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# PROSPECTS OF TRANSITION TO GREEN ECONOMY

**YULDASHEVA NILUFAR ABDUVAKHIDOVNA**

Associate Professor of Fergana Polytechnic Institute, Fergana, Uzbekistan

Tel: (0894) 133-1615, E-mail: [nilush1986@bk.ru](mailto:nilush1986@bk.ru)

ORCID: 0000-0003-0198-899X

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**Abstract:** The article analyzes the conceptual foundations of the concepts of "sustainable development" and "inclusive development", as well as the relationship between them, including the attitude to the use of financial, human and natural, as well as social, economic and environmental components. The foreign experience in the directions of the transition to the "green" economy according to the criteria of economic, ecological and social components is highlighted. The importance of transition to "Green" economy in solving global problems is shown.

**Keywords.** Economic development, sustainable development, inclusive growth, green economy, environmental sustainability, environmental management, sustainability indicators, energy efficiency

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**Introduction.** In recent years, the concept of sustainable development has been taking the main place by many foreign researchers among the many programs at the global and national level aimed at the harmonious development of society in accordance with the possibilities of the environment.

As noted in the documents of the UN Conference on Environment and Development held in Rio de Janeiro, on the one hand, the "excessive consumption" of resources by developed countries, and on the other hand, the poverty of the majority of the world's population are closely related. This leads to the conclusion that it is necessary to reduce the difference in the level of development of different countries, which is a necessary condition for the transition to sustainable development.

According to experts' calculations, one of the main problems of the near future of civilization is the increase of the population (mainly in developing countries) by about 3 billion in the period until 2032. Population growth leads to unprecedented increases in demand for energy and water, as well as dramatic increases in demand for transportation networks, urban systems, and agricultural production.

It is extremely difficult to meet these requirements within the possibilities of the biosphere: to double the production of agricultural products and to increase energy production by 85% by 2050, while maintaining the current rate of consumption; the increase in water consumption is forecasted by 55%. Based on such projections, a shift to green energy or green growth seems likely to be the only way to reduce the environmental risks of future economic development. The idea of green growth needs to be considered separately, because a number of experts are skeptical about it, but the widespread use of such terms determines the relevance of their study.

**Literature review.** One of the fundamental works on the green economy was the "Green Economy Project" by famous English economists D. Pierce, A. Markandya, and E. Barbier [1].

M.I. Aselyanu's research shows that sustainable development is mainly achieved through green jobs [2].

J. Sachs, J. Tomkin, M. Auffhammer, A. Krueger, E. Lang, E. Leff, P. Sukhdev, M. Weitzman, T.A. Akimova, S.N. Bobilev, V.I. Danilov-Danilyan, N.N. Marfenin, T.V.

Uskova, E.A. Schwartz, N.N. Yashalova is considered a scientist who made a great contribution.

Green economy is considered by international experts as a new vector of sustainable development, designed to ensure harmonious coordination of the main components of sustainable development (economic, social and environmental).

According to M.V. Tereshina [3], the concept of green economy is significantly different from the current economic model and is based on the principles of the theory of sustainable development, although it is not completely identical to them.

Based on the theories of social justice, inclusive growth and prosperity economy, the green economy can be implemented in business practice and in the implementation of the main conceptual rules of commercial structures.

Recently, the concept of inclusive sustainable growth has become more widely known abroad. Its main principles were originally developed by scientists from the 80s of the 20th century, including the existence of a strong connection between the rate of economic growth and the solution of large-scale social problems, including those created in society more equitable distribution of incomes, special attention to the least well-off strata of the population is emphasized [4].

**Methodology & empirical analysis.** Methods such as induction and deduction, analysis and synthesis, observation, structural analysis, statistical analysis, abstract-logical thinking are used in the implementation of scientific research. Literature and articles of foreign and national economists were analyzed as the methodological basis of the article.

The United Nations Environment Program (UNEP) proposed the following definition: "a green economy is an economy that improves human well-being and social justice by significantly reducing environmental risks." [5]

It seems that the proposed interpretation focuses on certain areas of development. Among them, UN experts propose to consider increasing energy efficiency, reducing environmental (or resource) potential, and socially oriented development. Thus, the development paradigm, which includes the transition of society to green principles, shows a closer connection with the concept of rational environmental management, which proposes to evaluate development by achieving economic results while reducing environmental costs.

Human began to use the main characteristics and laws of nature against him, natural processes set directions and paces corresponding to the goals of their activity. On this basis, man has established dominion over nature through labor. It should be noted that work has a double meaning. On the one hand, it is good that it frees people from dependence on nature, on the other hand, it has a harmful effect on the natural environment.

With the development of human activity, ecological balance began to appear as a ratio of the resource and ecological possibilities of nature on the one hand, and the economic needs of human society on the other. This is the main difference between the establishment of balance in natural and social-natural ecosystems - in natural ecosystems,

self-regulation, self-regulation of all subsystems of the ecosystem occurs, and in social-natural human society, the coordinating and takes on the role of manager. For a long enough time, this influence and management has been carried out only in the interest of mankind - a part of the socio-natural ecosystem. Neglecting the interests of other subsystems, treating them as a means of increasing the well-being of social life, has an impact on the natural environment and leads to an imbalance of ecosystems.

Taking into account the concept of ecological crisis, we can distinguish three stages of development: 1) self-recovery of ecosystems; 2) the degree of disturbance of the ecological balance that threatens the existence of ecosystems; 3) the level of initiation of changes that are not suitable for life, leading to the complete or partial extinction of living things in a large or small geographical area. This stage is called "ecological destruction".

In order to make long-term decisions, it is necessary to pay attention to the principles that define sustainable development, which stand out in modern literature:

responsibility for the future;

equal opportunities for development and meeting the needs of different generations;

the right of every person to live a healthy and active life in harmony with nature, to live in an ecologically clean and comfortable environment;

ensuring a balanced economy and ecology or preserving the biosphere;

ending poverty and preventing serious differences in people's living standards;

ideological support for stabilization of education and sustainable development;

optimizing the structure and content of personal consumption of the population;

anticipating effective measures to prevent deterioration of the environment, environmental and technological disasters;

environmentalization of all spheres of life, etc.

**Results.** Currently, maintaining ecological balance is interpreted as achieving sustainable development.

The transition to sustainable development implies the purposeful and consistent restoration of natural ecosystems, which ensures ecological stability and raises the necessary conditions for future generations of people to the level where there is a real opportunity to meet their vital needs. All this requires the gradual connection of the economic, ecological and social spheres of human activity into a single self-organizing system. In this sense, sustainable development implies, at least, social justice with economic efficiency, compatibility of the biosphere and reduction of anthropogenic pressure on the biosphere.

There is no satisfactory and universally accepted science-based approach to creating a biosphere-friendly economy fully compatible with modern civilization. The solution to this environmental and economic contradiction is seen in the creation of a new model of management - a balanced or sustainable economy based on the principles of comprehensive and complete intensification.

The stages of formation of global environmental problems can be expressed in the following sequence: environmental problems arising at the level of a separate enterprise, industrial region, region, country, continent, and the world.

Such a sequence is natural, because enterprises in different countries producing the same product emit the same pollutants into the environment. For example, common emissions for all thermal power plants that burn coal and fuel oil are nitrogen oxides, sulfur dioxide, carbon monoxide, and carbon dioxide. The consequences of anthropogenic impact on the atmosphere are called the main cause of environmental problems. Currently, the main ecological problems caused by anthropogenic influence are as follows:

- population growth,
- increased greenhouse effect,
- destruction of the ozone layer,
- deforestation and desertification;
- pollution of the atmosphere and hydrosphere, especially by toxic substances
- reduction of tropical forests;
- acid rains
- decrease in biological diversity.

During the development of civilization, each of the environmental problems can lead to the death of humanity and the biosphere. In this way, one of the current global trends can be described as an increase in the ecological crisis, an imbalance in the relations of human society with nature in relation to ecological systems and the environment. The problem of overcoming the global environmental crisis, which is developing faster than expected in pessimistic forecasts, is of particular importance today.

Currently, humanity has a need for environmental security. Satisfying and providing it is as necessary as satisfying traditional needs through various goods and services. The "ecological boomerang" phenomenon of environmental degradation has had a serious impact on security, as human influence on nature has begun to oppose it due to ignorance of environmental laws, rules and principles.

UNEP has developed the following recommendations for national governments and those responsible for creating the conditions and strategies for the transition to a green economy [6]. Such conditions include:

- development of an effective legal framework;
- the priority of state investments and expenses in the areas that encourage the transformation of economic sectors into green sectors;
- investing in training, education and training;
- strengthening of international relations and leadership.

The above recommendations show the importance of the role of the state in the transition to a green economy, improvement of the state policy on correcting the shortcomings in the economy, development of legal mechanisms, special incentives.

At the moment, the world community, unfortunately, is not aware of the "Millennium Development Goals" defined in the Millennium Declaration (2000) and the "Sustainable Development Goals" that replaced them, which were formed in the agenda for the sustainable development of countries in the period until 2030. It has not yet achieved the "Sustainable Development Goals". Sustainability remains an important long-term goal and requires continued efforts to green the economy to achieve its goals.

In order to "green" the world economy, UNEP has identified ten sectors that need to be invested first (Table 1).

**Table 1.** Priority sectors of green economy development (according to UNEP data) [7].

Direction	Purpose
1. Agriculture	Increase the amount of calories in the daily diet to 2800-3000 kcal by 2030 (and keep it at this level)
2. Heating and lighting of buildings	Increasing energy efficiency to achieve the energy consumption and emission goals set in the "Blue Map" scenario of the International Economic Agency (Blue Map; a scenario for the development of a low-carbon economy to reduce greenhouse gas emissions)
3. Energy supply	Increasing the share of renewable sources for electricity generation and primary consumption to reach at least the Blue Map scenario targets. Low Carbon Electricity Generation (Supply) and Energy Efficiency and Management (Demand)
4. Forestry sector	Halve deforestation by 2030 and increase tree planting to ensure more trees. Effective management of forests and protected forests
5. Industry	Achieving energy consumption and emission targets from stationary sources defined in the Blue Map scenario
6. Tourism	Development of ecological tourism and reduction of environmental burden during travel
7. Transportation	Achieving the energy consumption and mobile emission targets set in the Blue Map scenario, increasing the use of public transport
8. Waste	Reducing the amount of disposed waste by at least 70%
9. Energy sector	Optimizing the use and saving of fuel and energy resources, significantly increasing energy efficiency and safety, reducing the negative impact on the natural environment

In some foreign countries, strategies for "greening" of the national economy have been developed and are being implemented (Table 2).

Based on the analysis of foreign experience, it can be concluded that it is necessary to switch to a green economy in the world community. The main factors that determine the extent to which countries participate in this process include the existence of a high-level political environment and public support for government initiatives. At the same time, appropriate institutional and financial support is being created to support measures for the transition to a green economy.

**Table 2.** Directions and measures of transition to green economy in foreign countries [8].

Country name	Activities on formation and development of green economy
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USA	In 1984, the US Senate Finance Committee created the Superfund, a source of funding for hazardous waste disposal.
Canada	In 2009, the American Recovery and Reinvestment Act was passed to promote innovation and growth in green businesses, energy conservation, the development of alternative energy, mainly solar power plants, and the growth of green jobs. provides financial incentives.
Ireland	Green standards in construction are designed to assess the environmental condition of land plots, the efficiency of water and electricity use, the impact on the environment, and the disposal of waste. The importance of the extractive industry is noted, and special attention is paid to saving resources
Germany	In order to renew the economy based on the principles of sustainable development, the Recovery Strategy (2009) was adopted. The strategy aims to create green jobs, improve the environment and secure energy supply
Republic of Korea	A national resource efficiency program was developed, the goals of which are to minimize the negative impact on the environment, to gradually reduce the dependence of the German economy on primary raw materials, and to further develop closed production cycles and zero-waste technologies. The German Federal Fund for Environmental Protection was established (provides grants for environmental projects of highly qualified university graduates of Central and Eastern Europe)
China	Implementation of the concept of green growth through a national strategy for the development of technologies that allow solving transport problems without harming the environment, creating new jobs and developing ecotourism. The main focus is on industry, energy, green modes of transportation, alternative sources of fresh water, waste processing technologies, development of parks, beautification of rivers within the city.

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Analysis of the prospects of low-carbon projects shows that they are fully compatible with the principles of green energy and general environmental management: perhaps the most important result of such projects is the achievement of economic and geo-ecological results, as well as economic and geo-ecological results. In this: development of the social sphere: increasing the number of jobs, increasing material well-being and improving the geo-ecological situation, along with stimulating economic development.

Modern studies consider the green economy as:

- a means of achieving rational management of the environment;
- to encourage the creation of green jobs and decent work;
- resource and energy efficient economic system.

Priority is given to features of the green economy, such as social orientation (increasing material well-being, reducing poverty, access to basic services) and, in a broader context, ensuring equality between generations. The result of such an assessment, which includes taking into account the environmental costs of development, will lead to the preservation or (if necessary) restoration of ecological balance, the preservation of global biodiversity and, in addition to the above-mentioned social achievements, to rational environmental management in some regions of the world. requires a transition.

**Conclusions.** For a systematic transition to a green economy and inclusive growth, relevant environmental sustainability goals should be included in the strategic regulatory framework. The green economic model involves fundamentally changing the entire structure of economic activity and ensuring the balance of three types of capital (financial, human and natural), so its development must be taken into account in national strategic planning. The modern model of the "green" economy should help the country enter new product, service and technological markets. Green and inclusive economic models can not only reduce social stratification and increase social welfare, but also ensure political stability of the country by responding to the latest global challenges in time.

The success of the transition to a green economy is determined by a wide range of economic instruments:

- ⊙ defining a road map and program in accordance with the principles of "green" development;
- ⊙ reforming the taxation system, paying attention to "environmental" substances, focusing on taxation for environmental pollution;
- ⊙ public procurement policy encouraging the production of environmentally friendly products and the use of resource-saving production technologies;
- ⊙ growth of public investments in infrastructure and restoration and preservation of natural capital in accordance with the principles of "green" development;
- ⊙ targeted state support for research and development related to the creation of environmentally friendly technologies;
- ⊙ social strategies aimed at improving the social standard of living of the population and reducing poverty.

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