



The July 1897 and September 1899 floods in the Upper Danube Basin, and comparisons with the June 2013 flood

Thomas Nester and Jürgen Komma

Vienna University of Technology, Vienna University of Technology, Vienna, Austria (nester@hydro.tuwien.ac.at)

During the 19th century, rivers and lakes were used increasingly for vessel traffic, commercial and industrial purposes. Also, the need for water in settlements increased steadily. In 1893, the Austrian Hydrographic Central Bureau was founded to evaluate existing hydrographic data and to set up new data collecting stations.

In 1897 and 1899, only 4 and 6 years after the foundation of the Hydrographic Central Bureau, two major floods occurred in the Upper Danube basin which accelerated the establishment of a flood information system for the Danube.

In this contribution, we give an overview of the July 1897 and September 1899 floods, which are among the 6 largest floods in the last two centuries in the Upper Danube basin. Maximum peak discharge in Vienna was around $9400 \text{ m}^3/\text{s}$ in 1897 and $10500 \text{ m}^3/\text{s}$ in 1899, and only three years ago, this value was exceeded by the June 2013 flood which had a flood peak of $11.000 \text{ m}^3/\text{s}$.

We evaluate the regional evolution of the floods and compare spatial and temporal patterns of precipitation and flood wave propagation along the Danube and its major tributaries.