



Historical water control maps – key to understand current challenges?

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The 19th century and post-World War II decades were the main eras of water controlling in former Hungarian Kingdom and Hungary. Due to those large projects, the number and frequency of big floods were minimized but changes caused several other problems what we have to face off in the present. The main help to understand or highlight the fundamentals of those problems can be the flood control maps which, in some cases, show the original, natural riverbed and neighbouring areas of the river. There is other advantage of these maps compared to other surveys: while the main focus of the water control surveys was the river, there was sufficient time to measure the fine differences of land-use and relief in detail.

Our sample area is the middle part of Tisza river and three different maps were chosen to show the changes before and after the regulations:

Map of the Middle-Tisza, mapping until 1790 by János Lietzner

This map is the earliest, known, topographic scale map about the river. Due to its age, the sheets are in bad state, especially their parts close to the edges and corners. A photographed, greyscale copy exists about the sheets, that was used in our research. Despite such bad conditions, it contains lots of information about the river and settlements, as well as detailed land-use before any flood regulation.

New survey of Tisza river, mapping until 1932 by the Directorate of Water and Construction

Because of the changes, due to time and regulation, several new surveys were ordered at the end of 19th century and between the world wars. During those new surveys, the river was re-triangulated and mapped, although cross and longitudinal section measurements also were carried out. This map clearly shows the results and changes of regulations, especially on populated areas, newly built dykes etc. but before the changes happened between 1950 and 1980.

Topographic maps of the Hungarian Defence Forces – Geoinformation Services

As a current, base-dataset, topographic maps were used to compare historical content to the current state.