

JOINT RESEARCH CENTRE

EUROPEAN SOIL DATA CENTRE (ESDAC)

ESDAC: http://esdac.jrc.ec.europa.eu ESDAC Newsletter No **150** (February 2023)

Soil Health dashboard of the EU Soil Observatory

Life on earth depends on healthy soils. Yet the new Soil Health dashboard of the EU Soil Observatory (EUSO) estimates that 61.5% of EU soils are unhealthy, with strong implications for the supply of ecosystem services that keep us alive. With the EUSO Soil Health Dashboard, the JRC provides a spatial assessment of where unhealthy soils may be located in the EU – and which degradation processes affect them. The EUSO Soil Health Dashboard uses a convergence of evidence methodology, which spatially combines datasets to highlight the intensity and location of 15 soil degradation processes. The resulting map shows, for the first time, where current scientific evidence converges to indicate areas that are likely to be affected by soil degradation. The EUSO Dashboard also shows that the majority of unhealthy soils is in fact to be subject to more than one type of soil degradation, an important finding for the soil restoration agenda. The loss of soil organic carbon (48%), the loss of soil biodiversity (37.5%), and soil erosion by water (32%) are the most prevalent types of soil degradation. The EUSO Soil Health Dashboard will evolve as new scientific data become available (e.g. Horizon Europe's Soil Mission projects) and with the implementation of EU and national soil policies, in particular the forthcoming EU Soil Health Law



Number of soil degradation processes

https://esdac.irc.ec.europa.eu/esdacviewer/euso-dashboard

New EUSO Technical Working Group on SOC Monitoring, Reporting and Verification (MRV)

Launched during the 2nd EUSO Stakeholders Forum (October 2022), this Technical Working Group (TWG) aims to engage with stakeholders involved in the MRV of Soil Organic Carbon from a range of perspectives. If you would like to become an active member in this working group, please send us an e-mail (<u>Cristina.ARIAS-NAVARRO@ec.europa.eu</u>) before 08/03/2023 so that we can invite you to participate in future activities. More information on the other EUSO Technical Working groups can be found on: https://esdac.jrc.ec.europa.eu/euso/technical-working-groups



Global Rainfall Erosivity Database (GloREDa) - call for data

Quantifying rainfall erosivity is challenging as it requires a high temporal resolution. The Global Rainfall Erosivity Database (GloREDa), contains erosivity values estimated as R-factors from 3,625 stations distributed in 63 countries worldwide. This is the result of an extensive data collection of high temporal resolution rainfall data from many countries in order to have a representative sample across different climatic and geographic gradients. At global scale, this is the first time ever that an erosivity database of such dimension is compiled. The EUSO WG on Erosion launches a call for more data following the GloREDa specifications (high resolution, RIST) which will be included in a group data paper. If interested, please send an e-mail: panos.panagos@ec.europa.eu



Derived outputs from GloREDa: https://esdac.jrc.ec.europa.eu/content/global-rainfall-erosivity

Call for Saturated hydraulic conductivity dataset (Ksat) data

EUSO WG on Erosion is looking for saturated hydraulic conductivity (**Ksat**) datasets with soil texture and organic carbon. We aim to couple the soil hydraulic properties with soil erosion modelling. Such data should be complementary to the <u>SoilKsatDB</u> (global database of soil saturated hydraulic conductivity measurement). Ksat describes water movement under saturated conditions in the soils. It differentiates the amount of water infiltrating into the soil and the amount of water flowing over the surface as runoff. If you have such data and are wiling to contribute, please send an e-mail: <u>panos.panagos@ec.europa.eu</u>



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