

Submarines in Lake Geneva

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Topics: Ecosystems

Two Russian MIR submarines arrived in Le Bouveret on Lake Geneva today. An international team of scientists headed by ETH Lausanne will use these to get to the bottom of "Lac Léman" in the coming months in the truest sense of the word. Four of the projects are being directed by Eawag. Their focus is on the Rhone Delta. Giant cubes of sediment collected here over thousands of years and formed underwater canyons.

With the submarines, the Eawag researchers now want to take a closer look at the behavior of these sediments, the stability of the underwater topography and the exchange processes between the sediment and the water. Now samples can be taken and observations made; something which was hardly possible from the surface of the lake so far. This includes the taking of horizontal sediment drill cores from the steep walls of the underwater canyons. These samples are supposed to provide information about the stability of the steep delta slopes. When large sediment masses slide in lakes and in the ocean, this phenomenon cannot only trigger devastating tsunami-like waves but also explains structures on and in the bottom of the lake outside of the delta and is responsible for the vast transport of stirred up material.

The other projects with participation of Eawag investigate above all the installation and behaviour of organic material in the sediment and the physical exchange processes between the water-saturated layer above the sediment and the free water in the lake. Special focus here is on the release of methane and the question of how much methane reaches the water surface and thus escapes as a strong greenhouse gas into the atmosphere.

The Eawag projects

Four of the projects are being directed by Eawag. Their focus is on the Rhone Delta. The project description of the Eawag-projects (pdf) provides more detailed information on the planned experiments in the lake.

The project "elemo"

The elemo scientific program will help us learn more about Lake Geneva. An international science team, led by EPFL, will explore the abysses of this largest of alpine lakes with the goal of better understanding and protecting it. The newest press release by EPFL about the eLemo project May 2011 (in french) is online.

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<https://www.eawag.ch/en/info/portal/news/news-archive/archive-detail/submarines-in-lake-geneva>