

**SURVEY ON THE PROCESS OF ENVIRONMENTAL IMPACTS OF OPENCAST  
MINING**  
**BERKI, Imre<sup>1</sup>, GRIBOVSKI, Zoltán<sup>2</sup>, PÁJER, József<sup>1</sup>, POLGÁR, András<sup>1</sup>, SZABÓ,  
Katalin<sup>1</sup>**

**The University of West Hungary Faculty of Forestry**

**<sup>1</sup> Institute of Environmental and Earth Sciences**

**<sup>2</sup> Institute of Geomatics and Civil Engineering**

**H-9400 Sopron, Bajcsy-Zsilinszky Str. 4.**

**e-mail: [jpajer@emk.nyme.hu](mailto:jpajer@emk.nyme.hu)<sup>1</sup>**

The surface of Hungary is covered by a number of quarry pits that were made out of mining cultivation. This is attributed to the former permissive regulations apply to mine-opening, as well as the change of the ownership after the change of the regime. Concerns have become more intense over possible environmental loads and there are different professional standpoints regarding the adjudication of the situation.

The target of the project is to identify the impact area of the opencast mining, exploring the factors, that influence the impact range of the impact factors, keep in mind the preservation of the natural environmental requirements. Systematize these impact factors, and develop a check-list, that supports the forecast of the impact factors.

The survey is based on a 5 years of returning monitoring, that allow of the aerial photography, and the local collection of data.

The research took place on 20 allocated sampling areas, but experiments were made on other minesides as well. According to the impact parameters 8 impact processes were identified. The impact area was examined using pairs of aerial photos about these mining areas. During the examination different types of impact processes were identified.



Gércé (alginít), 2005



Gércé (alginít), 2011

*Figure 1: The change of the environmental state of the alginít mine Gércé*

The examination eludes the ecological processes of the mines, where we experienced that the direction of the natural succession and the range of the constantly changing biological diversity depends on many different factors. However there are some basic determining factors such as the water supply of the area, the kind of vegetation coverage of the area before the mine-opening, and the type of the exploited raw materials.

The survey is done within the TÁMOP 4.2.1. B „Preservation and sustainable utilization of our natural heritage” subproject, in the part of „The impact of opencast mining on the natural environment” project.