**Assessment of potential PFASs Hotspots in Upper Austria**

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Per- and polyfluorinated compounds (PFASs) have been used in various industrial processes for over 50 years and are nowadays very popular for the usage in household articles, due to their consumer appreciated properties. An aspect critical to mention is that, the awareness concerning the negative impacts of perfluorinated compounds is currently rising, as Perfluorooctanesulfonate (PFOS) - a popular substance within this group - has been proven to be persistent, bioaccumulative and toxic. Recently other similar substances like Perfluorooctanoic acid (PFOA) or Perfluorohexanesulfonate (PFHxS) are being examined whether they might have also severe impacts to ecosystems and manhood.

PFASs are globally distributed and many publications detected concentrations in soil, sediment, air, vegetation, surface waterbodies and even drinking water. Nevertheless two circumstances in research are quite obvious, namely that comprehensive multi-media screenings scarcely exist and that samples are often taken simply at venture.

The aim of this paper is to a priori determine areas which could be contaminated by PFCs via several entry paths. The area of interest of this predominately theoretical work is Upper Austria, which is considered to be a highly industrialized region with 1.4 million inhabitants.

In the methodical work a scheme for emissions pathways of the respective chemical substances and precursors was established, whereby deposition, surface run-off, volatilization, leaching, elevation, rainwater infiltration, targeted transport of waste water and sewage sludge as a fertilizer were considered as relevant. Moreover due this this scheme it was differentiated between potential surface and groundwater contaminant sources. In course of this paper industries, settlement areas and partly streets, roofs and parking spaces are considered as sources that affect predominately surface waters. Sources that might have the potential to pollute groundwater are airports, military and fire brigade training sites, landfills, “relic” contaminated areas, accidents, sewage sludge for agricultural purposes and leisure activities like skiing and camping.

In order to verify whether the theoretical findings are suitable for use in practice, interviews were conducted with representatives from firefighting brigades, military, industry and administration.

The collected information was used to depict locations where emission pathways from relevant sources come together. With the aim of the online web based geo information system “DORIS” all these sources were localized and assed according to a self-defined risk matrix. Due to the visualized “Hot spot”- PFAS areas it will be possible to rank possible polluted locations due to their inherent contamination potential for organisms. Moreover it can be deduced where it might be useful to extract samples from different media. Furthermore it will be easier to deduce management plans as the entire context of contingent origins (city with airports, landfills, quantitative industrial processes, relevant WWTPs and vulnerable areas) is encompassed in this evaluation.