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## **STIMULATION OF INNOVATIVE ACTIVITY IN THE TRANSITION TO A GREEN ECONOMY**

*Annotation: The article examines the interdependence of ecology and economics, the impact and results of economic activity on the environment. The transition to a "green economy" and its advantages will be highlighted in order to significantly reduce environmental risks and environmental degradation arising from the country's economy and production. In addition, this article extensively examines the experience of foreign countries in the field of eco-innovations and green investments in the transition to a "green economy."*

*Key words: environment, ecology, strategy of Uzbekistan, environmental problems, "green economy," eco-innovation, eco-investment, ecologization of the economy, "green" jobs, environmental technologies.*

### **Introduction:**

The process of globalization requires a qualitative renewal of the technological base of industrially developed countries, a transition to a modernized economy with a new technological structure that ensures an improvement in the quality of life and living environment, as well as an increase in production efficiency and competitiveness. The "green growth" economic policy implementing this transition abroad has been adopted by the Organisation for Economic Co-operation and Development (OECD) as a

strategic direction for the long-term development of all its members (until 2030). From the perspective of anti-crisis potential, eco-innovations, green investment, and the green economy as a whole will allow for increased employment, mitigation of unemployment, stimulation of activities in all sectors of the economy, and faster recovery from recession. Eco-innovations are defined as any form of innovation aimed at achieving sustainable development goals, reducing harmful impacts on the environment, and achieving significant and tangible growth through more efficient and rational use of natural resources, while there is no universally accepted definition of a green economy. Environmental experts from the United Nations (UNEP), considering the "green economy" as an economic activity, propose a broad definition of this concept, meaning that "a green economy improves people's well-being and ensures social justice, significantly reduces environmental risks and environmental degradation. This definition of the "green economy" is no different from the well-known concept of sustainable development. In a narrower sense, "green economy" refers to the control and reduction of emissions of pollutants and greenhouse gases, monitoring and forecasting climate change, as well as the creation, production, and use of energy and resource-saving technologies and technologies for renewable energy sources. This includes the creation, production, and use of technologies and materials to protect buildings and structures from sudden changes in temperature, humidity, and wind/Journal of innovation in economics 02/2018; the production of environmentally friendly products, including agricultural (food, natural fibers) and consumer goods (natural and natural-based medicines and personal care products without chemical additives), in other words, the "green economy" includes types and results of economic activity that contribute to improving the quality of life and living conditions along with the modernization of the economy and increasing production efficiency. At the same time, the "green economy" is reflected differently in the official

documents of different countries: first of all, competition among developed countries, job creation, in developing countries - sustainable development, poverty reduction, citizen participation and equality issues, and in the BRICS group - the efficiency of resource use. However, the most pressing problems in the field of environmental development, primarily limitations in the field of environmental protection, are not reflected in the definitions of the "green economy" in any of these documents. This shows that the most important aspect of a green economy is that it is the economy itself and the socio-economic sphere. The European Community's strategy for transitioning to a "green economy" by 2050 emphasizes that the "green economy" should represent a system that unites ecosystems (natural resources), economy (material resources), and society.

### **THEMATIC LITERATURE ANALYSIS**

Analysis of the Current State of Development of Renewable Energy: It is known that the National Energy Network should strive to increase the share of renewable energy sources such as solar and wind energy to reduce dependence on fossil fuels.

Over the past five years, Uzbekistan has been making progress in the development of renewable energy, particularly solar and wind energy, in the Eastern Renaissance: Innovative, Educational, Natural and Social Sciences (E) ISSN: 2181-1784 4 (4), April, 2024 SJIF 2024 = 7.404 / ASI Factor = 1.7 www.oriens.uz 163. The government is investing in projects to diversify energy sources and reduce dependence on fossil fuels. Large-scale solar and wind power plants, as well as initiatives to improve energy efficiency, are planned. However, accurate details on the current state of development require more relevant information from local sources or recent news. Uzbekistan's renewable energy goals are part of its broader strategy to modernize the energy sector and sustainably meet the growing demand for

electricity. The country aims to increase the share of renewable sources in energy by 25 percent by 2030. Recent reforms

**Solar energy:** Uzbekistan has a lot of sunlight, which makes solar energy a promising renewable energy source. Several solar energy projects are being implemented, including the construction of large-scale solar parks. In particular, the government signed agreements with international companies on the construction of solar power plants with a capacity of from ten to hundreds of megawatts.

**Wind energy:** Windy regions of Uzbekistan create opportunities for the development of wind energy. Plans for wind farms aimed at using wind resources to generate electricity have been announced.

**Policy support:** Introduced policies and incentives to encourage investments in renewable energy in our country, such as tariffs and tax breaks for renewable energy projects.

**International cooperation:** Uzbekistan cooperates with international organizations and foreign companies to support renewable energy projects and technology transfer.

**Study of foreign experience in the formation and development of a green economy in Uzbekistan** To orient the global economy towards a model of economic, social, and environmental sustainable growth, the principles of a green economy should be integrated into the ongoing structural reforms. Experts identify four main channels (identifying their respective impacts), through which the formation of a "green" economy and corresponding structural reforms can serve as drivers of economic growth, including GDP growth.

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First, the transition to a green economy can increase the input resources of natural, physical and human capital (these are input effects). It is about increasing the productivity of natural resources (forests, fisheries, agricultural lands, etc.) through more effective management of natural capital, improving the quality of human potential through improved health, and reducing morbidity among the population through improved

environmental conditions. Reducing economic losses arising from loss of physical capital through more skilled management of environmental risks, including forest fires, floods, and other natural disasters. Secondly, this transition will be accompanied by favorable structural changes and significant investments in a number of systemically important sectors, including energy, construction, housing and communal services, and others, aimed at updating production equipment, increasing energy efficiency, and transitioning to alternative technologies to reduce energy sources and greenhouse gas emissions. All these results, in a broad sense, are expressed in increasing the efficiency of key sectors of the economy (efficiency effect). At the same time, thirdly, investments aimed at the development of "green" infrastructure, including the water supply and sewerage system, public transport aimed at alternative fuel sources, etc., stand out as an important factor of growth. It can stimulate economic growth on both the supply and demand side, while simultaneously helping to expand employment and reduce unemployment (essentially during a crisis). Fourth, the transition to a green economy stimulates innovative activity, including at the firm level (as a rule, measured through R&D expenditures and patent activities), which should be supported alongside the creation of a favorable competitive environment. This can also be achieved through the introduction of regulatory methods, including standards and rules. In the transition to a green economy, special attention is paid to the formation of modern infrastructure, which is the main factor in ensuring sustainable development, and its modernization is an important element of the structural reforms analyzed here. Infrastructure networks include water infrastructure (including dams and reservoirs), land development and planning, housing and urban planning, coastal flood protection systems, road and transport infrastructure (including ports, bridges, roads), energy (including nuclear power plants), and a number of industries. These industries are characterized by a long service life of the production

equipment used in them (for the listed range of industries - from 20 to 200 years) and a long investment life of Eastern Renaissance: Innovative, Educational, Natural and Social Sciences (E) ISSN: 2181-1784 4 (4), April, 2024 SJIF 2024 = 7.404 / ASI Factor = 1.7 [www.oriens.uz](http://www.oriens.uz) 165, as a result of which their environmental orientation, modernization is of great importance. At the same time, infrastructure sectors are characterized by specific economies of scale, synergy between network effects and economic, environmental, and social goals, which increases the efficiency of related investments. Let's look at some ways of forming a green economy in countries that prioritize this sector. South Korea is one of the world leaders. In this country, starting from 2011, it is planned to allocate 3 percent of GDP or \$60 billion over 5 years to the development of "green" industries and create 1.8 million jobs. South Korea, which has chosen the concept of "green" development as its national strategy, pays special attention to industry, energy and investment, "green" modes of transport, alternative sources of fresh water, waste recycling technologies, development of parks and improvement of the population. Various projects implemented independently by the ministries were combined into a single package to prevent secondary expenditures from the budget. Since 2011, South Korea has launched a system of green payment cards to encourage green consumption of products produced with environmental innovations. Such maps take into account the consumption of "green" goods and services, the use of public transport instead of private transport, and the use of energy-saving goods. For Uzbekistan, in our opinion, this experience seems very interesting, especially in connection with the formation of the national payment system. Perhaps it should include a "green" component. The U.S. experience The United States has chosen the development of alternative energy as a key direction for the development of the green economy. By 2030, solar installations will generate 65 percent of the country's energy consumption and 35 percent of its heat. American

government agencies were given two years (since 2014) to independently develop specific measures to achieve this goal. President John Biden announced his plan to invest in clean technologies not only to improve the environment, but also to create up to 5 million jobs over the next 10 years. European Union countries Eastern Renaissance: Innovative, educational, natural and social sciences (E) ISSN: 2181-1784 4 (4), April, 2024 SJIF 2024 = 7.404 / ASI Factor = 1.7 [www.oriens.uz](http://www.oriens.uz) 166 Almost all EU countries have developed "green" measures in the field of energy, public transport and infrastructure development, construction and recycling systems of eco-villages. The European Union has adopted Euro 5 vehicle exhaust standards and is already preparing to introduce new Euro 6 standards. Consumers will receive multi-million-dollar subsidies for the purchase of electric vehicles. The UK has adopted a green economy as its national development strategy and has recently presented green projects aimed at creating 100,000 new jobs. The Chinese experience In China, by 2020, it is planned to obtain 15% of electricity (currently 9%) from renewable sources and reduce the carbon intensity of the economy by 45%. The trend of green technology development in China has been established since the 12th Five-Year Plan (i.e. since 2011). In China, more than 2,000 environmental polluting companies were forcibly closed. The volume of government investments in energy saving, renewable energy, and related technologies in China is several times higher than in the United States and the European Union. Hunter Lovins, the author of many books, including *Natural Capitalism* and a *Handbook on Climate Protection for Cities*, in an interview with *Green Technology* ([www.greentechnology.org](http://www.greentechnology.org)), provided a few examples of how countries in different countries are preparing for the transition to a green economy. Hunter speaks in particular of the Swedish and Swedish statements that the country plans to completely get rid of oil by 2024, as well as eliminating coal and nuclear energy from the processes. Japan announced that it would reduce the use of



oil as an energy source by 40%. The European Commission aims to reduce carbon emissions by 20% by 2025 and increase the use of renewable energy by 20%.

## **METHODOLOGY**

The following methodologies were used to study foreign experience in the formation and development of a green economy in Uzbekistan: 1. Comparative analysis. Foreign countries Conduct an analysis of foreign countries successfully implementing the Green Development Strategy in order to identify key factors of success and their practical application in Uzbekistan. Oriental Renaissance: Innovative, educational, natural and social sciences (E) ISSN: 2181-1784 4 (4), April, 2024 SJIF 2024 = 7.404 / ASI Factor = 1.7 www.oriens.uz 167 2. Case analysis. Study of specific examples of successful implementation in other countries with the aim of identifying features and methods of implementation of green economy development projects. 3. SWOT analysis. An analysis of the strengths and weaknesses, opportunities for implementing green projects in Uzbekistan based on the experience of foreign countries. 4. Modeling. Creation of a green economy development model for Uzbekistan based on the best practices of foreign countries, taking into account the specifics of the national economy.

## **RESULTS AND DISCUSSION**

Uzbekistan has unique opportunities and conditions for a green economy. The vast territory, convenient geopolitical location, available financial and natural resources, growing supply of green technologies that are increasingly effective and accessible in the market, and other factors support new opportunities. The most important segments of the economy that require reform in terms of applying green development principles are the waste management sector, the energy industry, and the water consumption sector. Following the RIO+20 summit, the forces of Uzbekistan's society are focused



on implementing the strategy of transition to a "green" economy. On the initiative of the President, he developed a concept for transitioning to a "green" economy. The concept primarily includes a list of priority tasks aimed at reforming certain sectors of the economy. The main tasks facing the country in transitioning to a "green economy" are: increasing the efficiency of resource use and management (water, land, biological, etc.); modernization of existing and construction of new infrastructure; improving the well-being of the population and the quality of the environment through cost-effective methods of mitigating environmental pressure; improving national security, including water security. The formation of a green economy in Uzbekistan.

1. Germany's Energiewende (Transition to Energy): Uzbekistan can learn from Germany's experience of transitioning to renewable energy sources and phasing out nuclear energy. Through policy stimulation, additional tariffs, and investment in R&D, Germany has become a global leader in the adoption of renewable energy sources, particularly solar and wind energy, through the Oriental Renaissance: Innovative, Educational, Natural and Social Sciences (E) ISSN: 2181-1784 4 (4), April, 2024 SJIF 2024 = 7.404 / ASI Factor = 1.7 www.oriens.uz 168.

2. Denmark's wind energy success: Denmark has successfully integrated wind energy into its energy mix, with wind energy being an important part of electricity generation. Uzbekistan can emulate Denmark by promoting the development of wind energy through auspicious policies, sector integration and public-private partnerships.

3. Costa Rica's commitment to renewable energy: Costa Rica has achieved impressive milestones in renewable energy production, with nearly 100% of its electricity generated from renewable sources. Costa Rica is an example of how countries can prioritize sustainability and achieve energy independence by investing in hydropower, geothermal, solar, and wind energy.

4. Singapore's Green Building Initiatives: Uzbekistan can look to Singapore's green building initiatives as a model to promote energy efficiency and sustainable urban development. Singapore has contributed to resource conservation and environmental sustainability by implementing strict building codes, green certification programs, and green building design incentives.

5. The Dutch circular economy strategy: The Netherlands has adopted circular economy principles aimed at minimizing waste generation and maximizing resource efficiency. Through initiatives such as product redesign, waste-to-energy projects, and circular procurement practices, the Netherlands will provide valuable lessons for Uzbekistan in transitioning to a circular economic model.

6. Swedish waste management practices: Sweden's innovative waste management practices, including waste incineration and large-scale waste recycling programs, have allowed the country to export waste from landfills at a high level. Uzbekistan could explore similar approaches to reduce landfill dependency and promote a sustainable approach to waste management.

### **Summary**

Global experience shows that the "green economy" stimulates regional development, achieving social stability, and increasing economic potential through the creation of new jobs in the "green economy" sectors. The "green economy" primarily contributes to economic development and ensures the growth of GDP, increases the country's income, ensures employment, and reduces unemployment in the country. At the same time, the transition to a "green economy" will reduce the risk of global threats such as climate change, mineral depletion, and water scarcity. However, if we consider global development as a whole, we can conclude that if all countries around the world do not choose an ecologically oriented model of economic development at the moment when modern world civilization has gained strength and

reached the pinnacle of its power, then in the context of globalization, there will be a risk of gradual decline and complete destruction of the entire planet.

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