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Landscape changes of the Polish Carpathian under the oil mining impact: from oil fever through industrialization to marginalization

Kachnic J., Bryndza M., Chwałek J., Dąbek M., Dobrowolska A., Dziemianko A., Gogola K.,
Grywalska A., Grzywa M., Hurlak M., Konieczna G., Suchocka A., Wilk P., Ostafin K.

Jagiellonian University, Institute of Geography and Spatial Management

Deposits of crude oil in the Polish Carpathians are in flysch rocks mainly at several hundred meters, and frequently rises above the ground. In the Middle Ages, the local people were extracting oil and mineral wax from natural outflows for medical purposes as well as for building and machine conservation. Year 1853 brought a groundbreaking innovation, Ignacy Lukasiewicz and Jan Zech patented their crude oil refining formula in Vienna.

The world's first oil mine in Bobrka near Krosno started production on an industrial scale just one year later. This fact became short-lived but significant factor for economic development of the central and eastern part of Polish Carpathians under the rule of Austro-Hungarian Empire.

The plot owners were able to manage oil mining under the Austro-Hungarian law. Thus, in some areas of Polish Carpathians small plots had many oil wells adjacent one to another. The oil well was 30-60 meters deep and cased by using wood from the surrounding forests. At the beginning of XX century, the Polish Carpathians with current Ukrainian Carpathians were world's third largest oil production center, behind the United States and Russia. Many large private companies from Great Britain, Germany, America, France and Belgium invested here. Despite oil production in the Polish Carpathians decreased over the course of interwar period, however the infrastructure associated with the oil industry was an important landmark. The reasons for decreasing of production were: strong fragmentation of the industry, weak infrastructure and intense competition between foreign oil production centers. After World War II state-run company took over oil mining. Many of private boreholes and oil wells were abandoned. The significance of the Polish Carpathians was reduced after the discovery of much bigger oil layers in the Polish lowlands in the 1970s.

The aim of our research is reconstruction of the Polish Carpathian landscape transformation in the immediate vicinity of the oil mining. We have chosen five test areas based on analysis of oil extraction statistical data from 1874 to 1928 and historical maps for time cross sections important to oil industry: Austrian Second Military Survey Map from the 1860s. (initial stage), Polish Military Maps from the 1930s. (advanced stage) and contemporary topographic maps (marginal stage). Cartographic materials and statistical data was supplemented by an analysis of old photographs and postcards.