

Eawag Seminar Invitation

Emerging Contaminants in Coastal Environments: Sources, Distribution and Fate

Speaker **Prof. Pablo Lara**
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When **October 6, 11.00 – 12.00 a.m.**

Where **Forum Chriesbach, room C20, Eawag Dübendorf**

Abstract: The number and volume of synthetic chemicals used has increased exponentially since the second half of the past century. The ocean constitutes the ultimate sink for most of the pollutants derived from human activities after the use and application of these chemicals. This presentation focuses on the role of coastal systems, an intermediate between the mainland and the ocean during the transport and release of organic emerging contaminants. These are substances that have been not monitored until recent and that may cause adverse effects on the populations inhabiting the receiving aquatic systems. Our aim is to achieve a better knowledge on the environmental behavior and fate of widely used chemicals such as pharmaceuticals and personal care products (e.g., surfactants, fragrances, sunscreens, etc.). To this end, several aspects are presented, including analytical methodologies available for their identification and quantification, as well as results from extensive sampling campaigns. Monitoring emerging contaminants in coastal systems provides useful information on their concentrations and spatial and temporal distributions, as well as the location of possible sources. Later on, the different mechanisms involved in their reactivity/persistence in the environment (sorption, bio and photo degradation, bioaccumulation) can be studied in detail through specific laboratory experiments. This strategy allow us to prioritize those contaminants that have an expected higher environmental risk due to the high concentrations, persistence, toxicity and/or bioaccumulation potential of either the parent compounds or possible degradation intermediates.