## Soil microbial biomass and respiration

Using the LUCAS soil biodiversity samples in EU, we developed datasets predicting potential soil basal respiration at 20°C, soil microbial biomass as estimated by substrate-induced respiration, and soil microbial respiratory quotient (the ratio between potential basal respiration and microbial biomass) across Europe. Predictions were performed with structural equation models fit using the following predictive variables (published in the paper): mean annual temperature, annual precipitation, mean temperature, annual precipitation, soil sand content, soil water content, pH, soil organic carbon content, elevation, and latitude. We make available the datasets (for year 2018) of potential soil microbial basal respiration (bas), microbial biomass (Cmic), and respiratory quotient (qO2) predicted across Europe. Monthly maps for bas and Cmic are also available:

https://esdac.jrc.ec.europa.eu/content/soil-microbial-biomass-and-respiration
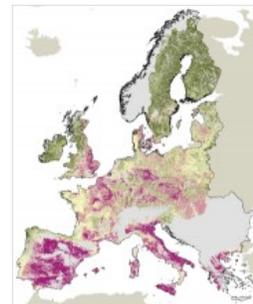
EU Soil Observatory Stakeholders Forum: 19-21 October 2021

The Joint Research Centre (JRC) is organising the first ever EUSO Stakeholders Forum. Are you a PhD candidate or a farmer? a scientist or a policy maker? Working in private sector or representing an NGO? interested in soils or policy making? Join the first ever European Soil Observatory Forum. It is free, online and we give also space to young scientists. We will discuss about biodiversity, land degradation, contamination, soil erosion, Citizen Engagement and much more (new EU Soil Strategy, Zero pollution Action plan, EU mission on soil, CAP). A final agenda is available from: https://ec.europa.eu/jrc/en/event/other-event/euso-stakeholders-forum. Please subscribe to participate actively:

https://ec.europa.eu/eusurvey/runner/EUSOSTAKEHOLDERFORUM2021
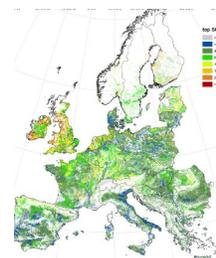
Manure and Soil biodiversity

In the European Union (EU-27) and UK, animal farming generated annually more than 1.4 billion tonnes of manure during the period 2016–2019. Of this, more than 90% is directly re-applied to soils as organic fertiliser. We reviewed the impact of manure from farmed animals on soil biodiversity by considering factors that determine the effects of manure and vice versa. In this review paper we explored the impact of manure from farmed animals on soil biodiversity and vice versa. This review considered 407 published papers and relevant legislative provisions. In addition, we evaluated whether benefits and risks on soil biodiversity are considered in manure management. This dataset includes the spatial distribution of manure in EU and UK (per country, animal type) plus the database of the literature used:

https://esdac.jrc.ec.europa.eu/content/manure-and-soil-biodiversity
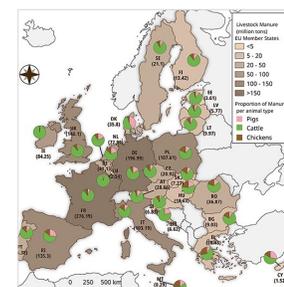
Two Open Vacancies in the JRC Soil group: **Soil organic carbon**; **EU Soil Observatory**

The first position (2021-IPR-D3-FGIV-018654) will focus on the development of indicators of soil organic carbon combining the current LUCAS soil monitoring system data in the EU with advanced modelling applications. The candidate is requested to have modelling experience in soil carbon cycle and dynamics in agroecosystems with particular specialization in machine learning (e.g. Digital Soil Mapping) or Biochemical model (e.g. Century, DayCent or equivalent) Deadline: **26.10.21**. The second position (2021-IPR-D3-FGIV-018688) will support the implementation of the EU Soil Observatory through the development of the Integrated Soil Monitoring System including global and EU data, the organization of regular meetings of stakeholders of the EU Soil Observatory and the daily operation of components of the European Soil Data Centre. Deadline **31.10.21**. Both candidates are expected to lead and contribute to scientific publications. https://recruitment.jrc.ec.europa.eu/

More Details