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Ice jams on the Danube River during the winter 1894-95

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The floods on the Danube River in March and April 1895 were preceded by a relatively hard winter in 1894-95.

The analysis of air temperature for Central Europe was based on archived meteorological data (yearbooks of the Imperial and Royal Central Office of Meteorology and Terrestrial Magnetism in Vienna and in Budapest) and NOAA 20th Century Reanalysis of daily composites. Information about ice phenomena on the Danube River come from archived hydrological data (Hydrographic Yearbook of the Imperial and Royal Central Office in Vienna) and local contemporary press.

Analysis of average monthly air temperatures in the Upper and Middle Danube Basins showed that the coldest month in the period from December 1894 to March 1895 was February 1895. Similarly comparison of data on average daily air temperatures from 01 December 1894 to 31 March 1895 with the 30-year normals (1881-1910 and 1961-1990) shows that the largest deviation from average daily air temperature values in the winter of 1894-95 and the start of spring 1895 was in February.

During the winter of 1894-95, more severe cold persisted in the Upper Danube Basin. The severe frosts during this winter meant that the waters froze on both the Danube and its tributaries leading to the accumulation of ice jams. According to Hydrographic Yearbook the ice barrier created the continuous line from Korneuburg (14 km above Vienna) up to the point of mouth of the river Drava to Danube River in total length of approximately 563 km (between February 24 and 27). Almost on the whole Bavarian leg of the Danube, as well as on the lower section of the Austrian part of the Danube River, there was an occurrence of ice jams (once or two times) during this winter recorded. Similarly newspaper Pressburger Zeitung on 29th March 1895 brings the following information from Bratislava: “We had one of the few years when the ice barrier on river occurred even two times.“ There were no ice jams present on the upper section of the Austrian part of the Danube River at that time. Only free floating ice (ice drift) was mentioned.

The warming that followed in the second half of March 1895 caused the snow to melt and the ice jams to break up with the appearance of drift ice in the Upper Danube. This was linked to an increase in flow and water levels on the main stream of the Danube and its tributaries.

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