

**ECONOMICS AND MANAGEMENT
OF THE NATIONAL ECONOMY,
INNOVATIVE ORIENTATION
OF NATIONAL MODELS OF ECONOMIC SYSTEMS**

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**DEVELOPMENT OF THE GREEN ECONOMY'
MECHANISMS AND TECHNOLOGIES
AS A FACTOR OF THE NATIONAL SECURITY**

While understanding the eco-social relations as the process of interaction of a set of natural and anthropogenic factors that results in a geo-system quality, which creates an environment and determines the quality of a range of life spheres, we should distinguish the following main aspects of these relations in the scope of business practices: the environment condition at the local, regional and national levels (as a resulting indicator of environmental safety of the economy' technical and technological base, as well as the level of development of environmental mechanisms and institutions in certain scales of the nature exploitation, the environment saturation with industrially produced chemical compounds, physical and biological factors generated by enterprises); the direction and strength of the environmental situation' impact on the population' and employees' health; the labor safety level. World's leading countries with high living standards have already recognized the fact of an increasingly deeper globalized

scope of the level of the environment' exploitation and pressure that is approaching to critical and irreversible parameters. This awareness has led to the development of a «green economy» model that meets the key principles of sustainable human development, which allows to combine economic growth with acceptable environmental sustainability [1–3].

The set of adverse factors of natural, domestic, industrial environment (external ones) is up to 50% of the causes of the genetic apparatus' damage and congenital human pathologies, which is leading to the population' reproductive losses; the combined action of genetic mechanisms and environmental factors causes up to 60% cases of the gene pool damage, as well as the occasions of fertility' and life expectancy' reduction. Ecologically determined genetic grounds for negative changes in public health are especially dangerous for countries with the simple population reproduction or demographic crisis, since the altered gene pool poses numerous and powerful direct and indirect threats to national security.

Among the main anthropogenic and technical factors that affect the life quality, and thus the population health, labor supply and productivity of the economic sectors' spectrum, but can be adjusted by already developed practices of green economy, we should note: the level of control over the production and use of synthesized chemicals, especially those that are in commercial circulation; the industrial complex' activities (especially enterprises for the production and distribution of electricity, gas and water, processing industry, including metallurgy and finished metal goods' production, mining industry in the most urbanized regions); the level of development of the industrial toxic waste management system, which determines the risks of their storage and the level of activity of this important source of environmental pollution by heavy metals; the functioning of transport that consumes motor fuels of petroleum origin and releases into the environment the products of their combustion, spare parts' wearing, causes acoustic pollution, etc., as well as the production activities of enterprises for motor transport

operation, roads' development and exploitation; the high level of the territory' use for agricultural purposes, as well as factors associated with the scale of chemical saturation and melioration of agricultural production in the retrospect and current period; the branching, technical conditions, functioning quality of water supply and sewerage networks and their autonomous systems; the activities of household utilities (boilers, transformer substations, etc.) that were built-in or attached to residential and public buildings, as well as their ventilation and air conditioning systems, technical characteristics of modern mobile communication gadgets; the radiation pollution of territories due to emergency situations at nuclear power plants, the population' constant exposure with small doses of ionizing radiation of anthropogenic origin, which is most relevant for residents of areas with high natural radioactive background.

Excessive anthropogenic-caused load on the environment, low level of natural environment' and man-made safety, unsatisfactory ecological, sanitary and epidemic situation associated with imperfect economic strategy and disparities in nature management were noted in the still current General Scheme of Spatial Planning of Ukraine, approved by the Law of Ukraine № 3059-III from February 7, 2002. The main measures to stabilize and improve environmental and social relations due to the green economy' mechanisms and instruments include:

- the dissemination of the mechanism for nature management processes' regulation that uses regionally oriented taxes and other stimulating financial instruments (in particular, practices of economic entities' environmental insurance), which implement the principles of Ukraine' sustainable innovation development, taking into account regional peculiarities of economic sectors' and businesses' diversification;

- further implementation of technological modes based on low- and zero-waste, as well as nature-recovery technologies, approval of tourist and recreational activities among the country's

specializations in the international labor division, increase of the measures' systemic level for preserving natural resource potential, biological and landscape diversity;

- strengthening the control (first of all, penalties) over non-compliance by industrial enterprises with the maximum permissible emissions' established standards, as well as with the technological mode of their dust and gas cleaning equipment' operation, modernization and increase of its capacity in accordance with current environmental and sanitary norms; modernization of technologies for emissions' purification from gaseous impurities; the increase of ecological and economic functioning efficiency of the heat power equipment and boiler units of the entire range of industrial objects and facilities;

- the employers' encouragement to update worn-out technological equipment at the enterprises of the main industry' branches (primarily ferrous and non-ferrous metallurgy, coal industry, productions of building materials, cement, energy);

- the observation and improvement of norms and standards in the products' standardization (primarily food ones) and living conditions' safety (including work, household, health protection and recreation conditions); the use in the regulatory authorities' practice of effective methods for determining the pollution level of the living environment and the economic complex' products by toxicants (pesticides, herbicides, heavy metals, etc.), allergens, pathogenic microorganisms;

- raising the agrochemical practices' culture, including in the private farm sector;

- the legal framework optimization and development of effective systems for controlling the level of motor transport environmental safety (especially private and transit); development of a bypass highways' network for transit transport in the urban settlement system; the compliance with the standards of motor transport enterprises' provision with devices for monitoring the technical conditions of vehicles and fuel in use; the technologies'

commissioning for alternative fuels' industrial production and distribution (in particular, bio-ethanol, pellets for solid fuel boilers);

– the timely works' ensuring of capital and current preventive maintenance of water supply facilities and networks, as well as the implementation of other measures to improve their technical condition; the further development of centralized drainage systems, so as development, reconstruction and large-scale technical and technological modernization of sewage treatment facilities; the strict control over compliance with drinking water' quality standards in the conditions of centralized and decentralized water supply;

– the consistent increase of the satisfaction level of settlements' needs in timely and effective waste disposal by public utilities; the development and implementation of innovative environmentally and economically acceptable technologies for the urban and rural buildings' sanitary cleaning, industrial and household waste' collecting and disposing (including toxic ones); the accounting of all landfills for their storage and disposal and dumps (including in the private residential sectors), the equipment of such authorized facilities with environmental protection means in accordance with ecologic safety' standards; the implementation of measures to counteract the unauthorized and spontaneous dumps' formation; modernization of waste incineration plants' technological equipment;

– the protection, reproduction, development of the network and implementation of effective economic mechanisms for balanced use of nature reserve fund' territories and objects, formed on the basis of assessing their useful properties (environmental, economic, social) for the local community, region of location, country as a whole and the international commonality;

– the monitoring of significant indicators of the natural environment quality and working conditions, the assessment of their complex negative impact' results on the population health and, in particular, health of employed in the regional context;

– the acceleration of Ukraine’s integration pace into European and world structures on environmental protection and regulation of various aspects of nature resources’ use, intensification of Ukraine’s participation in international projects to reduce anthropogenic impact on the environment and to improve its components’ quality, especially at regional and local levels.

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