THE CONCEPT OF THE GREEN ECONOMY AND ITS IMPACT ON INDUSTRIAL SECTORS

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Annotation:
The article analyzes the theoretical foundations of the green economy concept, its main principles, and its economic, environmental, and technological impacts on industrial sectors. It also examines practical directions for introducing resource-saving technologies, increasing energy efficiency, and reducing the carbon footprint in Uzbek industry. The research results substantiate the increasing importance of environmental factors in industrial development.

Keywords: green economy, sustainable development, industrial sectors, resource efficiency, energy conservation, innovative technologies.

In recent years, the rapid development of the global economy, coupled with the aggravation of environmental problems, requires the development of a new model of sustainable development. In such conditions, the concept of "green economy" is recognized as the most optimal approach that ensures a balance between economic growth and environmental safety. The green economy serves not only to reduce environmental damage, but also to increase economic efficiency, rational use of natural resources and the widespread application of new innovative technologies. Today, industrial sectors are one of the sectors that have the greatest impact on environmental pollution on a global scale. In particular, the increase in energy consumption, harmful gases emitted into the atmosphere, and the amount of production waste are increasing environmental risks and creating the problem of resource scarcity. Therefore, the re-modernization of industry based on the principles of "green transformation" and the introduction of energy-saving and environmentally friendly technologies are becoming a priority in world practice.

In strategic documents adopted by international organizations - the UN, the World Bank, OECD, UNDP and UNIDO, the development of a green economy is interpreted as a key factor in ensuring economic stability. According to this approach, the ecological modernization of industry allows not only to protect the environment, but also to produce products with high added value, expand export potential and increase competitiveness. In recent years, Uzbekistan has also been implementing large-scale reforms to transition to a green economy. The “Strategy for Transition to a Green Economy”, adopted in 2019, identified the main directions in the country as increasing energy efficiency, the widespread introduction of renewable energy

sources, and the use of resource-saving innovative technologies in industrial sectors. At the same time, a number of practical measures are being implemented to modernize industrial enterprises, create waste-free production systems, and increase compliance with environmental standards.

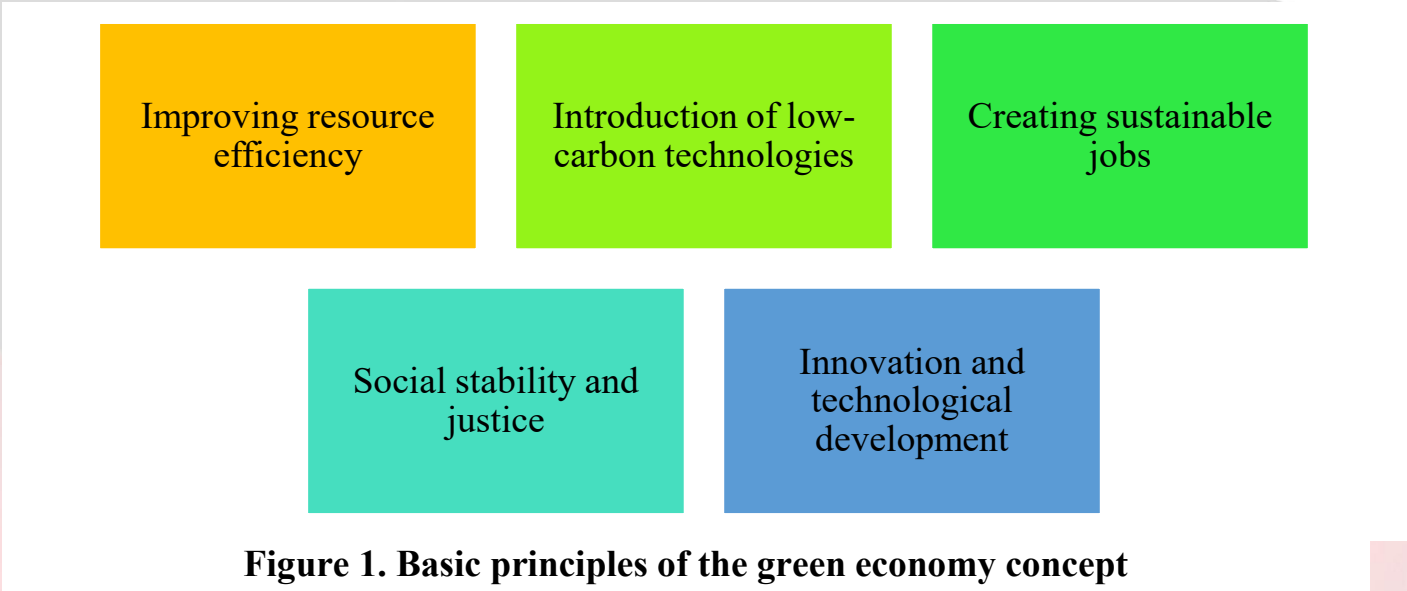

Figure 1. Basic principles of the green economy concept

The main principles of the green economy concept are aimed at harmonizing economic development, environmental sustainability and social justice. First of all, the principle of efficient use of resources deserves attention. This principle implies the most efficient use of natural resources, including energy, water, mineral and agricultural resources, and keeping waste to a minimum. In practice, this is implemented by introducing energy-saving technologies, water recycling and waste reduction systems in production enterprises.

The second important principle is the introduction of low-carbon technologies. In order to combat climate change, it is necessary to reduce emissions of harmful gases into the atmosphere in industrial sectors and widely use renewable energy sources. This process allows enterprises not only to ensure environmental sustainability, but also to increase long-term economic efficiency.

Another principle of the green economy is the creation of sustainable jobs. New jobs are created in the areas of the green economy, in particular in such areas as environmental control, waste recycling and renewable energy production. This increases social stability and improves the well-being of the population.

The green economy is also aimed at ensuring social stability and justice. It helps to improve living conditions in society, develop the health care system and strengthen social equality. This guarantees that economic growth is environmentally and socially sustainable.

The last principle is innovation and technological development. The green economy stimulates technological innovations, implements advanced technologies in the areas of increasing energy

efficiency, waste recycling and the production of environmentally friendly products. As a result, industrial enterprises increase their competitiveness, modernize production processes and effectively implement a sustainable development strategy.

According to the concept of sustainable development defined by the UN, meeting the needs of the present without compromising the needs of future generations requires economic and environmental sustainability. In this context, the green economy is considered one of the most important mechanisms for sustainable development.

The principles of the green economy bring economic efficiency, environmental sustainability and social benefits to industrial sectors. It forces industrial enterprises to save resources, reduce waste, create sustainable jobs and adapt to environmental standards.

Table 1 Impact of the green economy in the energy industry

Direction	Impact	Country/Project
Renewable Energy	Reduce carbon emissions	Germany, wind and solar
Energy Efficiency	Reduce costs by 10–20%	Sweden, smart grids
Ecological Certificate	Enable sustainable product manufacturing	Japan, green certification

Ushbu jadval energetika tarmoqlarida yashil iqtisodiyot printsiplari qanday amaliy natijalar berishini ko‘rsatadi. Qayta tiklanuvchi energiya manbalarini keng qo‘llash (quyosh va shamol energiyasi) uglerod chiqindilarini sezilarli darajada kamaytiradi va ekologik xavfsizlikni ta’minlaydi. Energiya samaradorligini oshirish esa korxonalar xarajatlarini 10–20% ga kamaytirish imkonini beradi. Shu bilan birga, ekologik sertifikat olish orqali korxona raqobatbardoshligi oshadi, bu esa eksport imkoniyatlarini kengaytiradi. Jadval shuni ko‘rsatadiki, yashil iqtisodiyot energiya tarmoqlarida nafaqat ekologik, balki iqtisodiy foydani ham ta’minlaydi.

Table 2 Key trends in the green economy in the chemical and manufacturing sectors

Direction	Impact	Practical
Waste Recycling	Production of environmentally friendly products	Germany, BASF plant
Energy Efficiency	Reducing costs	Sweden, electrocooking
Innovative Technologies	Increasing competitiveness	USA, biodegradable polymer

The table shows the main directions and their practical impact for the chemical and manufacturing industries. Waste recycling produces environmentally friendly products, which reduces environmental damage. Energy efficiency reduces production costs and increases the sustainability of the enterprise. The implementation of innovative technologies allows to increase competitiveness, create new products and take a leading position in the market. As a

result, the chemical and manufacturing industries combine environmental and economic benefits through a green economy.

Table 3 Impact of the green economy in transport and logistics

Direction	Impact	Country/Project
Electric transport	Reducing carbon emissions	Austria, city buses
Logistics optimization	Reducing energy and fuel consumption	Denmark, freight transport system
Traffic efficiency	Improving urban ecology	Netherlands, cycle paths

The most important impact of the green economy in the transport and logistics sector is the optimization of electric transport and logistics. Electric transport reduces carbon emissions, making cities more environmentally friendly. Logistics optimization reduces energy and fuel consumption, which increases the economic efficiency of enterprises. Improving the efficiency of road traffic improves public health and makes urban infrastructure environmentally sustainable. As can be seen from the table, the green economy in the transport system provides not only environmental but also social benefits.

Table 4 Impact of the green economy in agriculture and the food industry

Direction	Impact	Country/Project
Organic farming	Production of environmentally friendly products	Denmark, organic farming
Irrigation system optimization	Water conservation and increased crop efficiency	Israel, drip irrigation
Ecological certificate	Increased export potential	France, organic fruit export

In agriculture and food industry, green economy is implemented through organic farming, irrigation system optimization and ecological certification. Organic farming produces environmentally friendly products and reduces waste. Irrigation system optimization helps to save water and increase crop efficiency. Ecological certification increases the export potential of products, which brings additional income to the country's economy. At the same time, a green approach allows to improve the health of the population and ensure the sustainability of the agricultural sector.

In recent years, the concept of green economy has gained importance as the main mechanism for combining economic development with ecological sustainability at the global and national levels. By implementing the principles of green economy, industrial sectors, including energy, chemistry and manufacturing, transport and logistics, and the agricultural and food industry,

not only reduce environmental damage, but also increase economic efficiency, ensure rational use of energy and resources, and widely introduce innovative technologies.

In the energy sector, the use of renewable energy sources significantly reduces carbon emissions, energy efficiency allows for a 10–20% reduction in costs, and environmental certificates increase export potential. In the chemical and manufacturing sectors, waste recycling, energy efficiency, and the introduction of innovative technologies make enterprises sustainable and competitive. In the transport and logistics system, electric vehicles and logistics optimization provide environmental and social benefits, and urban infrastructure becomes environmentally sustainable. In the agricultural and food industry, organic farming, irrigation system optimization, and environmental certificates not only increase product quality, but also strengthen export potential and improve the health of the population. In general, the concept of a green economy allows for the modernization of industrial sectors, ensuring resource efficiency and environmental safety, as well as strengthening social stability by creating new jobs. Therefore, reforms being implemented in countries towards a green economy not only increase environmental and economic efficiency, but are also an important tool for implementing a long-term sustainable development strategy.

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