

Proposals for NORMAN Joint Programme of Activities 2022

Title	Analytical case study for ESB soil samples to identify ubiquitous compounds
Type of activity	Analytical study
Leader	UBA
Topic / activities	<p>Background / Justification for the proposed activity:</p> <p>Screening of soil samples in support of chemical management</p> <p>Not much is known about chemicals in soil so far. National screenings often only include only a small number of compounds, such as heavy metals. However, many chemicals are transferred to soil via air, application of fertilisers, biosolids, etc. Finding PFAS even in remote terrestrial environments is an example why we should start to advance our knowledge concerning chemicals in soil and try to find out which substances we have overlooked so far.</p> <p>We are therefore very interested in obtaining a comprehensive picture of chemical contaminants in soil samples in order to further develop the assessment and environmental monitoring of substances in terrestrial systems. For this purpose, we present samples from the German environmental specimen bank, which have been collected, analyzed and archived since the early 2000s. Specimens from the different sampling areas can be used to identify contaminants that are ubiquitous or that are associated with specific ecosystem types and land uses. The data will provide important information for prioritizing regulatory monitoring programs for soils and critically improve our understanding of ubiquitous chemical pollution associated with atmospheric deposition. It is planned to make UBA funds available to support interested laboratories for this analysis.</p> <p>What is the German ESB?</p> <p>The German ESB has been collecting soil samples from different ecosystem types (urban, forestry, agrarian and semi pristine) in nine sampling regions since 2002, see www.umweltprobenbank.de/en. The samples have been collected according to standardised protocols and they are archive at ultra-low temperatures (<-150°C) to preserve their biological and chemical integrity. So far, we have gathered temporal and spatial data for specific compound groups, including legacy OCPs, PFAS, chlorinated paraffins, brominated and chlorinated flame retardants. They are also being studied using genetic methods, such as eDNA metabarcoding, to provide information on temporal changes in biodiversity.</p> <p>Added value / Link with other NORMAN activities and / or other projects</p> <p>EU Chemicals Strategy, Zero Pollution Ambition, PARC</p>
Participants	Terrestrial WG
Proposed in-kind contribution	80 K€
Contribution needed from NORMAN Association¹	-

¹ Please, provide here a transparent justification of the requested resources and of the in-kind contribution, thereby distinguishing between the costs associated with “person-months” for the organisation, the “travelling costs” for invited speakers and the costs for the logistics (e.g. meals, room rental etc.)