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### **Ensuring sustainable development of the country's ecological mechanism**

It is important to have a sustainable development which will help to conserve ecological systems, protect the economic potentials and rational utilization of natural resources. To achieve this goal, it is necessary to develop measures for the rational use of natural resources, and the development of the economy based on the principles of sustainability is relevant.

It should also be noted that ignoring environmental factors in the development of industry and agriculture in the Republic of Azerbaijan causes serious problems in the country. Information on the negative effects of suspended particles in the atmosphere on public health was given on several occasions.

Although suspended particles are a serious source of danger to human health, which has been determined as a result of recent research. [4]

It is known that three main criteria are used to assess sustainable development. These include environmental, economic and social indicators.

a) Environmental criteria:

Environmental criteria include those listed below.

- ✓ Quality of the local environment
- ✓ Biodiversity, ecosystems

b) Economic criteria:

- ✓ Employment:
- ✓ Money income
- ✓ Transfer of relevant technology

c) Social criteria: Does the proposed project contribute to social development in Azerbaijan?

- ✓ Social justice and poverty reduction
- ✓ Quality of life

The article focuses on refining indicators of ecology and the environment on the three main criteria that are key to sustainable development.

Direct or indirect effects of human activity on the biosphere are called anthropogenic effects. Only the geological process can be compared with the metabolism of the biosphere due to anthropogenic power and the scale of energy circulation. The nature of the anthropogenic impact is the need for primary biological products and mineral raw materials for the survival of the population. The biosphere is the only source for this demand. [3]

Managing the relationship between nature and society is one of the most important issues in our country, being one of the socio-economic aspects of ecological and economic zoning. At the same time, much more pollution occurs in the environment than in previous years. In addition, the basis for solving numerous environmental problems in the development of the relationship between society and nature in our time is a balanced and sustainable development of the economy, its greening and effective management. [1; 4]

It is impossible to effectively and rationally predict the natural balance of the environment and natural resources or maintain the natural environment for life without ecological knowledge, without knowing the complex and complementary mechanism of communication. On this basis, it is inevitable to solve environmental problems and socio-economic aspects. [3].

### ***The main tasks to improve the environmental situation***

The key goals of improving the environmental situation are:

1. Prevent water pollution;
2. Conservation of biodiversity;
3. Increase in greenery;
4. Protection of atmospheric air;
5. Prevention of land degradation;
6. Improving waste management.

The objectives adopted for solving environmental problems are to increase revenues in the non-oil sector as a result of the rapid development of the economy, which greatly expands the possibilities for implementing environmental projects. [2; 4]

The global environmental problem that has recently become a matter of concern for the whole society is the spread of the ozone layer in the atmosphere, rising climate temperatures, large-scale coverage of the desertification process, a sharp reduction in biodiversity and the spread of various diseases associated with pollution. [2]

On the other hand, it is intended to implement the following goals and objectives in order to eliminate and limit the serious environmental problems arising in the course of economic activity in order to ensure that development is environmentally sustainable.

- Use appropriate economic and social resource management techniques to improve the quality of the environment;
- Creation and use of economic models, technologies that stimulate the well-being of current and future generations;
- Protection of systems, ecosystems and biodiversity that can support human activity.

*The implementation of these tasks should be based on the following principles:*

- Decision making taking into account short-term and long-term economic, environmental and social outcomes and possible consequences;
- Taking into account alternatives when making decisions in the field of sustainable development and environmental protection;
- Preventing the implementation of economic, social and environmental projects that may cause irreversible damage to any component of the environment;
- Ensuring a strong and multifaceted economic development that allows you to allocate funds for environmental protection and sustainable development;
- the involvement of non-governmental organizations in the decision-making process on sustainable development and environmental protection should be considered.

The economic and social development of countries that do not meet environmental standards are not sustainable. It should be noted that, the environment is considered an important factor for sustainable development.

“Sustainable development is development that meets the needs of today, but does not jeopardize the capabilities of future generations, meeting their own needs.” Sustainable development is accompanied by two basic concepts.

- The concept of need is needs, in particular those necessary for the existence of the most vulnerable segments of the population, which should be the subject of top priority;
- The concept of constraints imposed by the organization on the environment to ensure the current state of the technology and to meet future needs. ”

To determine sustainable development, the following factors should be considered.

1. Currently, sustainable development has more than 169 appointments.
2. Equilibrium in the environment, the balance between the economy and the population is the basis of the strategy of sustainable development.
3. The goal of a sustainable development strategy is to develop basic ways of adapting to life and methods of global change.
4. To this end, everyone has the right to a productive life in harmony with a healthy environment and nature.

On the other hand, “Sustainable development is a stable socio-economic development that does not violate its natural base. Thus, the improvement of the quality of life of the population was mainly formed in three stages. It should be ensured that bio-fertilizer is within the limits of the biosphere volume, which would lead to the destruction of the natural biotic mechanism of environmental regulation and its global changes” [1; 4]

The following formula is used to determine sustainable development:

$$\frac{dF(L, K, N, I)}{dt} \geq 0,$$

where,  $F(L, K, N, I)$  is a function of sustainable development

L is human capital;

K – artificially created (physical) capital, means of production;

N – natural capital;

I – institutional capital

It should be borne in mind that in accordance with sustainable development, it is necessary to understand the preservation of existing ecological systems, the protection of economic potentials and the rational use of natural resources. To achieve this goal, it is necessary to develop measures for the rational use of natural resources, and the development of the economy based on the principles of sustainability is relevant. [2]

The article focuses on the consistency of ecology and the environment with economic development in assessing sustainable development.

The concept of sustainability should be based on development evidence-based development and appropriate approaches. To this end, approaches to establishing indicators of sustainable development should follow the following sequence. There are two approaches to building indicators of sustainable development. [2]

1) to create integral indicators to determine the degree of stability of socio-economic development;

Aggregation is usually based on three groups:

- environmental and economic
- environmental and socio-economic
- only ecological

2) Creating a system of indicators, each of which reflects individual aspects of sustainable development.

In most cases, the following indicator subsystem in the overall system is selected.

- Economic,
- Ecological,
- Social,
- Institutional.

In addition to these indicators, integrated indicators of sustainable development should also be defined. In this case, as integral indicators, the following can be noted.

- Net savings (savings)
- Integrated environmental and economic accounts
- Human Development Index
- Millennium Development Goals
- A new look at the wealth of people and so on.

Several studies have shown that new approaches to sustainable development are needed:

- Damage from environmental pollution;
- Depletion of natural resources;
- New economic reality.

The modern accounting system of socio-economic processes is not aimed at analyzing the most adequate indicators;

As you know, the role of GDP in economic research is further enhanced by research results.

Gross domestic product (GDP) is not an ideal indicator of improved welfare, because it does not cover various social processes that are called “sustainable” development (environmental changes, some events)

- It is necessary to emphasize the apparent contradiction of GDP, while it is required that the most attention be paid to safety issues, air and water pollution, which can lead to a slowdown in GDP growth.

- In order to measure one of the main production results, an accurate assessment should be carried out in the system for improving welfare indicators. In this case, welfare measurement should be considered in the context of sustainable development.

- To measure social welfare, it is necessary to use different indicators that cover various aspects, such as security (economic and physical), freedom of choice, health care, education, and some factors. But, unfortunately, many traditional indicators of social welfare do not reflect social reality.

As an environmental indicator, the following can be noted. First of all, pay attention to the key indexes:

- Living Planet Index;
- Ecological footprint index.

The following are the types of indicators:

- Integral indicators;
- key / baseline indicators;

- additional indicators;
- specific indicators;
- private indicators.

Each of these indicators is individually important for the development and protection of ecology and the environment.

Environmental Strength (Pollution Intensity) – Environmental Efficiency = Expenditure / Result

Net savings (savings) can be applied to:

- GDS – gross domestic savings,
- CFC – consumption of fixed capital,
- EE – education expenses,
- DDNR – damage to depletion of natural resources
- ED– CO2 emissions damage
- DPE – damage from particulate emissions.

It is known that during the economic activity of people (as a result of technological processes) a product (goods and services) and useless waste are formed. Although the economic (institutional) unit is interested in organizing the accounting for the production of a useful product, there is no interest in organizing the accounting of waste (anti-products). As a result, the environment (soil, water, air, etc.) is constantly exposed to the physical, chemical and biological effects (quantity and quality of changes) of anti-products. Since environmental damage is beyond the scope of the enterprise, it is therefore necessary to regulate this area with the relevant authorities.

Disruption of the ecological balance is dangerous for all living things, including humans. People must protect nature from the physical, chemical, biological effects of anti-products. Physical effects include the destruction of greenery, physical damage to the earth, drilling for various purposes, dust emitted by industrial facilities, and other factors that adversely affect the physical integrity of the atmosphere.

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