



Eawag has been singled out for the Chemical Landmark distinction

February 27, 2024 | Andres Jordi, SCNAT / Andri Bryner, Eawag
Topics: Organisation & Staff

The Swiss Academy of Sciences has honoured the water research institute in Dübendorf as a significant historic site for chemistry. Eawag, the Swiss Federal Institute of Aquatic Science and Technology, revolutionised chemistry under its director, Werner Stumm, through its launching of environmental chemistry. It has contributed significantly to a better understanding of complex processes in nature and to clean bodies of water in Switzerland.

Überlandstrasse 133 in Dübendorf is the address where Eawag, the water research institute, made chemical history. And it was for this reason that it received [the Chemical Landmark](#) from the Swiss Academy of Sciences (SCNAT). This honour is awarded by SCNAT to domains in Switzerland which, through their actions, are historically significant in chemistry.



Founded in 1936, Eawag moved into the new buildings at Chriesbach Dübendorf in 1970, with the office building at the front and the laboratory building at the back. In the background the suburban railway under construction. (Photo: Eawag)

From test tube to natural environment

The fact that Switzerland can boast so many clean rivers and lakes today is due significantly to Eawag and, indeed, Werner Stumm, who headed the institute from 1970 to 1992. A chemist, he was of the opinion that environmental processes could only be understood if research was conducted into fundamental processes at a molecular level. He and his scientific colleagues therefore transferred laboratory research in the test tube to the complex material and impact cycles in nature. They identified the fact at an early stage that chemistry on its own was inadequate to research these, and that it was vital to also examine geological, biological, physical and ecological aspects. This was a pioneering approach from Eawag, examining as it did environmental phenomena and problems in a holistic manner which also transcended different disciplines. The new research field of environmental chemistry was born.



Werner Stumm and Jerry Schnoor during field work on an "acidic" lake in Ticino. (Photo: Eawag)

Construction and expansion of wastewater treatment plants is not enough

Werner Stumm was convinced that the pollution protection of bodies of water in Switzerland could not be solved solely through the construction of treatment plants. On the contrary, water protection is a permanent and ongoing task. New pollutants and new chemicals necessitated

the development of novel and more sensitive analytical methods. Eawag also played a significant role in this area, and this has remained the case right up until the present. Whereas the focus used to be on phosphates from detergents and agriculture, attention today is directed towards, for example, pesticides, drugs and microplastics. Water is also a central concern when it comes to adapting to climate change.



The interdisciplinary team at Eawag realised early on that concepts from chemistry can in principle also be applied to the environment and engineered systems. Water plays a central role in this.

(Illustration: Gregor Forster / Layout: Monique Borer)

Specialists for practical approaches

The water research institute with its two sites in Dübendorf and Kastanienbaum is today one of the leading global addresses when it comes to understanding aquatic systems and developing technical solutions to improve water quality. In addition to its consistent focus on solid basic research on an interdisciplinary level, Eawag under Werner Stumm also strengthened the appropriate education and training of specialists for practical work. It was one of the driving forces behind the introduction of the environmental sciences study

programme at ETH Zurich.

Werner Stumm would have reached the age of 100 this year. Together with the distinction of becoming a historic site for chemistry, Eawag therefore has two reasons to celebrate. A combined ceremony today saw the accomplishments of the former director being honoured and the unveiling of the Chemical Landmark plaque. The city of Dübendorf is proud of the water research institute. "Research and education are our most important raw materials," said Patrick Schärli, president of the municipal council, in his address. "Our municipality is home to several renowned institutes. Eawag is one of the most prestigious of these."

[Video recording \(1h55min\) of the event](#)

[Photo gallery of the event](#) (photos: SCNAT, Andres Jordi)

Cover picture: The President of the Dübendorf Municipal Council, Patrick Schärli, unveils the plaque with which the SCNAT Academies of Sciences honour Eawag as a Chemical Landmark, a place where the history of chemistry has been and continues to be written. Eawag Director Martin Ackermann on the right, SCNAT President Philippe Moreillon on the left. (Photo: Andres Jordi, SCNAT)

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