

Temporary Dataset Download: LUCAS 2015 TOPSOIL data

ID	127210
Date - Time	Mon, 03/30/2026 - 13:45
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-- Other	
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Purpose	The dataset will be used to develop and train machine learning models aimed at predicting soil types and soil bearing capacity. The objective is to identify areas sensitive to heavy forestry machinery to prevent soil compaction and environmental damage in Swedish forest landscapes.
Notes	

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24. The following Annexes form an intergral part of this License Agreement: ANNEX 1: Specification of LUCAS2015_SOIL Database
25. **THE LICENCEE ACKNOWLEDGES TO HAVE READ, UNDERSTOOD AND AGREED TO BE BOUND BY THE ABOVE-MENTIONED TERMS AND CONDITIONS OF THE CONTRACT**

Technical assistance concerning the use of the LUCAS data can be obtained from : ec-esdac@ec.europa.eu

ANNEX 1: SPECIFICATION OF LUCAS2015_SOIL DATA

Database: The LUCAS2015_SOIL data are :

- In MS Excel format for all tabular data and ESRI shapefile for geographical presentation of the data
- RDATA, text and MS Excel format for Soil Multispectral dataReports (Proposed Citation)

References:

The documentation associated to the data is available from the following two reports:

[report](#) describing the 2015 dataset for the EU

Jones, A, Fernandez-Ugalde, O., Scarpa, S. LUCAS 2015 Topsoil Survey. Presentation of dataset and results, EUR 30332 EN, Publications Office of the European Union: Luxembourg. 2020, ISBN 978-92-76-21080-1, doi:10.2760/616084, JRC121325

[report](#) describing changes between 2009 and 2015.

Fernández-Ugalde, O., Ballabio, C., Lugato, E., Scarpa, S., Jones, A., Assessment of changes

in topsoil properties in LUCAS samples between 2009/2012 and 2015 surveys, EUR 30147 EN, Publications Office of the European Union: Luxembourg 2020, ISBN 978-92-76-17430-1, doi:10.2760/5503, JRC120138.

The following [report](#) may provide further insights to the data. The reader should be warned that this report refers to a different number of total points, and also makes explicit reference to data that are stored internally to ESDAC, but are not available to the public:

R. Hiederer, Data Evaluation of LUCAS Soil Survey Laboratory 2009 to 2015 Data, EUR 30092 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN, 978-92-76-15648-2, doi:10.2760/791714, JRC119881.

The following Science-policy [report](#) provides insights on how the two indicators (Soil erosion, Soil organic carbon) have been developed using the LUCAS topsoil data of 2009 and 2015:

Panagos, P., Ballabio, C., Scarpa, S., Borrelli, P., Lugato, E. and Montanarella, L., Soil related indicators to support agro-environmental policies, EUR 30090 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-15644-4, doi:10.2760/011194

[Scientific publication](#) describing the LUCAS survey as a whole.

Orgiazzi, A., Ballabio, C., Panagos, P., Jones, A., Fernández-Ugalde, O. 2018. **LUCAS Soil, the largest expandable soil dataset for Europe: A review.** *European Journal of Soil Science*, 69(1): 140-153. <https://doi.org/10.1111/ejss.12499>

Scientific publication on the comparison with the Swiss sampling method.

Fernández-Ugalde, O, Jones, A, Meuli, RG. **Comparison of sampling with a spade and gouge auger for topsoil monitoring at the continental scale.** *Eur J Soil Sci.* 2020; 71: 137- 150. <https://doi.org/10.1111/ejss.12862>