

Chemical pollution in sustainable management of aquatic ecosystems – challenges and approaches from a Swiss perspective



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Because important European rivers, such as the river Rhine, spring from the Swiss Alps, which constitute the continental water divide, Switzerland is known as Europe's Water Tower. Europe's largest water fall, the Rhine fall, and largest freshwater reservoir, Lake Geneva, along with more than thousand rivers and lakes and numerous glaciers, testify the abundance of water in this country. Despite the notion of the Water Tower suggesting almost unlimited abundance of clean water, Switzerland is typical for many industrialized countries regarding conflicting interests in the management of aquatic ecosystems, water resources and water infrastructure in response to societal needs and values. These needs will most probably increase in the future and interact with effects due to the ongoing climate change. This Special Sessions intends to present a state-of-the-art summary regarding the knowledge about these future challenges, what role the issue of chemical pollution plays in the overall context of sustainable management of aquatic ecosystems and how the Swiss authorities intend to put the current knowledge into practice. Finally, the session will address the question to what degree experiences gained in Switzerland are relevant for other countries. The timing for this session is well chosen. In 2014, the Swiss National Research Program 61 on Sustainable Water Management will conclude. Sixteen research projects covering a wide range of water-related topics and four thematic syntheses packages provide new insight into the challenges of the Swiss water sector and how to tackle them. At the same time, the federal authorities are very active in implementing new programs on up-grading of wastewater treatment plants, on river restoration and on fostering renewable energy. Research is actively involved in considering these changes as research opportunities and has launched projects to benefit from these real-world experiments. An essential question related to all of these projects is how multiple stressors influence structure and functioning of aquatic ecosystems and how one can sort out the impact of a specific stressor group to support measures towards an improved ecological status.

SESSION TYPE: Platform (invited speakers) and Poster