

DIRECTIONS FOR DEVELOPING THE "GREEN ECONOMY"

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Abstract

This article covers the theoretical foundations, relevance and main directions of the development of the "green economy". It analyzes environmental problems, limited natural resources, climate change and the need to ensure economic stability as important factors in the transition to a green economy. It also considers the development of renewable energy sources, waste management, rational use of water resources, green transport, organic agriculture, energy efficiency and the introduction of green technologies. The article also substantiates the importance of implementing the principles of the green economy in practice in the conditions of Uzbekistan.

Keywords

Green economy, sustainable development, environmental sustainability, renewable energy, green technologies, resource efficiency, waste management, organic agriculture, energy efficiency, eco-innovation.

In recent years, global economic development processes have been closely linked to environmental problems, the limited availability of natural resources, and climate change. The limited capabilities of the traditional economic model to ensure long-term sustainability are prompting countries to seek new approaches that combine economic growth and environmental protection. In this context, the concept of "green economy" is recognized as one of the important factors in ensuring sustainable development.

The issue of transition to a green economy is also of particular relevance for the Republic of Uzbekistan. The energy, agricultural, and industrial sectors play a significant role in the country's economy, and efficient use of resources and ensuring environmental sustainability in these sectors are among the priorities. In recent years, reforms aimed at increasing the efficiency of renewable energy, improving the waste management system, and introducing ecological innovations serve as a practical expression of the principles of a green economy.

The urgency and necessity of the transition to a “green economy” is determined by the following factors:

- The need to implement technological modernization in the economy in order to reduce the negative consequences of environmental pollution and depletion of natural resources;
- Increasing the competitiveness of the economy based on reducing dependence on hydrocarbon raw materials and their share in the value of the final product;
- The use of green innovations that allow updating high-tech industries with a large multiplier effect;
- Reducing dependence on hydrocarbons in the process of transition to a low-carbon economy.

As noted above, the initiative to develop a “green economy” in the world was put forward by UNEP in 2008 and is based on the following general principles:

- Assessment of environmental problems at the national and international levels and their transformation into the first agenda;
- Ensuring employment of the population through the creation of “green” jobs and developing appropriate measures;
- Using the market mechanism to achieve sustainable development.

The concept of “green economy” is based on the following assumptions: a) the impossibility of unlimited expansion of the sphere of influence in a limited environment; b) the impossibility of satisfying growing needs in conditions of limited resources; d) the interconnectedness of everything on Earth.

UNEP experts divide the “green economy” sectors into two groups: a) sectors related to raw materials extraction, agriculture, fisheries, forestry and water resources management, i.e. sectors related to “natural capital”; b) sectors related to energy, processing industry, mechanical engineering, transport and construction, i.e. sectors related to “increasing energy and resource efficiency”.

At the same time, the development of a green economy is not limited to solving environmental problems, but also allows for the formation of new sources of economic growth, increasing employment levels and improving the quality of life of the population. This process requires improving institutional mechanisms, attracting investments and ensuring the consistency of state policies.

Some experts emphasize the need to use the Clark-Fisher model in determining the directions of development of the “green economy”. The Clark-Fisher model serves to theoretically substantiate the importance of the extractive, processing and service sectors of the economy in creating jobs at the stages of economic development. This model complements the "green economy" sectors

proposed by UN experts with "green" services related to the service sector and areas specific to the innovative economy, such as high-tech manufacturing, tourism, urban management and waste disposal, education, scientific research, and financial services.

The following areas of development of the "green" economy are distinguished in the economic literature:

1. **Development of renewable energy sources.** The energy sector is a sector that has a significant impact on climate change, and about 60% of greenhouse gas emissions into the atmosphere fall on this sector. According to the analysis, one in five people on the planet, or 1.2 billion people, lack access to electricity. 2.8 billion people use wood, coal, and animal waste to cook food and heat their homes. This causes more than 4 million deaths annually due to indoor air pollution. Countries around the world will need to increase the amount of annual investments spent on the formation of the necessary infrastructure for the development of the "green energy" sector from the current \$ 400 billion to \$ 1.25 trillion by 2030.

2. **Improving the waste management system.** Currently, in developed countries, from 1 kg to 3 kg of solid household waste is produced per capita every day. In the USA, this figure is increasing by 10% every 10 years. In Russia, waste collection areas cover an area of more than 2 thousand sq. km. At the same time, the creation of a rational waste management system can bring serious economic dividends. In particular, in the UK, in 2005-2010, 7 million tons of waste were recycled and reused within the framework of special programs. This allowed to avoid the emission of 6 million tons of greenhouse gases into the atmosphere, save 10 million tons of primary materials and 10 million liters of water. 8,700 jobs were created in this area.

3. **Improving water resources management systems.** Every sixth person on the planet suffers from a lack of drinking water. As a result of climate change and the activation of the global natural water cycle, the level of humidity in the regions with a humid climate is increasing, while droughts are increasing in the regions with a dry climate. Currently, 3.6 billion people live in areas where water shortages are observed for at least one month a year, and by 2050 this figure may increase from 4.8 billion to 5.7 billion.

4. **Development of "clean", "sustainable" or "green transport".** UNEP is conducting research on reducing the demand for transport, primarily private vehicles, without harming the general movement of the population. "Green transport" is understood as any method or organizational form of transport that reduces the negative impact on the environment. Green transport can include

walking and cycling, eco-friendly cars, the design of convenient transit zones for public transport, and urban transport systems that promote an economical, healthy lifestyle and help preserve living space. Transport systems have a significant negative impact on the environment, with 20-25% of global energy consumption and greenhouse gas emissions directly attributable to transport. The world's car fleet is expected to triple by 2050. For this reason, UNEP, in collaboration with the International Automobile Federation and the International Transport Forum of the International Organization for Transport (IATA), has launched the "50 by 50" initiative. The goal of this initiative is to increase the efficiency of the world's car fleet by 50% by 2050. In Tashkent, 90% of greenhouse gases emitted into the atmosphere are caused by motor transport. The amount of toxic substances emitted by vehicles in Tashkent is 395 thousand tons per year. In 2018, the amount of these toxic substances in Uzbekistan amounted to 2 million 449 thousand tons, and the share of motor transport was 60%. This indicator is 3 times higher than the world standard.

5. **Development of organic farming in agriculture.** It is proposed to abandon the use of herbicides, pesticides, toxic chemicals and artificial fertilizers in agriculture. Organic agriculture is being developed in 178 countries of the world as an important direction of the global "green economy". The area of land allocated for organic production is increasing year by year. In particular, in 2019, more than 70 million hectares of land were used in organic agriculture worldwide, and this figure is approximately 1.4% of the world's agricultural land.

6. **Increasing energy efficiency in housing and communal services.** The presence of housing equipped with inefficient heating systems and equipment leads to significant heat loss.

7. **Preservation of ecosystems and increasing management efficiency.** All types of human activity lead to changes in the bioenvironment. The direction and scale of these changes can be described as an "ecological crisis". According to the UN, 30.7% of the Earth's land surface is covered by forests. Forests are important for ensuring food security and preventing climate change. Humanity is losing 13 million hectares of forest annually, and systematic land degradation has led to the desertification of 3.6 million hectares of land. Of the 8,300 known animal species in the world, 8.0% have become extinct, 22.0% are on the verge of extinction, and only about 1.0% of the 80,000 tree species have been studied for potential use.

8. **Develop markets for the creation and sale of "green technologies".** In 2025, the global market for environmentally friendly equipment was worth 4.4 trillion euros (about 6 trillion dollars). It is observed that this market is growing by

an average of 30% annually and its contribution to global GDP is increasing to 6-7%. According to the analysis, by 2020, the global market for environmentally friendly equipment is expected to double in size, the number of people employed in relevant sectors will quadruple, and the contribution of the "green economy" to global GDP will increase by 5%.

Based on the above, it is advisable to solve the following tasks in the development of the "green economy":

- The main problem in the successful implementation of the "green economy" concept is to simplify the concept of "green economy" as a means of directing additional investments in the development of energy and resource-saving technologies, alternative energy, or as "green growth";

- The complexity of the scientific justification of the need to transition to a "green economy" and the high uncertainty of forecasting environmental problems create difficulties in explaining this concept in an understandable and simple way. In particular, there is no single agreement on the timing and level of reducing greenhouse gas emissions into the atmosphere. The volume of greenhouse gas emissions into the atmosphere is increasing;

- The "green economy" cannot replace sustainable development, the "green economy" is a criterion that serves to achieve sustainable development;

- Sustainable development requires the integrated, interdependent development of economic, social and environmental components;

- The transition to a "green economy" is of particular importance for each country and is directly dependent on characteristics such as natural capital, human capital, and the country's level of economic development.

The development of the "green economy" in Uzbekistan is directly related to the country's long-term sustainable development strategy. Today, along with ensuring economic growth, strengthening environmental safety, rational use of natural resources and increasing energy efficiency are among the most important tasks in the republic. In particular, the introduction of environmentally friendly technologies in the industrial, energy, transport and agricultural sectors is emerging as a key condition for the transition to a green economy. Our country has high potential for the use of solar and wind energy, which creates favorable conditions for the development of renewable energy sources. The abundance of sunny days, the presence of desert and semi-desert areas make it possible to build large solar power plants. At the same time, the introduction of energy-efficient technologies into production processes reduces the costs of enterprises, reduces the cost of products and increases competitiveness. The agricultural sector also plays an important role in the development of a green economy. In conditions of water

scarcity, the widespread use of drip irrigation technologies, maintaining soil fertility, reducing the use of chemicals, and growing organic products ensure environmental sustainability. This not only serves to provide the domestic market with quality products, but also to increase export potential.

Also, the development of a waste recycling system is one of the important areas of the green economy. Sorting, recycling, and using household and industrial waste as secondary raw materials reduces pressure on natural resources. This process allows for the formation of new production sectors, the creation of additional jobs, and the reduction of environmental problems. Your article also highlights the issues of waste management, rational use of water resources, green transport, and the development of organic agriculture as areas of the green economy.

In addition, improving the ecological culture of the population is also important in the process of transition to a green economy. It is necessary to instill in the population a culture of environmental protection, energy and water conservation, and waste sorting through environmental education, advocacy, and the media. Because the green economy is not limited only to state policy or the activities of enterprises, but also depends on the environmental responsibility of each citizen in his daily life.

In general, the development of a green economy in Uzbekistan allows for the combination of economic efficiency, environmental safety, and social well-being. In this process, it is important to strengthen cooperation between the state, private sector, scientific institutions, and civil society. The introduction of green technologies, attraction of investments, and support for environmental innovations are important factors in the country's sustainable development.

In conclusion, the development of a "green economy" today is not only an important condition for reducing environmental problems, but also for forming a sustainable and effective model of economic growth. The limited availability of natural resources, increasing environmental pollution, climate change, and energy security challenges are pushing countries to abandon traditional economic approaches and move towards resource-efficient, environmentally friendly, and innovative development.

As discussed in the article, the main directions of the green economy are the development of renewable energy sources, improvement of the waste recycling and management system, rational use of water resources, expansion of green transport, development of organic agriculture, improvement of energy efficiency in housing and communal services, protection of ecosystems and expansion of the market for green technologies. These directions, along with increasing efficiency in economic

sectors, serve to create new jobs, improve the quality of life of the population and ensure environmental sustainability.

In the conditions of Uzbekistan, the transition to a green economy requires the implementation of deep reforms in the energy, industry, agriculture and transport sectors. In particular, expanding the use of renewable energy sources, efficient use of water and land resources, development of waste processing infrastructure and introduction of ecological innovations are of great importance for the long-term sustainable development of the country.

Thus, the green economy is one of the main means of achieving sustainable development, which allows combining economic, social and environmental interests. For the effective implementation of this concept, it is necessary to ensure the consistency of state policy, attract investments, introduce modern technologies, increase the ecological culture of the population, and strengthen international cooperation. The widespread implementation of the principles of the green economy in practice will create a solid foundation for the competitive, environmentally friendly and sustainable economic development of Uzbekistan.

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