

## sDiv working group meeting report

### “sOilFauna”

#### **Working group meeting report**

- focal areas of discussion + main results/conclusions + open questions

The project sOilfauna was funded by the synthesis center sDiv (Germany) to conduct a synthesis about the consequences of human activity for soil macrofauna communities and the ecosystem services they provide, at a global scale. The project is based on the GlobalSoilMacrofauna database that we curate. This database now contains 20 000 records of the abundance of 17 soil macrofauna taxa, which were sampled simultaneously with a standardized method (hand-sorting of soil monoliths of a certain size). During this workshop, we reviewed the additional data that had been collected since the first workshop and tested the framework and methodology we plan to apply to explore the drivers of soil macrofauna communities and their link with energy fluxes. We also dedicated time to perform data quality exploration and identify gaps that need to be filled to improve our methodology.

- content of presentations

Several presentations were given by the members of the project. The actual state of the database (number of records, metadata) and preliminary macroecological results about community structure were presented. A session was dedicated to explore methodological aspects due to the variability of sampling procedures or data availability. We had presentations about the implications of taxa biomass and body size, and how to estimate them at a global scale. A presentation was dedicated to the methodology to build local foodwebs from the available data. We also gave a seminar to sDiv to outline our main research objectives. On the last day, we discussed harmonization with other large-scale projects on soil fauna in general.

- general structure of the week (break out groups, presentations, sessions with remote participants etc.)

We had one topic per half day, each topic corresponding to a potential paper. The leads and main contributors of these respective papers were consolidated during the meeting. We had one session in subgroups to work on specific topics every day. A remote session was organized each afternoon with the remote participants, to guarantee that all working group members are up to date. We also had a remote meeting with the data providers, to keep them informed about the progress of the project.

- next steps & upcoming deliverables

We decided to get more data to cover critical gaps in biomass data from under-represented geographical areas. We decided to complete the database until 15<sup>th</sup> of June 2023 and to have a short intermediate meeting in December 2023 to work on the

potential papers. We all agreed that we need a last meeting in sDiv in 2024 to finalize the papers.

- general working atmosphere and feedback on sDiv support (What kind of support? How helpful was it?)
- sDiv was very supportive in all aspects of the working group, including social events.