
# Validation of World Cereal products

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# Validation of temporary cropland extent

The NoR service is being used to validate temporary cropland extend and to get information. In particular the service allows to identify if a field is being actively used for crop cultivation (e.g. ploughing). Validation has been done for WoldCereal using the following approach:

- A new independent validation data set
- Random sampling
  - 50 000 globally
- Blind validation
- Quality control of validation data
- Error matrixes
- Detailed documentation

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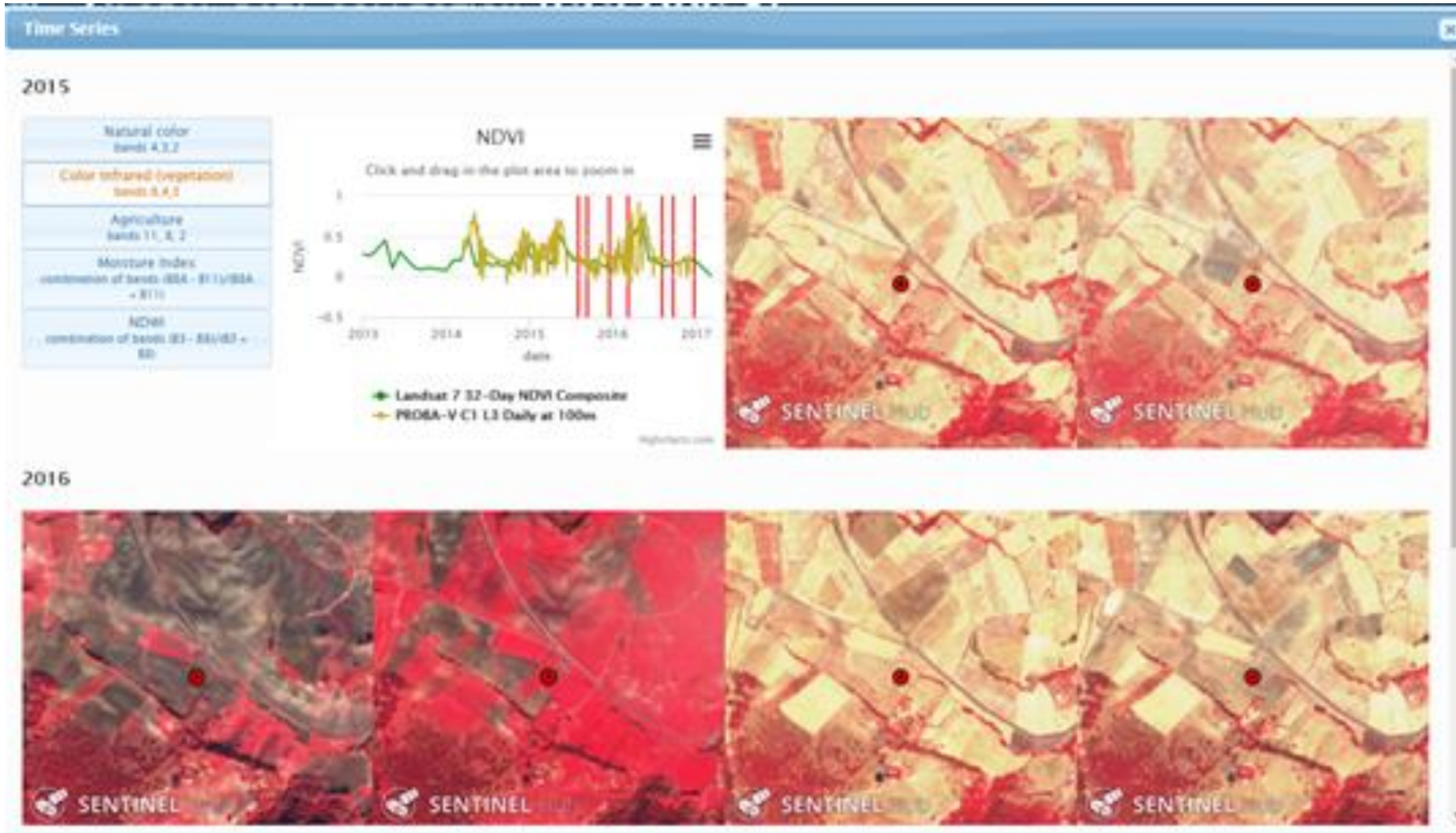
# Crop type validation results

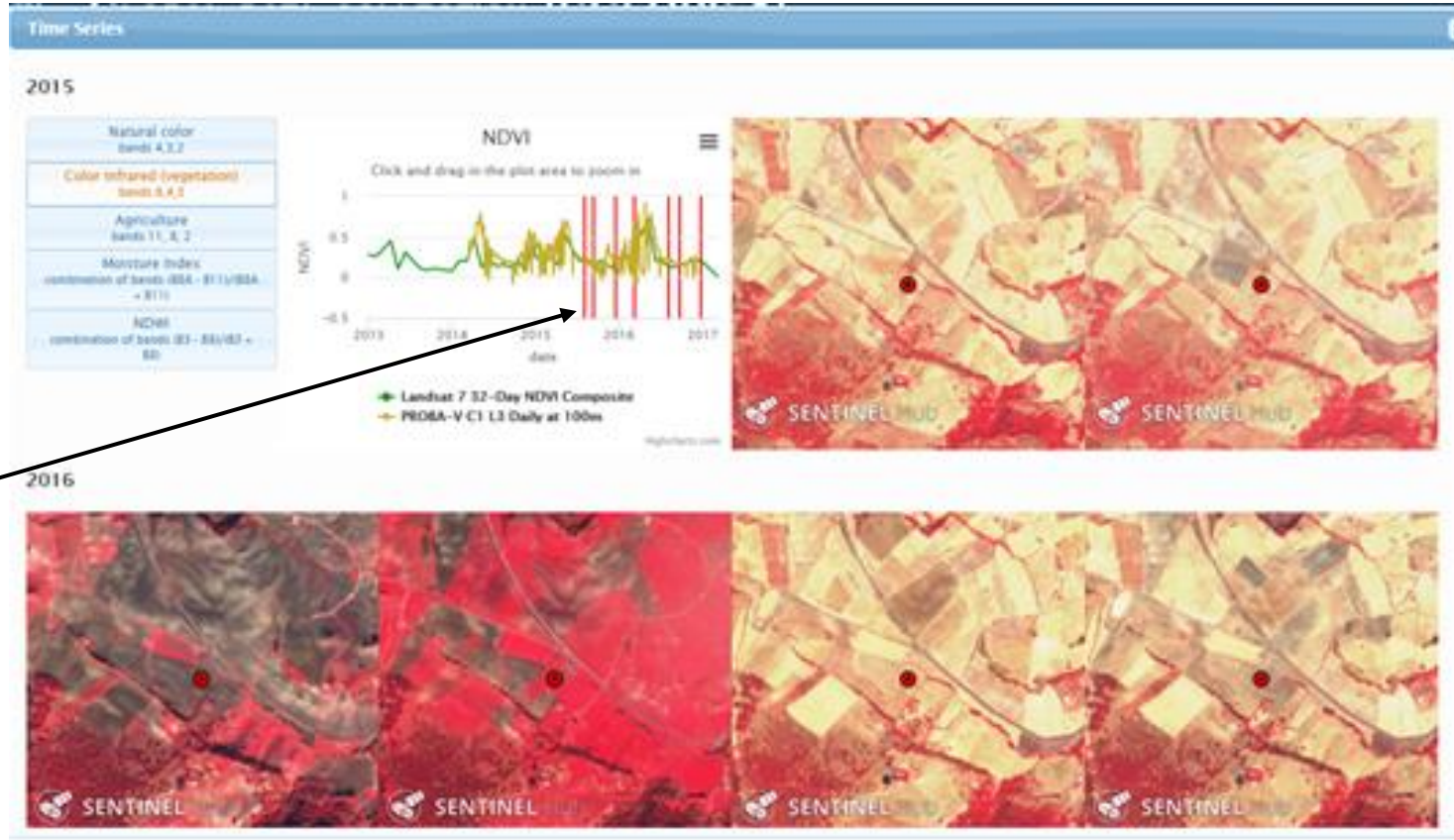
The NoR service is being used to validate temporary cropland extend and to get information on certain crop management activities e.g. plowing



# Crop type validation results

The Sentinel Hub WMS was integrated into the Geo-wiki toolbox and combined with information of the growing season such as NDVI

Each red line shows the seasonal cloud free availability of color red composition

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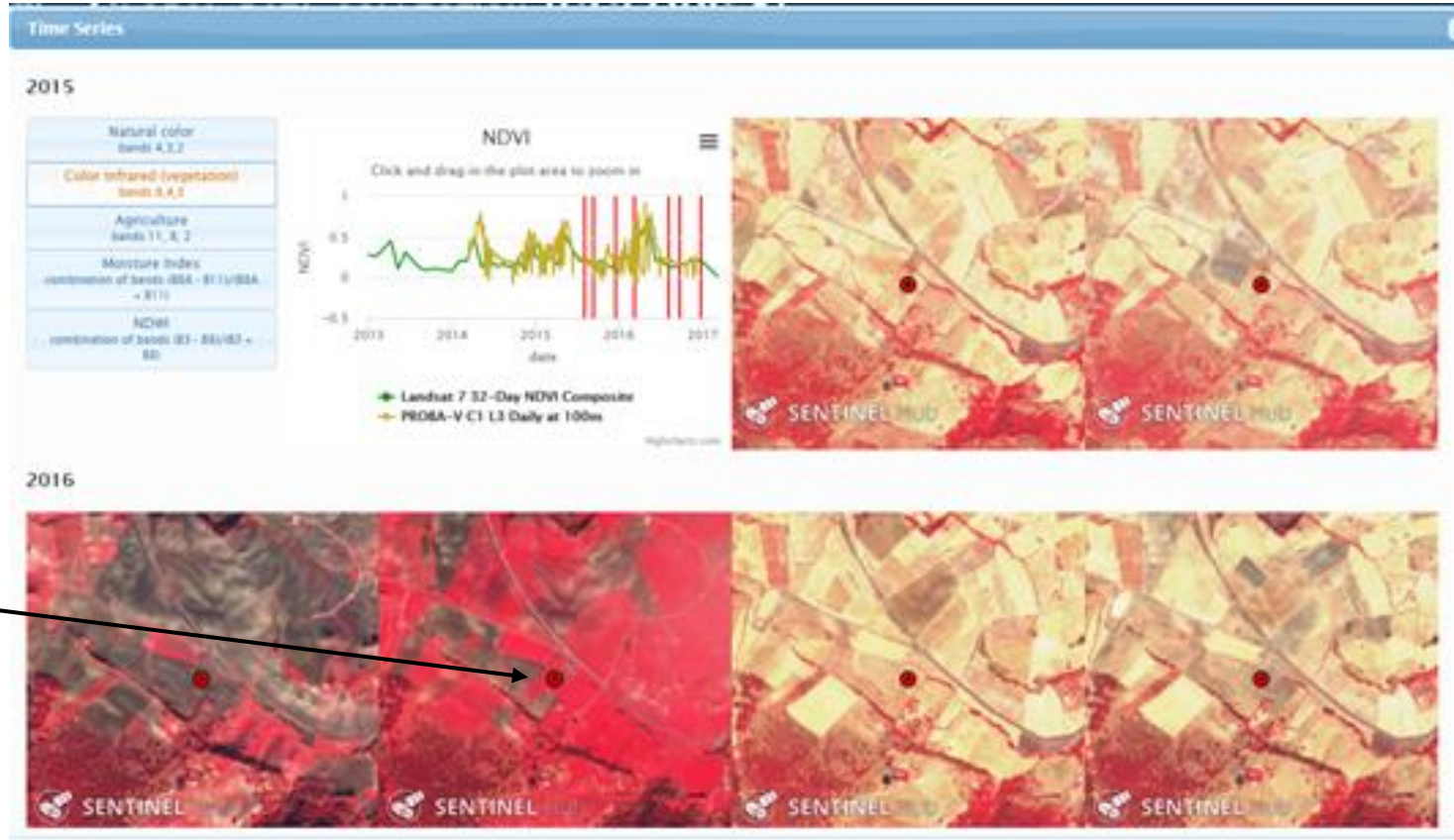
# Crop type validation results

The Sentinel Hub WMS was integrated into the Geo-wiki toolbox and combined with information of the growing season such as NDVI

This example shows a ploughing event which can be picked up using seasonal cloud free Sentinel Hub images using the color infrared composite option

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# Concluding remarks on the usefulness of the service

- The NoR - Sentinel hub service is critical and very useful for validation of land cover products and WorldCereal in particular
- The service is very user friendly and allows to visualize different color composites provided as WMS. The service performance is reasonably fast.
- The service provided also allows to filter for a percent of cloud free image which is useful in order to make sure that only images with a certain percent cloud cover are visualized.
- The service can be combined with other information such as temporal NDVI which allows to understand exactly in which period of the growing season the Sentinel cloud free image was taken.
- The service helps to increase the confidence in visual interpretation of very high resolution images such as Maxar/Pleiades and adds a temporal dimension which is otherwise not easily available

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- Thanks to:
  - ESA WorldCereal project
  - HE – OEMC

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