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## **THE ECOLOGICAL CONSEQUENCES OF RESTRUCTURING OF COAL MINING BRANCH IN UKRAINE**

The coal mining is the important branch of the industrial potential of Ukraine as it ensures the development of the main sectors of the national economy. The future stable development and energy security of the nation are substantially dependent on the effective and stable functioning of the coal mining. The exhaustion of the reserves, the unprofitability of mines, difficult mining and geological conditions and unstable economic circumstances caused the shutdowns of the mines.

From the beginning of the restructuring (from 1996) 143 mining enterprises went into liquidation, but only 50 mines were finally wound up. The anthropogenic and ecological consequences of coal mines liquidation were often left out of account, the environmental regulations were violated, so the social and economic and ecological problems of coal mining regions in Ukraine have been aggravated to a considerable degree.

The large-scale shutdowns of the coal mines cause the underground water rise and washing out of rocks around the mine workings, which can activate the dislocations and cavings. As a result of mines inundation the changes of hydrogeological and geotechnical conditions of the most mine fields take place. The conditions emerge according to the intensive mining works connected with mine liquidation. The complete flooding is followed by wedging out of mineralized mines waters and possible displacement of acid mineralized waters from the old shallow mine workings. The mine waters reaching the surface are characterised by high salt load and aggressivity and represent danger to groundwater and surface water.

The mine gas outlet to the earth surface, houses and facilities is one of the dangerous consequences of mines liquidation. Mines liquidation activates the processes of mine gas flow to the earth surface, that can cause the anthropogenic emergency.

There is also such an urgent problem of the unprofitable coal mines liquidation as the treatment of large-tonnage wastes of coal mining; they occupy large territories and have a permanent negative influence on the environment components and population health.

The environmental load caused by mines operation peculiarities is one of the most important factors to be taken into consideration for planning the future development of the national coal mining industry.

So, the effective nature-conservative measures should be developed and implemented in order to overcome the anthropogenic, ecological and social aftershock of the restructuring of coal mining industry and secure the environmental safety of the unprofitable coal mining enterprises liquidation.