

Changes of depositional environments in central Poland and Mid-Miocene climatic fluctuations

Climatic changes, often caused by tectonic activity, have a different impact on the rate and nature of sedimentation. A good example of this are the Mid-Miocene tectonic movements in the Carpathians and the Alps, which resulted in drastic climate changes in their foreland, among others, in the Polish Lowlands territory. Then, under the conditions of climatic changes and the lowering movements of the central Poland region, also marked significant changes in the lithology of deposited sediments. At that time was created the 1st Mid-Polish lignite seam, which is currently exploited by the Konin and Adamów lignite mines. Hence, most of the planned research will be carried out in the Józwin IIB, Tomisławice and Adamów opencasts belonging to the aforementioned mines.

The main aim of this project is to determine the changes of depositional environments in central Poland during the Mid-Miocene, that is, ca. 15 ± 1.5 Ma. These changes will be presented in the context of climatic fluctuations and intense vertical movements of the Carpathian-Alpine orogen as well as slight lowering of the Polish Lowlands area. On the basis of preliminary studies, we believe that all lithologically varied the Mid-Miocene sediments in central Poland (sands, lignites and overlying muds, so-called "Poznań clays") are genetically related to different types of fluvial environment. Therefore, determining the river type (braided, meandering, anastomosing), in which environments were formed deposits of various lithologically (sands, lignites, muds) seems to be a very important part of this project.

The obtained results will be published in high-ranked international journals (the so-called "Philadelphia List", in other Polish journals from the so-called "Ministerial List", as well as present during international and national conferences, and on the website of project.