



Spatial and temporal patterns of micropollutants upstream and downstream of 24 WWTPs across Switzerland

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Treated wastewater is an important source of micropollutants in many streams. These chemicals consist of very diverse set of compounds that may vary in space and time. In order to improve our understanding of such spatio-temporal patterns of micropollutants in surface waters, we compared upstream and downstream locations at 24 sites across the Swiss Plateau and Jura (12 sites in the 2013 campaign, 12 sites during the 2014 campaign). Each site represents the most upstream treatment plant in the corresponding catchment. This survey is part of the interdisciplinary, Eawag-wide research project EcoImpact that aims at elucidating the ecological effects of micropollutants on stream ecosystems.

In 2013, a broad analytical screening was applied to samples collected during winter (January) and summer conditions (June). Based in these results, the bi-monthly samples obtained in 2014 were analysed for a set of about 60 selected organic micropollutants and 10 heavy metals.

The screening results demonstrate that generally pharmaceuticals, artificial sweeteners and corrosion inhibitors make up the largest part of the organic micropollutants. Pesticides including biocides and plant protection products are also regularly found but at lower concentrations.

This presentation will analyse the variability of the micropollutant patterns across the different sites and how upstream conditions and the wastewater composition changes with season.