

Comparison of in-situ, crowd- and landcover-derived data sources to understand their applicability for large scale cropland mapping over JECAM sites across the globe

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Third intercomparison experiment (continuity of Brussels 2015 proposal) is proposed to address the applicability and efficiency of globally available sets of crowd-source and landcover-derived training data for cropland mapping.

As in-situ data, being considered most accurate for mapping, are costly to update and infeasible to support globally, ground truth derived from remote sensing images and landcover maps are viewed as a way for their substitution.

Main goals of the experiment are:

- 1) assess the accuracy of crowdsourced and landcover data in both direct and indirect ways over various JECAM sites;
- 2) check the accuracy of cropland maps derived by locally adapted mapping methods adopted by site partners while using crowd- and landcover-derived data and performing over larger areas.

The planned structure of proposed experiment could be the following:

- 1) assessing the accuracy of abovementioned sources against in-situ data in direct way (direct comparison of on road surveys polygons and crowdsource and landcover derived samples over same polygons).
Local level: JECAM site (100x100 Km aprox)
- 2) crowd-source data generation through Geowiki or VEGA tools, and landcover-derived samples extraction over a larger area (500x500 Km?)
- 3) Partners' methods could be modified to be locally-adaptive and applied to produce cropland maps based on new training data sources
- 4) such cropland maps are estimated and available sets are validated indirectly as well.