



## **The use of historical topographic maps in the study of forest-cover changes in Southern Romania**

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In the post-communist period the term “deforestation” becomes well known in Romania. By the middle of 19th-century more than 27% of the country was covered by forests, but since then certain changes took place in this respect. The study of the phenomena can be done by the help of maps. In this regard it is very important to have old maps which can emphasize the situation from the past. As the map of Southern Romania, made about Walachia in 1864, called Charta României Meridionale is now georeferenced and accessible on the web, it can be used as a basis for such studies. Researchers are now able to make quantitative studies. In our poster we made a study of two different regions from Southern Romania: one from a mountain region and one from a plain region. Both are in the basin of Argeş river, tributary of Danube. The mountain region lies in the upper basin of Argeş river which is now occupied Vidraru artificial lake. The plain region lies on wetland and today is a natural reserve. The study regions have almost the same size (about 400 km<sup>2</sup>). In order to follow the evolution in time of the forest cover we used four data sources which covers a period of more than 150 years: Charta României Meridionale (the survey was made between 1855 and 1859); Lambert–Cholesky maps (the survey was made at the end of the 19th century); Gauss–Krüger maps (from the 1960s) and orthophotographs made in 2005. All these materials are georeferenced. With the help of GIS software we digitized the areas covered by forests in both regions. The areas were determined and compared. Using GIS techniques we can overlap the areas covered by forests, the illustrations were made this way.

As a conclusion we can say that the plain region suffered important changes as the natural landscape turns into an agricultural-human landscape in the first part of the 20th century. We can say that the actual forest is preserved only because now it is a protected area. In the mountain region the territory was partially transformed into artificial lake, the forests are preserved to reduce the flow of wash materials into the lake. But in the mountain regions more and more clearings appear. The study demonstrates that with the help of historic maps landscape changes can be studied with good results.

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