**Interactive comment on** “LUCAS Copernicus 2018: Earth Observation relevant in-situ data on land cover throughout the European Union” *by Raphaël d’Andrimont et al.*

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The manuscript by d’Andrimont et al. “summarizes the LUCAS Copernicus protocol to collect homogeneous land cover and proposes a methodology to create a ready-to-use dataset for Earth Observation land cover and land use applications with high resolution satellite imagery”. Both aims are conducted in the frame of a new LUCAS module that is specifically tailored to EO, the LUCAS Copernicus module. The module but most of all a standardized way to provide in-situ data as training data for further LULC developments is of high importance and crucial. Both, the data set and the efforts of all persons involved are highly appreciated.

The present manuscript describes the protocol how in-situ data are obtained and proposes a methodology to create a ready to use dataset for further usage. It is well written, concise and informative. In certain parts it lacks clarity especially for an interested reader who is not a LULC expert. Some of it is induced by a diversity of used terms whose relation is not directly tangible. Some other relates to numerous points (LUCAS theoretical grid point, LUCAS Copernicus point point) and metrics (buffer and distances) for which it is unclear what really is of relevance and used during the survey or later on to e.g. define homogeneity. Regarding the term diversity a glossary may provide the essential light in the dark, while a simple process chart could disentangle the point/metric puzzle.

Since it is a data paper in which it is also asked to check the data quality and usability, let me mention that one decisive file was missing (LUCAS_2018_Copernicus_attributes.csv). Thus I could not completely verify its content, but I will gladly do it as soon as the revised version of the manuscript is available.

These comments alongside further smaller ones are added to the *.pdf to facilitate preparing the final version of the manuscript that I would be happy to receive again.

Yet, overall the manuscript is very well developed and needs just some tweaks before being publishable. Congratulations.

Sincerely, Ulf Mallast

Please also note the supplement to this comment: https://essd.copernicus.org/preprints/essd-2020-178/essd-2020-178-RC3-supplement.pdf

LUCAS Copernicus 2018: Earth Observation relevant in-situ data on land cover throughout the European Union

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Abstract.

The Land Use/Cover Area frame Survey (LUCAS) is a regular in-situ land cover and land use ground survey exercise that extends over the whole of the European Union. LUCAS was carried out in 2006, 2009, 2012, 2015, and 2018. A new LUCAS module specifically tailored to Earth Observation was introduced in 2018: the LUCAS Copernicus module, among others.

1 Introduction

The Land Use/Cover Area frame Survey (LUCAS) is a regular in-situ land cover and land use data collection exercise that extends over the whole of the European Union (Gallego and Delincé, 2010; Eurostat, 2018c). LUCAS has been carried out in 2006, 2009, 2012, 2015, and 2018. During these five campaigns, a total of 1,351,293 points were surveyed and 5.4 million photos were collected. On each of these surveyed points, observations were recorded on up to 109 variables. The LUCAS Copernicus module specifically tailored to Earth Observation was introduced in 2018, the LUCAS Copernicus module, among others.