Persistent Organic Pollutants in sediments from rivers in Moldova

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Pesticides and industrial chemicals, including persistent organic pollutants (POPs), were extensively used in the past in the Republic of Moldova. Sediments act as a sink for various chemicals but can also serve as a source for dispersal of POPs to the surrounding ecosystems, however, data on POPs in sediment from Moldova is very limited. Thus, the aim of this study was to determine the levels of polychlorinated biphenyls (PCBs) and polybrominated diphenyl ethers (PBDEs) in sediments from the two main rivers in Moldova: Prut and Dniester. The sediments were sampled at a depth of 0-5 cm at 14 different sites during the summer of 2017. The sediment samples (*n*=14), which consisted of three pooled subsamples (per sampling site), were Soxhlet extracted, cleaned-up, and finally analysed using gas chromatography coupled to tandem mass-spectrometry (GC-MS/MS). The average concentration of Σ_{20}PCBs was 2.4 ng g^{-1} dry weight (dw) in the Dniester River and 0.74 ng g^{-1} dw in the Prut River, with the highest concentration at Goieni sampling site (9.2 ng g^{-1} dw, Dniester River) and Leuseni (1.5 ng g^{-1} dw, Prut River). Our study suggests that further monitoring of POPs in aquatic ecosystems in Moldova is needed.

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