

TOOLS FOR ANALYSIS OF ECOLOGICAL CONDITIONS OF GROUND PLOTS AND THEIR IMPACT ON ECONOMICAL VALUE

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Land is one of the most universal natural resources that is essential for all fields of economy. Its particular qualities are the inability to be replaced with any other natural resource, and the requirement to utilize it at its geographical location. In this regard, land can be classified as a territorial resource and the base of evolution of society.

Under modern conditions, the problem of economical evaluation of ground plots can be considered both in the view of solving the normative-governed problems in accordance with legislation, using official directive and methodical documents and standards, and in the view of independent expert assessment based on scientifically proven approaches and principles, that define consumer value of ground plots in the market.

Economical assessment of ground plots is made of a number of social value characteristics, expressed in cost units. Ineffective and irrational utilization prevents realization of economically significant functions and lowers the pecuniary valuation of a ground plot. Thus, it is important to take ecological state characteristics of the environment into consideration when developing a method of complex economical assessment.

Taking ecological state characteristics into account is accomplished via the method of correcting the basic pecuniary valuation of a ground plot using a system of corrective coefficients:

$$Pr = Pb * S * K1 * K2 * K3 * K4 * K5,$$

where Pr – resulting ground plot price;

Pb – basic ground plot price;

S – ground plot area;

K1 – coefficient that takes account of atmospheric air pollution;

K2 – coefficient that takes account of polluting the soil with residual chemicalization wastes, heavy metals, and other chemical elements;

K3 – coefficient that takes account of ground erosion;

K4 – coefficient that takes account of noise pollution;

K5 – coefficient that takes account of effect of an electric field.

A software product for analysis of ecological conditions of ground plots has been created, using Java programming language, NetBeans IDE and JavaDB DBMS.

References

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