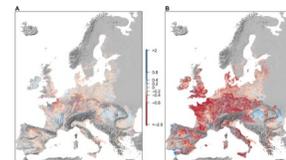


Carbon budget in the EU agricultural soils

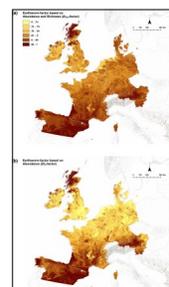
Soil plays a significant environmental role in balancing the climate as it may act as a carbon sink or source of CO₂ to the atmosphere. Using a new biogeochemistry-erosion model to quantify the impact of future climate on the carbon cycle, JRC tracks the possible transformations of the organic carbon across the landscape. Accelerated soil erosion in EU agricultural land due to more intense precipitation will lead to a 35% increase in eroded carbon in the period 2016–2100. This is likely to exacerbate carbon losses from agricultural land to the atmosphere (up to 23% of the predicted losses under the RCP4.5 scenario), thus increasing the effect of climate change. More info about it in the [paper](#) published in Science Advances. Data available at:



<https://esdac.jrc.ec.europa.eu/content/carbon-budget-eu-agricultural-soils>

Biodiversity factor in soil erosion

The relationship between soil erosion and biodiversity is extremely multifaceted. According to the current (limited) knowledge, earthworms can play a key role in reducing soil erosion, mainly due to their burrowing activity that increase soil porosity. In addition, the ecological impact of soil erosion on soil-living communities is a challenge. The soil erosion—biodiversity interactions are presented in the [paper](#) published in Global Ecology and Biogeography. Based on available pan-European (11 countries) maps of earthworm richness and abundance, we developed an “Earthworm factor” (Et-factor) to be integrated into soil erodibility (K-factor) calculation. Data available at:



<https://esdac.jrc.ec.europa.eu/content/biodiversity-factor-soil-erosion>

Open Call for DNA sequencing (LUCAS 2018 soil biodiversity)

We have free slot for DNA sequencing (16S, ITS, 18S). If interested, contact alberto.orgiazzi@ec.europa.eu. Please include this info in your email: 1) number of samples and brief explanation of sampling strategy; 2) land cover/use, country of origin (preferably Europe) and sampling date (preferably in 2018); 3) why your samples are relevant (possibility to develop parallel projects/publications). Fresh/frozen soil samples must arrive at JRC by **15.12.18**.

Opportunities for soil sustainability in Europe (a report by EASAC)

Soils provide numerous essential services in terrestrial ecosystems, ranging from the support of plant growth in agriculture and forestry to moderation of flood risks, water purification, large-scale carbon storage, and support of biodiversity. A multidisciplinary group of European experts (including JRC) has examined the implications of recent scientific research for integrated policy solutions towards ensuring the sustainability of Europe’s soils, and identified many opportunities for policy-makers to safeguard this valuable resource for the benefit of the EU’s citizens.



Land and Soil Management Award (by European Landowners’ Organisation)

The prize rewards land use and soil management practices mitigating soil threats i.e. soil degradation, erosion, reduction of organic matter content, diffuse contamination, and compaction as well as the reduction of soil biodiversity, salinization, sealing, flooding and landslides. In doing so, the award sheds light on outstanding achievements, encouraging new concepts of land and soil protection and their implementation in land management, as well as enhancing awareness about the importance of land and soil functions. **Deadline:** 31.12.18



More Details

Download the ESDAC Newsletter: [PDF Format](#). **Feedback:** panos.panagos@ec.europa.eu

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