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GREEN ECONOMY AS A TOOL FOR SUSTAINABLE ECONOMIC GROWTH

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Abstract
The article explores the role of the green economy as a key instrument for achieving sustainable economic growth without compromising the natural environment. It analyzes the theoretical foundations of the concept, global challenges, and international practices. A comparative table is presented with examples of countries implementing green strategies, demonstrating the possibility of aligning economic and environmental interests.

Keywords: Green economy, sustainable development, CO_2 emissions, environmental policy, economic growth.

Introduction

The modern economy is faced with the need to adapt to the challenges of the 21st century: climate change, resource depletion, and increased pollution. Traditional models of development based on consumption and expansion are not able to ensure long-term sustainability. In this regard, the green economy is seen as a concept that allows economic growth to be realized without harming the environment, forming the basis for a new stage of global development. The relevance of the topic is due to the need for a systematic rethinking of the fundamental principles of economic activity, taking into account environmental restrictions and intergenerational justice. This article is aimed at the theoretical substantiation of the role of the green economy, as well as the analysis of its application in international practice.

The term "green economy" was coined in a 1989 report to the UK government. Today, according to the definition. According to the United Nations Environment Programme, a green economy is an economy that leads to improved human well-being and social justice, while significantly reducing environmental risks and scarcity of natural resources. It is opposed to the traditional model focused on GDP growth without taking into account environmental consequences. The principles of the green economy include: reducing greenhouse gas emissions, improving energy efficiency, switching to renewable energy sources, circular production and prioritizing social inclusion. The theoretical basis of the green economy is based on the ideas of sustainable development, ecological and economic balance and the post-industrial paradigm, in which human capital and natural resources become the main production factors.

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A green economy is necessary to overcome three key challenges:

(a) **Global climate change and the need to reduce greenhouse gas emissions**

Global warming caused by the accumulation of greenhouse gases (primarily CO_2, methane and nitrous oxide) in the atmosphere is one of the most acute challenges of our time. According to the Intergovernmental Panel on Climate Change (IPCC), anthropogenic CO_2 emissions from fossil fuel burning and deforestation have been a major driver of climate change since the mid-20th century. The consequences of climate change, such as rising average annual temperatures, more extreme weather events (droughts, floods, hurricanes), melting glaciers, rising sea levels, pose large-scale risks to food security, water resources, infrastructure and public health. The green economy offers a comprehensive approach to decarbonizing the economy through:

1. Transition to renewable energy sources (solar, wind, geothermal, and hydropower).
2. Upgrading energy infrastructure to reduce leakage and improve energy efficiency.
3. Development of zero-emission transport, including electric vehicles, hydrogen technology and public transport.
4. Carbon regulation: introduction of taxes on emissions, a system of emissions trading (ets), incentives for companies to reduce their carbon footprint.
5. Capture and utilization of carbon using natural and technological solutions.

Thus, the green economy is becoming the main tool for containing the climate catastrophe, offering ways to adapt and mitigate the negative effects.

(b) Scarcity of non-renewable resources and the transition to sustainable energy

The modern economy is still largely dependent on non-renewable energy sources: oil, gas and coal. However, these resources are limited, their extraction is becoming increasingly costly and environmentally harmful, and geopolitical conflicts increase market volatility. At the same time, global demand for energy is growing, especially in developing countries striving for industrialization. This exacerbates the problem of shortages and increases the cost of resources, posing a threat to the energy and economic security of states. The green economy offers an alternative through:

1. Investment in renewable energy sources (RES): their share in the global energy sector is growing rapidly, and the cost is decreasing thanks to technologies of scale.
2. Introduction of energy-efficient technologies in construction, production, transport.
3. Developing a circular economy – reusing materials, minimizing waste and designing products with a long life cycle.
4. The formation of a culture of rational consumption - both among producers and consumers.

In this way, the green economy reduces dependence on finite resources by replacing them with innovative, environmentally friendly and economically sustainable alternatives. The green economy offers a comprehensive response, combining economic incentives, environmental standards, and social safeguards. It can transform production systems, reduce pressure on ecosystems and ensure long-term sustainability, which is especially important in the context of global transformations.

World practice proves that the successful implementation of a green economy is possible with the integration of the efforts of the state, business and society. The European Union is

implementing the European Green Deal strategy, aimed at achieving carbon neutrality by 2050. Scandinavian countries have achieved strong results thanks to the taxation of emissions and investments in renewable energy sources. China has invested billions of dollars in the development of solar and wind energy, becoming a world leader in this direction. South Korea is implementing the Green New Deal, with an emphasis on green jobs and digitalization. These examples show that economic growth is possible while reducing anthropogenic pressure on the environment.

The table shows countries with different green strategies that reflect the balance between economic growth and emission reduction:

Table 1. Comparative analysis of countries' environmental policies and economic outcomes

Country	**Economic strategy**	**Ecological result**
Germany	Abandonment of nuclear power energy, renewable energy subsidies	Reducing the share of coal up to 28%, growth of renewable energy sources
Sweden	CO_2 Emissions Tax, Green bonds	One of the lowest emissions in the EU
China	Investments in solar energy and electric vehicles	More than 50% of the world Solar Production Panels
France	Energy efficiency Nuclear power	Stable level emissions with high GDP
Algeria	Initial projects in solar energy	Great potential, but low level of implementation

The analysis showed that the green economy is an effective tool for ensuring balanced economic growth, taking into account environmental constraints. It makes it possible to move from a model of quantitative accumulation to a model of qualitative development, where priority is given to sustainable technologies, environmental responsibility and social inclusion. International experience proves that a systematic approach based on scientific research, incentive measures and investments in human capital gives concrete results both in terms of GDP and in reducing the carbon footprint. For developing countries, the introduction of a green economy is a chance to get out of dependence on raw materials, create new markets and increase competitiveness in the context of the global green transformation. It is recommended to strengthen interstate cooperation, develop national roadmaps and introduce green growth indicators into macroeconomic policy.

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