Old topographic maps – valuable data source for environmental research

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Our research at the Department of mapping and cartography is focused on the usage of old maps. The poster shows how the data of old topographic maps can be used for environmental research. If old maps are georeferenced and are easily accessible, they can be used for landscape changes detection in an efficient way.

As we found out the data of I. Military mapping of Austrian-Hungary Empire cannot be used because of huge distortion of map content. However, the data of II. and III. Military mapping can be very easily georeferenced and used. After proper georeferencing the specific map symbols should be digitized into the vector form. The most interesting features for environmental research are forests and water bodies. Streams and rivers, roads and paths or settlements can be digitized too. Once we have digital vector data from different epochs, we can compare them very easily in GIS environment.

The outputs of this comparison could be graphs (e.g. Total sum of forest areas in different epochs) or maps. On the map can be very nicely depicted "change polygons" of area features. The areas where the forest disappeared or the areas where the new forest has grown up can be symbolized with different colors. Very similar outputs can be visualized in map server application.

We created such application during our project of detection landscape changes in Neveklov region. The user of our web application can choose the raster background

(maps from four different epochs) and the vector data from these epochs. The layers with epoch comparison are also available. Using this application can anybody very easily find out, how the landscape was changing in the past.