

## **Environmental planning methods as the basis for sustainable development of the country**

*Danshyna S. Yu., Laptii P. O.*

*(National Aerospace University "Kharkiv Aviation Institute",*

*E-mail: s.danshyna@khai.edu, p.o.laptii@khai.edu )*

Sustainable development as a most important element of ensuring the necessary quality of modern people life assumes that the process of changes in society, its scientific and technical development is carried out in conditions of maximum preservation and increasing of available natural resources. However, in developing countries, especially in industrial cities with significant population growth - occurs uncontrolled urbanization, which negatively affects the whole ecosystem. In these circumstances, the only way to solve environmental problems is to reorient human activity to the implementation of its eco-development strategy. Ecologists, economists and industrialists are agreeing that in the future the main condition for the survival of mankind is to prevent changes in some properties of the environment by constant monitoring of the influence level which human deals on it.

Ecological planning is a set of measures to control man-made human impacts on the environment in order to restore and update ecosystems which were damaged as a result of anthropogenic activities. Any goals of economic development should be coordinated and adjusted by taking into account the environmental needs of the population of the country, include the function of early warning of adverse environmental trends. In order to create conditions for raising the standards of living of the population, it is necessary to systematically analyze the problem of anthropogenic impact, exploring the sources of influence, identifying its shortcomings and developing possible ways to improve. At the same time, the goals of projects implemented within the framework of the development eco-strategy may include the protection of ecosystems that are at

risk area, the restoration of degraded ecosystems or the creation of new sustainable systems to meet the needs of the country. This means that such projects should be based on a comprehensive environmental assessment of the region, based on the current legislation on and undergo environmental expertise.

At the initial phases of the life cycle of an eco-development project, possible directions are considered based on the results of monitoring environmental parameters, taking into account the sources and localization of anthropogenic impacts of the environment, their epicenters and zones, as well as taking into account the nature of pollution. To control these parameters and determine the degree of impact of anthropogenic pollution, classical methods of environmental monitoring are used, which, unfortunately, do not allow to get an objective picture due to the expansion of the scale of environmental impact and an increase in the time for processing the results. In this regard, geoinformation systems open up new opportunities related to the collection of data on sources of anthropogenic impact, their identification, verification for compliance with the requirements of the legislation, etc. Understanding the dynamics of environmental changes and the possibility of forecasting them is an important source of information for making management decisions. However, it is here that the potential of geoinformation systems is not fully used: they are not considered as an effective means of making a decision on the state of the environment in accordance with the requirements of land management, cadaster, environmental protection, etc.

There is a need for the development of specialized models and methods, oriented to the use of remote sensing of the Earth, make it possible to identify sources of anthropogenic impacts on the environment, their nature and zones and assess the dynamics of changes with the necessary completeness.