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The Influence of Minerals Extraction on Environment in the Prydniprov'sk Industrial Region

Ukraine is one of the leading countries as for the amount of mineral resources. Occupying 0,4% of the mainland, it possesses 5% of the world's stock of minerals with the total value of more than \$11 trillion, which is distributed among 9000 deposits. It has stipulated formation of a powerful production complex and concomitant technology-related ecological problems, namely: the high degree of technology-related loads and pollution of environment, formation of large waste volumes, activation and development of dangerous geological processes, violation of hydrological processes, loss of minerals, non-complex deposits utilization. All the enumerated problems concern the Prydniprov'sk industrial region of Ukraine. This region has been developing during a long period of time, possesses its own specificity and corresponding ecological consequences.

Quite a critical ecological situation has arisen in the Western Donbas.

The peculiarities of coal extraction at mines of the Western Donbas consist in the fact, that exploitation of coal deposits is located in the bottomland of the Samara River and its confluents. As a result of intense undermining of the grass there appear processes of falling and flooding (swamping) of large territories. That results in a significant loss of arable lands, destruction of forests and underflooding of settlements.

For the Western Donbas inclined layers occurrence, large areas of occurrence and high level of groundwaters location are typical. In the process of grass undermining its draw makes up nearly 90% of the taken power and occurs right after the break. It stipulates the loss of fruitful and potentially fruitful layers and violated grounds can no more be used for its original predestination. The most valuable areas are lost, including agricultural lands and woodlands. The applied methods of recultivation of violated grounds do not allow to restore their original quality fully.

Saving ground fertility and, in many cases, even improve is greatly, is possible subject to the implementation of the anticipatory recultivation, which provides preliminary (before the undermining) removal and separate storage of fertile black earth layer and sublayer, addition of shaft rock and a subsequent covering by piled subjacent and fertile ground layer. In such a way the problem of wastes storage after coal extraction is almost solved and during the recultivation it is possible to use the modern equipment of high capacity.