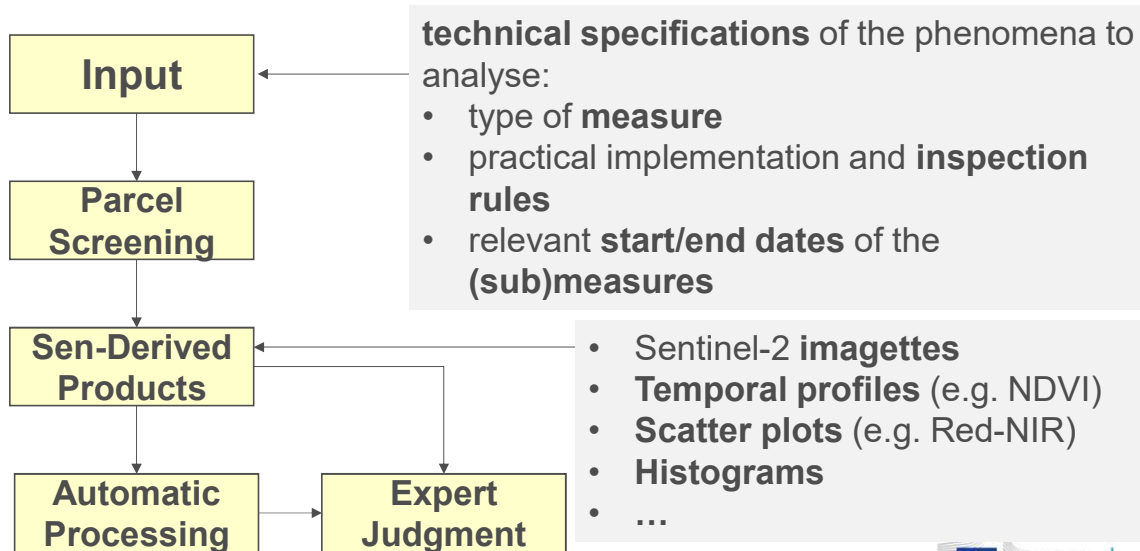
- On EFA fallow land: was **maintenance** performed in the [start_date – end_data] period?
- Was catch crop **seeded** by [end-date]?
- Were **grassland eligibility** conditions met?



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Sentinel for the Audit Process: Workflow



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Limits of S2-based Processing

Parcels have to meet **minimum geometric requirements** to enable Sentinel-based **analysis**

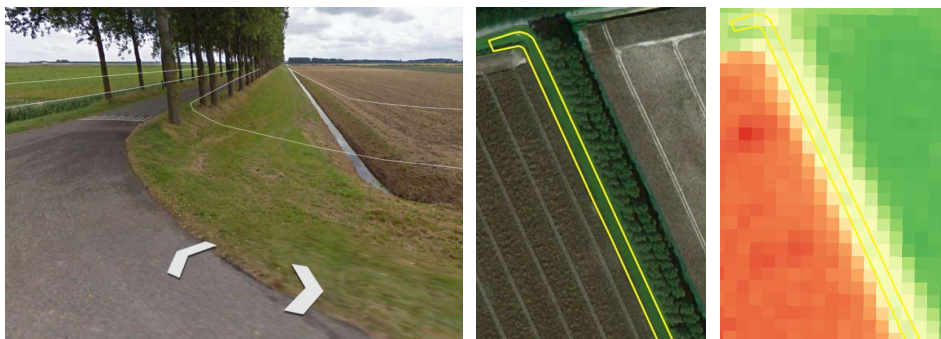
E.g./

- Contain at least 8 Sentinel-2 full pixels
- Lose less than 60% of the pixels when applying a 5 meter buffer
- ...

Test of geometric conditions

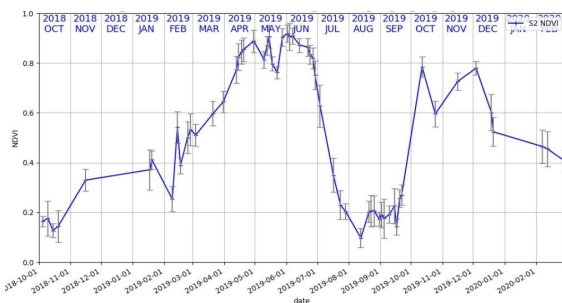
Images from open databases

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Sample Results (I/II)

Question confirmed: winter wheat followed by a cover crop

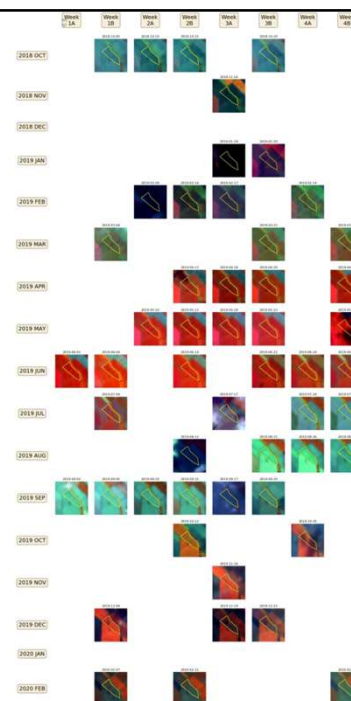


2019 campaign, ~90.4 ha



False color composite
RGB(8,11,4)

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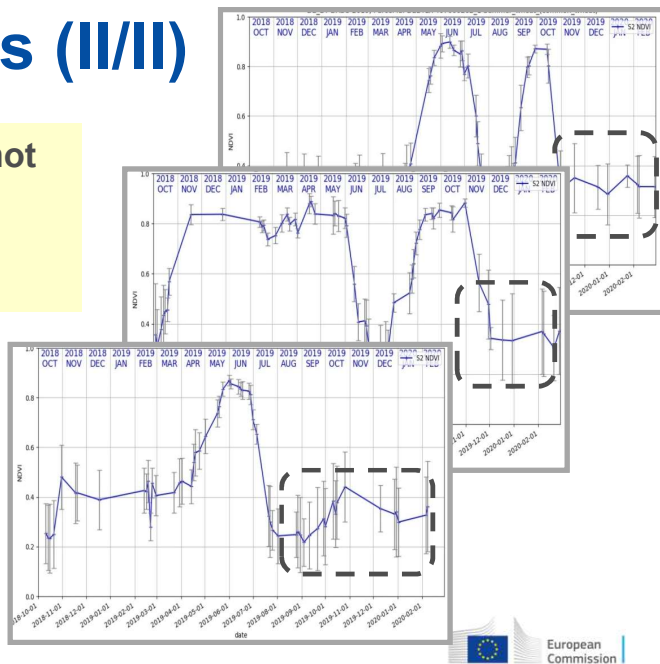


Sample Results (II/II)

Automatic detection of parcels not complying with the winter cover requirements (presence in December/January)

Detection based on NDVI curves
20 doubtful parcels

Verification by human expert: the correctness of the decision taken



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Conclusions

Sentinel data: potential to support audit activities

Positive interaction between JRC, DG AGRI (audit) and PAs

Sentinel-based technology to answer **targeted questions** (confirm/verify conditions): take **advantage of context information** to improve performance (**in progress**)

Wide range of products from Sentinel-2 (-1)

Interest from other **audit bodies** (e.g. ECA)



... in principle this is not **CbM**

no **interaction** with the farmer, no possibility to **correct errors**, ...

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