

Lesya Goychuk
A.V. Bardas, research supervisor
O.D. Shvets, language adviser
SHEI “National Mining University”, Dnipropetrovsk

Rent as an Instrument of Mining Influence on Environment Minimization

The problem of harming in mining operations continues concerning the world community. Despite the fact that with each passing decade scientists are trying to optimize this process and develop more effective and less harmful technologies, negative influence is growing faster. Over the past hundred years industrial production increased by 50 times, while the highest growth rates are demonstrated by the industries that depend on mining. Conventional mechanisms of influencing mining companies do not work and the country needs the financial guarantees to cover this damage. It is the ecological rent that can become those, when businesses will take a preliminary lease for using the territory for their own purposes, taking into account future costs of its restoration. The environmental conditions of the territory and the technical and economic factors should influence the rent formation. The technical and economic factors can be considered as the ratio between the average and individual levels of production technology and production. Before operations start it is necessary to estimate the impact on the territory and only after verification of data by public authorities the rent should be calculated. It would be kind of insurance against unfair use of state land, aimed only at making a profit.

The enterprise's ecological passport can become a basis for rent calculation. It is a comprehensive document that contains the basic information on the scales, emission specificity, features of the technological process, and the equipment condition. It identifies the enterprise's impact on the environment – water, air, material and land resources – organizational and technical level of environmental performance. It also includes a program of activities aimed at reducing the load on the environment, with indication of the costs, emission size, timing and changes after each phase of work. Ecological rent introduction may encourage tenants to improve technologies. Often the nature of raw materials mining and processing technologies has no less impact on the quality of work than the mining and production scale. Therefore, considering the harm that can be caused in the future, the entrepreneur will calculate in advance whether it is beneficial to continue not to introduce safer and more efficient technologies. Mining damage to large industrial regions is hundreds millions of dollars per year. Though surface mining is less expensive than mine, it does more harm to the environment. If to count all the costs to cover the damage, they in some cases can cover all the profit from the operations carried out.

Nowadays, more than 70% of the territory of Ukraine is contaminated and this level is growing. The ecological rent can become the preventing instrument of environmental protection, based on mutual benefit of the county and private economic entities.