

Proposals for NORMAN Joint Programme of Activities 2022

Title	WG-6: Emerging substances in the indoor environment 2022 – Expanding the scope of WG6 to outdoor air
Type of activity	Working group amendment
Leader	Katrin Vorkamp (AU), Pernilla Bohlin-Nizzetto (NILU), Jonathan Martin (SU), Lisa Melymuk (RCX), Pim Leonards (VU)
Topic / activities	<p>Background / Justification for the proposed activity:</p> <p>Interest from the NORMAN Steering Committee and members of WG6 to devote more effort to outdoor ambient air. Air is an important matrix for transport, distribution and exposure processes. Air is the fastest and most efficient way for volatile and semi-volatile compounds, incl. most POPs, to travel into the Arctic and other remote areas, and air represents an important vector for aquatic and terrestrial food-chains. Moreover, even some high priority organic chemicals mainly transported with water, such as the per- and poly-fluoroalkyl substances (PFAS) and emerging persistent mobile organic contaminants (PMOCs), have major airborne sources. Climate change is likely affecting air transport processes, as well as the distribution of chemicals between compartments, requiring high quality air data for better process understanding. Air is a priority matrix for the Global Monitoring Plan of the Stockholm Convention, thus having an important indicator function for the regulatory effectiveness. There is a close link between outdoor air and indoor environments, as the sampling methodologies are similar, indoor air is both a source to and receptor of ambient air, thus detectable substances are common to both matrices. Important research questions, such as the gas-particle partitioning in air, are still not fully understood. Regional air monitoring networks (e.g. EMEP, MONET, AMAP), as well as monitoring activities at national level and international levels often focus on legacy pollutants although air monitoring, due to its quick reaction to changing sources and environmental conditions, offers important functions for an Early Warning System, including the identification of emerging airborne substances. Recent development of new air sampling adsorbents (e.g. PDMS-based) are now enabling a broadening of the chemical window for air monitoring, as these adsorbents are relatively clean and stable and do not require destructive and selective clean-up methods. This makes them, suitable for wide-scope suspect and non-target screening analyses, and perhaps even for toxicological testing.</p> <p>Description of the proposed activity and expected outcomes for 2022:</p> <p>We suggest to expand the main objectives of WG6 to include outdoor air (amendments to original objectives of WG6 marked in bold and italic):</p> <ul style="list-style-type: none"> - improve and harmonize sampling and analytical methods for indoor dust and <i>air in indoor and outdoor environments</i>; - organize inter-comparison studies (ILS)/collaborative trials (CTs) <i>for air (gas-phase and fine particles) and settled dust</i>; - identify and prioritize chemicals and chemical groups of emerging concern (CECs) in the indoor environment <i>and outdoor air</i>; - collect data of CECs that are currently analysed in indoor dust <i>and air in indoor and outdoor environments</i>, including data from target, suspect and non-target screening studies, in NORMAN database system; - identify indoor sources of CECs, e.g., building materials, products and articles, and identify important pathways of the chemicals to the outdoor matrices and exposure routes for humans in indoor <i>and outdoor</i> environments; - link policy and research; - act as an umbrella for other activities concerning CECs in NORMAN. <p>In 2022 we will initiate this by:</p> <ul style="list-style-type: none"> - Inventorying established infrastructures and monitoring networks for ambient air in Europe— what and how do they measure, where do they store the data – making sure that NORMAN complements and does not duplicate (NILU, RCX, AU), - Expanding the data collection template (DCT) and NORMAN database for ambient air, - Organizing a workshop with established networks and PARC (June or September 2022) (SU, AU, NILU), - Defining how and what NORMAN (WG6) can do, or needs to do, to incorporate outdoor air in the WG6 objectives and activities with the ultimate goal to enable an international early-warning system for emerging airborne substances.



	<p>Expected outcomes for 2022:</p> <ul style="list-style-type: none"> - Workshop - Inventory of existing monitoring networks/infrastructures and their strategies and programmes - Uploading of the first outdoor air data to NORMAN Database System; - Broadening of the scope to outdoor/indoor air, - New name of WG6. <p>Added value / Link with other NORMAN activities and / or other projects</p> <p>A new matrix for NORMAN. Links to WG1 with respect to prioritization of substances in air, WG3, WG7 and the two cross-working group activities on PS and NTS.</p>
Participants	WG6 + others
Proposed in-kind contribution	Personnel costs for the members in WG6.
Contribution needed from NORMAN Association¹	<p>Requested: 4000 €</p> <p>To cover cost for:</p> <ul style="list-style-type: none"> - Workshop

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.)