

Temporary Dataset Download: LUCAS 2009 TOPSOIL data

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Purpose	I am an undergraduate Computer Science student currently working on my undergraduate thesis on soil heavy metal inversion using hyperspectral data, and I would like to request access to the dataset for academic and non-commercial research purposes.
Notes	

Notifications:

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9. The European Union will be formally mentioned and fully acknowledged in, but not limited to, reports, articles, publications and presentations of work resulting from the use of the LUCAS_SOIL data as follows: "The LUCAS topsoil dataset used in this work was made available by the European Commission through the European Soil Data Centre managed by the Joint Research Centre (JRC), <http://esdac.jrc.ec.europa.eu/>".
10. The Licensee can obtain information concerning the LUCAS_SOIL database from the JRC by e-mail (ec-esdac@ec.europa.eu) The Licensee undertakes to communicate on a regular basis to the JRC any errors or omissions discovered
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19. The name LUCAS_SOIL of the data being created by the European Union, the Licensee shall not use the name of LUCAS_SOIL without prior written authorization of the JRC and shall not register the name LUCAS_SOIL as a trademark
20. Personal data retrieved from the LUCAS_SOIL database shall be processed according to Regulation (EC) 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data
21. Licensee is informed that its personal data may be used by the European Union and automatically processed. The identifying data that Licensee may submit (The Data) will be treated in accordance with the policy on "protection of individuals with regard to the processing of personal data by the European Union institutions", based on Regulation (EC) NÂ° 45/2001. It may occur that you are requested to provide certain Data such as your name, your mailing address, your e-mail address, and other data such as your country, area as well

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23. This Agreement shall be governed by and construed in accordance with Belgian law. Any dispute, controversy or claim arising out of or relating to this Licence shall be settled before the competent courts of Brussels.
24. The following Annexes form an intergral part of this License Agreement: ANNEX 1: Specification of LUCAS_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 LUCAS_SOIL DATA

Database: The LUCAS_SOIL data are :

- In MS Excel format for the soil properties data: LUCAS_TOPSOIL_v1.xlsx
- 1 formats for Soil Multispectral data: LUCAS_TOPSOIL_v1_spectral.rdata (RDATA)

Reports (Proposed Citation): The LUCAS_SOIL data are documented in the report:

- Orgiazzi, A., Ballabio, C., Panagos, P., Jones, A. and Fernández-Ugalde, O., 2018. [LUCAS Soil, the largest expandable soil dataset for Europe: a review](#). *European Journal of Soil Science*, **69(1)**: 140-153.
- "Toth, G., Jones, A., Montanarella, L. (eds.) 2013. LUCAS Topsoil Survey. Methodology, data and results. JRC Technical Reports. Luxembourg. Publications Office of the European Union, EUR 26102 - Scientific and Technical Research series - ISSN 1831-9424 (online); ISBN 978-92-79-32542-7; doi: 10.2788/97922"

References:

The documentation associated to the data is available from the report:

- Orgiazzi, A., Ballabio, C., Panagos, P., Jones, A. and Fernández-Ugalde, O., 2018. [LUCAS Soil, the largest expandable soil dataset for Europe: a review](#). *European Journal of Soil Science*, **69(1)**: 140-153.
- Tóth, G., Jones, A., Montanarella, L. (eds.) 2013. [LUCAS Topsoil Survey. Methodology, data and results](#). JRC Technical Reports. Luxembourg. Publications Office of the European Union, EUR26102 - Scientific and Technical Research series - ISSN 1831-9424 (online); ISBN 978-92-79-32542-7; doi: 10.2788/97922"

Peer-reviewed publications relevant to the data:

- 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, DOI: 10.1111/ejss.12499
- Toth G., Jones A., Montanarella L. (2013) [The LUCAS topsoil database and derived information on the regional variability of cropland topsoil properties in the European Union](#). *Environmental Monitoring and Assessment*, 185 (9), pp. 7409-7425.
- Panagos P., Ballabio, C., Yigini, Y., Dunbar M. (2013) [Estimating the soil organic carbon content for European NUTS2 regions based on LUCAS data collection](#) *Science of The Total Environment* Volume 442, pp. 235-246.
- Panagos, P., Meusburger, K., Alewell, C., Montanarella, L. (2012) [Soil erodibility estimation using LUCAS point survey data of Europe](#), *Environmental Modelling & Software*, Volume 30, Pages 143-145, doi:10.1016/j.envsoft.2011.11.002
- Nocita, M, Stevens, A., Toth, G., Panagos, P., van Wesemael, B., Montanarella, L. 2013. [Prediction of soil organic carbon content by diffuse reflectance spectroscopy using a local partial least square regression approach](#). *Soil Biology and Biochemistry*. 68 , pp. 337-347, DOI: 10.1016/j.soilbio.2013.10.022
- Stevens, A., Nocita, M., Toth, G., Montanarella, L., Van Wesemael, B. (2013) [Prediction of Soil Organic Carbon at the European Scale by Visible and Near InfraRed Reflectance Spectroscopy](#). *PLoS ONE*, 6: pp. xx-xx.
- Panagos, P., Köninger, J., Ballabio, C., Liakos, L., Muntwyler, A., Borrelli, P. and Lugato, E., 2022. Improving the phosphorus budget of European agricultural soils. *Science of The Total Environment*, 853: 158706. DOI: 10.1016/j.scitotenv.2022.158706
- Tóth, G., Guicharnaud, R.A., Tóth, B. and Hermann, T. (2013) Phosphorus levels in croplands of the European Union with implications for P fertilizer use