

Modern concepts of sustainable development and «green economy»

Global Challenges of the 21st Century

Module1

ENVIRONMENTAL POLICY AND GREEN ECONOMY IN KAZAKHSTAN

Subject : ECOLOGICAL PROBLEMS OF KAZAKHSTAN

Lecture -5

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REPUBLIC OF KAZAKHSTAN



- ▶
- ▶ **SUSTAINABLE DEVELOPMENT**
- ▶ **Environmental Safety**
- ▶ **GREEN ECONOMY**

"On the Concept of the transition of the Republic of Kazakhstan to sustainable development for 2007-2024"

the Decree of the President of the Republic of Kazakhstan dated November 15, 2006 N 216

- ▶ **The environmental foundations of sustainable development of the Republic of Kazakhstan are:**
- ▶ 1) achievement by the state of the goal of providing a favorable environment for human life and health;
- ▶ 2) environmental protection and biodiversity conservation;
- ▶ 3) ensuring and exercising the right of the Republic of Kazakhstan to develop its natural resources and defend national interests in matters of the use of natural resources and the impact on the environment;
- ▶ 4) fair satisfaction of the needs of present and future generations;
- ▶ 5) development of sustainable models of production and consumption;
- ▶ 6) compliance of environmental regulation with the conditions of social and economic development, taking into account the state of the environment;
- ▶ 7) observance of the right of every person to access to environmental information and the full participation of the public in addressing issues of environmental protection and sustainable development;

- ▶ 9) a global partnership to preserve, protect and restore the health and integrity of the Earth's ecosystem;
- ▶ 10) promoting the development of international law relating to liability for damage to the environment;
- ▶ 11) containment, prevention of transfer and transfer to other states of any activities and substances that cause serious damage to the environment are considered harmful to human health, as well as taking precautionary measures in cases where there is a threat of serious or irreversible damage to the environment.

- ▶ The purpose of the Concept is to achieve a balance of economic, social, environmental and political aspects of the development of the Republic of Kazakhstan as the basis for improving the quality of life and ensuring the country's competitiveness in the long term.
- ▶ The Concept defines the principles, priorities, directions and mechanisms of the country's transition to sustainable development. In particular, the integration of resources, mechanisms and development tools should be ensured. The target parameters of development established in the Concept should serve as the basis for indicative planning of the development of the country as a whole, industries, regions and economic entities in particular.
- ▶ Short-, medium- and long-term plans for the country's transition to sustainable development have been developed, including in the context of regions and industries. Diversification of the economy on the basis of innovative "breakthrough" technologies is to be expected.

▶ ***Canceled on accordance with the Decree of the President of the Republic of Kazakhstan dated April 13, 2011 No. 47***

ENVIRONMENTAL SAFETY

Basic provisions

- ▶ **Environmental safety (ES) is an acceptable level of negative impact of natural and anthropogenic environmental hazards on the environment and humans.**
- ▶ **The system of environmental safety** is a system of measures that ensure, with a given probability, the permissible negative impact of natural and anthropogenic environmental hazard factors on the environment and the person himself.
- ▶ • At each level of organization, the environmental safety system functionally consists of three standard modules that logically complement each other and only in their unity make up the system itself :
 - ▶ a comprehensive environmental assessment of the territory,
 - ▶ environmental monitoring,
 - ▶ management decisions (environmental policy).

- ▶ Each of these modules performs the following functions:
- ▶ **Integrated environmental assessment of the territory:**
 - ▶ • Identification and assessment of a set of environmental hazard factors that manifest themselves in a given territory;
 - Zoning of the territory in terms of resistance to the manifestation of environmental hazard factors;
 - Compilation and maintenance of a cadaster of objects of environmental impact;
 - Identification and assessment of environmental risks;
 - Compilation and maintenance of a cadaster of natural resources;
 - Compilation and maintenance of a cadaster of "contaminated" territories;
 - Choice of sustainable development indicators.
- ▶ **Environmental monitoring:**
 - ▶ • Regulation of environmental impacts;
 - ▶ • Control of sources of environmental impact;
 - ▶ • Quality control of environmental components;
 - ▶ • Monitoring of environmental risks;
 - ▶ • Monitoring of sustainable development indicators.

▶ **Management decisions:**

- ▶ • Formation of environmental policy;
- ▶ • Analysis and adjustment of sustainable development indicators;
- ▶ • Management of environmental risks: a) Prevention of anthropogenic factors of environmental hazard; b) Minimization of the consequences of natural environmental hazard factors;
- ▶ • Development and improvement of environmental legislation and methods of formation of ecological worldview.

▶ **ES assurance methods:**

- ▶ • *Environmental quality control methods:*
 - ▶ o Measurement methods are strictly quantitative, the result of which is expressed by a specific parameter (physical, chemical, optical, and others).
 - ▶ o Biological methods - qualitative (the result is expressed verbally, for example, in terms of "many-little", "often-rarely", etc.) or partially quantitative.
- ▶ • *Methods of modeling and forecasting, including methods of system analysis, system dynamics, informatics, etc.*
- ▶ • *Combined methods, for example, environmental-toxicological methods, including various groups of methods (physic -chemical, biological, toxicological, etc.).*
- ▶ • *Methods of environmental quality management.*

On the Concept of Ecological Safety of the Republic of Kazakhstan for 2004-2015

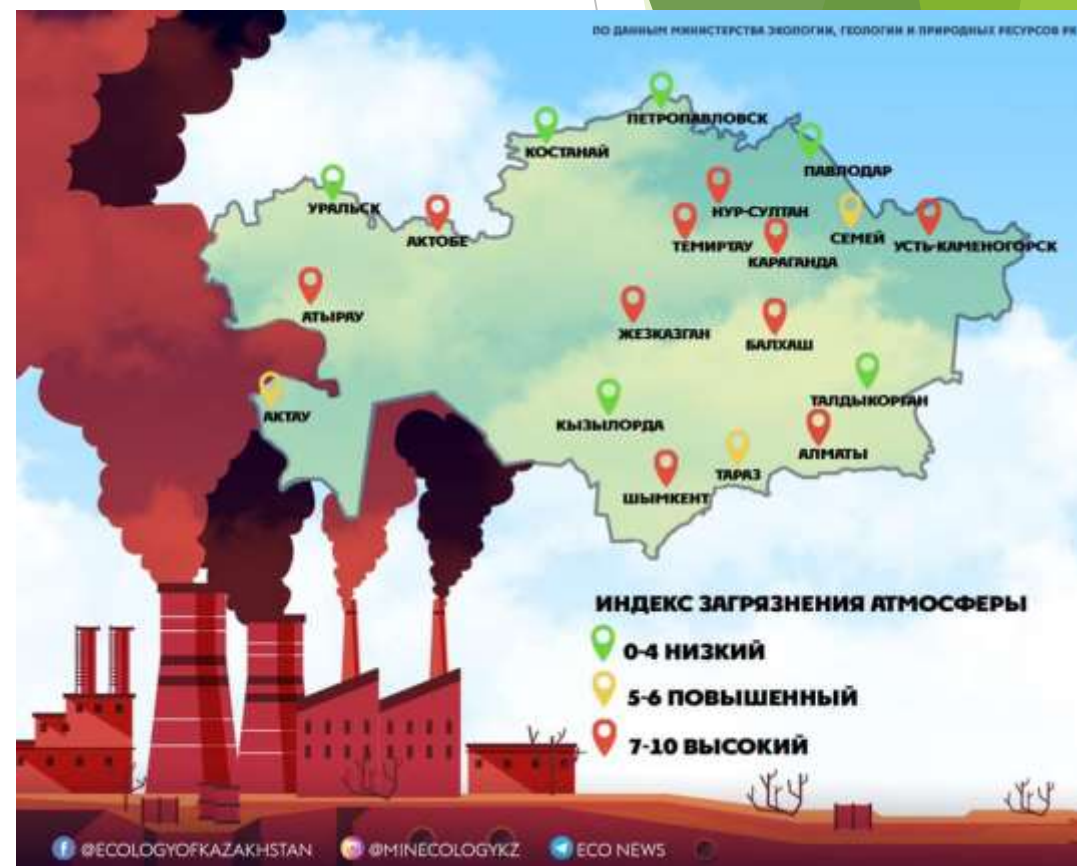
Decree of the President of the Republic of Kazakhstan dated December 3, 2003 No. 1241.

- ▶ The years of independence in Kazakhstan became the years of formation a completely new state system for ensuring environmental safety, environmental protection and nature management - a well-organized and territorially branched system of executive bodies in the field of environmental protection of the Republic of Kazakhstan. This ensured the formation and consistent implementation of state policy in the field of environmental protection and rational use of natural resources.
- ▶ However, over the course of many decades, a predominantly resource-based system of nature management with extremely high technogenic loads on the environment has been developing in Kazakhstan.

The main tasks of environmental safety of the Republic of Kazakhstan

- ▶ reduction of anthropogenic impact leading to climate change and destruction of the Earth's ozone layer; conservation of biodiversity and prevention of desertification and land degradation; rehabilitation of ecological disaster zones, ranges of the military space and test complexes; prevention of pollution of the Caspian Sea shelf; prevention of depletion and pollution of water resources; elimination and prevention of historical pollution, air pollution, radioactive, bacteriological and chemical pollution, including transboundary;
- ▶ reducing the accumulation of industrial and household waste;
- ▶ prevention of natural and man-caused emergencies.
- ▶ The solution of the tasks set is achieved by:
 - ▶ • improvement and systematization of the legislation of the Republic of Kazakhstan;
 - ▶ • economic mechanisms of nature management;
 - ▶ • state environmental control and environmental monitoring;
- ▶ optimizing the licensing system for nature management and environmental expertise;

- ▶ • development of research works in the field of environmental protection;
- ▶ • environmental statistics;
- ▶ • environmental education;
- ▶ • environmental advocacy and public participation;
- ▶ • improvement (expansion) of international cooperation.



Basic principles for ensuring environmental safety of the Republic of Kazakhstan

- ▶ **The environmentally safe development of the State is based on the following principles:**
- ▶ *an ecosystem approach to the regulation of all social relations for the sustainable development of the state through the introduction of a scientifically based set of restrictions, standards and rules for conducting economic and other activities that determine the environmentally acceptable limits for the use of natural resources and ensure balanced environmental quality management ;*
- ▶ *subordination of regional and local tasks of environmental safety to global and national goals of preventing environmental threats; obligatory compensation for damage to the environment and human health (paid by users of natural resources and polluters);*
- ▶ *ecological and economic balance of development and distribution of production forces (principles of ecological capacity and territorial planning);*
- ▶ *obligatory assessment of the impact of economic and other activities on the environment with subsequent environmental and sanitary-epidemiological examinations;*
- ▶ *ensuring public access to environmental information and its participation in solving environmental problems; partnership in international cooperation and observance of international law.*
- ▶ **Canceled by Decree of the President of the Republic of Kazakhstan dated April 13, 2011 No. 47**

“THE CONCEPT OF THE DEVELOPMENT OF "GREEN" ECONOMY IN KAZAKHSTAN”

- ▶ The Concept for the transition to a "green" economy was developed and signed on May 30, 2013. First of all, the Concept presents a list of priority tasks, mainly aimed at reforming certain sectors of the economy.
- ▶ **The implementation of the Concept is planned in three stages:**
- ▶ ***first stage - 2013–2020*** – *optimization of the use of resources and increasing the efficiency of environmental protection, as well as the creation of a "green" infrastructure;*
- ▶ ***second stage - 2020–2030*** – *rational use of natural resources, introduction of renewable energy based on high technologies;*
- ▶ ***third stage - 2030–2050*** - *the transition of the national economy to the principles of the "third industrial revolution", which is based on the use of natural resources in case of their renewal.*
- ▶ Measures for the transition to a "green economy", according to the Concept, will be implemented in the following areas: *sustainable use of water resources, development of sustainable and highly productive agriculture, energy conservation and energy efficiency, development of the electric power industry, waste management system, reduction of air pollution and conservation and effective management of ecosystems .*
- ▶ According to calculations, by 2050, the transformations within the framework of the "green economy" will further increase GDP by 3%, create more than 500,000 new jobs, form new industries and services, and ensure high quality of life standards for the population everywhere.

Seven key areas for the development of a green economy in Kazakhstan

- ▶ **The first direction is the implementation of renewable energy sources.**
- ▶ The ifurther conservation of mineral resources is becoming a huge issue. Our state is recognized as a country with very rich natural resources. Oil, gas - all over the world are classified as one of the largest energy resources, but even they are exhausted in due time, which means that it is necessary to find new resources for life. At the same time, the fact that Kazakhstan has a good ecosystem, soil, water and forest, significantly increases its position in front of other countries.
- ▶ **The second direction is energy efficiency in housing and communal services.**
- ▶ Due to the fact that a significant part of the urban housing stock was built in the post-Soviet period, most residential complexes are equipped with inefficient thermal insulation structures and heat supply systems, which leads to significant heat losses. Currently, energy service companies operate in Kazakhstan, designed to carry out activities in the field of troubleshooting the operation of heat supply devices.

▶ **The third direction - organic farming in agriculture**

▶ First of all, this type of direction considers the rejection of synthetic fertilizer products (pesticides), various feed additives. We are talking about the use of organic fertilizers to ensure the yield and growth of cultivated plants. "Greening" agriculture will provide food to the population without harming natural resources. Kazakhstan plans to act in the following areas:

- ▶ soil fertility management;
- ▶ efficient use of water;
- ▶ plant and animal health management;
- ▶ farm mechanization.

▶ **The fourth direction is the improvement of the waste management system**

▶ The problem of waste management has gained particular popularity. More and more often you meet dirty streets, landfills and the lack of any control over what is happening. In connection with the circumstances, it is proposed to use waste as a secondary product of the production cycle. So, for example, the technology of complex processing of municipal solid waste and obtaining alternative fuel is already being implemented in Almaty.

- ▶ **Fifth direction - improvement of the water resources management system**
- ▶ Water remains a key natural component for ensuring the existence of mankind and the integrity of ecosystems. In this regard, the rational use of water resources remains a problem that is acquiring enormous proportions.

- ▶ **The sixth direction is the development of “clean” transport**
- ▶ Most transportation in Kazakhstan is carried out on diesel/gasoline. First of all, this contributes to high greenhouse gas emissions.

- ▶ **Seventh direction - conservation and effective management of ecosystems**
- ▶ Activities in this direction are mainly aimed at preserving the unique natural wealth of our country.

▶ As part of the green economy development program, Kazakhstan plans to invest in 10 key sectors of the economy:

- ▶ Agriculture;
- ▶ Development of Housing and Utilities;
- ▶ energy;
- ▶ fishing;
- ▶ forestry;
- ▶ industry;
- ▶ tourism;
- ▶ transport;
- ▶ recycling in an Industry and recycling of waste;
- ▶ water resources management.

▶ Today, 40% of the world's innovations are in the green economy, and 50% of them are in energy saving and energy efficiency, which are a key factor in the green economy. Energy is responsible not only for the competitiveness and security of the economy, heat and light in our homes, but also for 50% of pollutant emissions and 70% of greenhouse gas (GHG) emissions. That is, the level of energy intensity is determined by the environmental and climatic components of national economies. According to this indicator, Kazakhstan occupies the eighth place in the world energy intensity rating (Russia is the fifteenth). *That is, energy efficiency is the Achilles' heel of our economies.*

«ЖАСЫЛ ЭКОНОМИКА» «ЗЕЛЕНАЯ ЭКОНОМИКА»



«ЗЕЛЕНАЯ» ЭКОНОМИКА КАК ОСОЗНАННЫЙ ВЫБОР КАЗАХСТАНА