



## **Soils as a source of persistent organic pollutants to the global atmosphere: Evidence and techniques for assessing their contribution**

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Soils are the main reservoir of historical and emerging persistent organic pollutants (POPs) at regional and global scales. Therefore the understanding of the processes controlling the air-soil exchanges of POPs is key for assessing their fate, transport and impact. Several methodological and theoretical approaches have been suggested for the study of air-soil partitioning, however, much less knowledge is available on the dynamic air-soil cycling of POPs. Here we will review these approaches and show results from modeling and field work on the air-soil dynamics of polychlorinated biphenyls, polycyclic aromatic hydrocarbons and other POPs. The results on air-soil fluxes will be put in the context of current knowledge of sorption processes (molecular scale) and its implications for regional and global dynamics and modeling of POPs.

In this presentation, we will consider the evidence that soils are a source/sink of POPs to/from the atmosphere, and discuss sampling and measurement techniques which can be used to quantify the fluxes/contributions across the air-soil interface.