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Temporary Dataset Download: Soil profile analytical database 14 (SPADE 14)

ID	136373
Date - Time	Fri, 11/13/2026 - 12:45
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Type of Organization	Research Organization
-- Other	
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Purpose	This research aims to map and analyze the spatiotemporal dynamics of soil organic carbon (SOC) in the black soil region of Northeast China around 2010. The requested dataset will be used exclusively for academic, non-profit research as training and validation labels for machine learning-based SOC inversion models. Specifically, the data will support: (1) extracting multi-source environmental covariates (climate, terrain, remote sensing) at sample locations; (2) training and validating random forest / XGBoost models to predict topsoil (0–20 cm) SOC distribution at 30 m resolution; and (3) assessing the impact of environmental drivers on SOC spatial patterns. All results will be published in peer-reviewed academic journals. The data will not be redistributed, sold, or used for commercial purposes. Proper citation and acknowledgment of the data source will be provided in all resulting publications.
Notes	

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Notifications:

1. The data provided has been prepared for use by internal research activities in European Soil Data Centre (JRC Ispra) in collaboration with Henrik Breuning-Madsen, Jeppe Aagaard Kristensen & Thomas Balstrøm (Department of Geography and Geology, University of Copenhagen, Denmark).
2. The data were developed for research purposes of the JRC (European Commission). The JRC does not accept any liability whatsoever for any error, missing data or omission in the data, or for any loss or damage arising from its use. The JRC agrees to provide the data free of charge but is not bound to justify the content and values contained in the databases.
3. The permission to use the data specified above is granted on condition that, under NO CIRCUMSTANCES are these data passed to third parties. They can be used for any purpose, including commercial gain.
4. The user agrees to:
    - Make proper reference to the source of the data when disseminating the results to which this agreement relates;
    - Participate in the verification of the data (e.g. by noting and reporting any errors or omissions discovered to the JRC).

References:

Kristensen, J.A., Balstrøm, T., Jones, R.J., Jones, A., Montanarella, L., Panagos, P. and Breuning-Madsen, H., 2019. Development of a harmonised soil profile analytical database for Europe: a

resource for supporting regional soil management. Soil, 5(2), pp.289-301.

Breuning-Madsen H., Aagaard Kristensen J., Balstrøm T. 2018. Final report on the establishment of a SPADE 14 soil profile analytical database connected to the EU soil map at scale 1:1.000.000. Available in European Soil Data Centre (ESDAC).

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