



A. R. Harlacher and his Role in founding of Czech Hydrological Service in Prague in 1875

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The 1858–1878 period, according to various studies, witnessed a high occurrence of droughts over the territory of today's Czech Republic, namely in 1863–1865, 1868, 1873 and 1874. These droughts resulted in many problems and, together with the 1872 flood, led to the gradual development of the rain gauge network and the establishment of the Hydrographic Commission of the Kingdom of Bohemia in 1875. The contribution focuses on life and activities of Andreas Rudolf Harlacher, the founder of the Czech Hydrological Service. Harlacher was born in Schöfflisdorf (Switzerland) in 1842. He studied at Zurich Technical University (ETH) from 1860 to 1863. Later on he worked as an assistant to famous Karl Culmann in ETH. Harlacher moved to Prague to become a professor of German part of the Prague Technical University in 1869. He organized a flow measurement campaign of the Elbe River in 1871–1872 and became a superior authority in hydrometry. On May 25 1872, Central Bohemia was affected by an extraordinary flash flood, which belonged to the most disastrous events ever recorded on the territory of the Czech Republic. This flood motivated at least five contemporary (1872–1875) scientific papers including two published by Harlacher. Other weather driven hazards like strong winds in 1868 and 1870 caused large damages, and in particular 1873 and 1874 droughts influenced a shortage in water and water energy, with consequent impacts on industry, transport and agriculture. Such a situation brought new scientific questions and pressure on government as well. The Prague Parliament voted in May 1875 to establish a Hydrographic Commission, which became very probably the third oldest hydrological service in the world. Harlacher was appointed as the first leader of its Hydrometric Section.

Based on experience from measurements in 1871-1872 A. R. Haralcher proposed enhancement of the current-meters by adding an electric counting device. His integrating current meter was an original device and method for measuring the average flow in vertical profile by continuous lowering of propeller from the water level to the river bottom. Harlacher used measurement results to estimate a runoff volume and runoff coefficients for the Elbe River. Harlacher 's activities included also the establishment of gauging network, extended hydrometric works resulting in rating curves construction, runoff evaluation, water balance computation, and finally a definition and successful implementation of a forecasting method for the Elbe River. Harlacher died unexpectedly during his visit to Swiss Lugano in October 1890.