

Article

The Place of "Green Economy" in Solving Ecologist Problems

Rustamova Dilsabokhon Djuraevna^{1*}

1. Associate Professor of Andijan Faculty of Tashkent State University of Economics, Uzbekistan

* Correspondence: dilbo@mail.ru

Abstract: This research explores the implementation of the "green economy" as a solution to environmental challenges in Uzbekistan, specifically examining its potential for sustainable economic growth. The study's objectives include evaluating the impact of green technologies on resource efficiency, environmental protection, and the development of renewable energy infrastructure. Employing a qualitative methodology, the research draws on policy analysis, government reports, and literature review to assess Uzbekistan's "green economy" initiatives, particularly the "Strategy for Transition to the Green Economy." Results reveal that adopting renewable energy sources, like solar power, alongside green technology modernization, can significantly reduce the nation's carbon emissions and foster economic resilience. The findings highlight Uzbekistan's capacity to align with international environmental standards, presenting a pathway toward sustainable development and improved public health.

Keywords: Green Development, Environment, Ecological Problems, "Green Economy", Renewable Energy, "Green Economy Technologies"

1. Introduction

In the last decade, there has been increasing attention to the transition to a green economy all over the world. A green economy is an economy focused on sustainable development that combines economic growth, social welfare, and environmental protection. For some countries, for example, Uzbekistan, the transition to a green economy is especially important, given the limited resources and existing environmental problems.

To liberalise the economy of the new Uzbekistan and ensure stable economic development, it is essential to guarantee the active participation of the national economy in the assessments of international organisations and to attain high rankings. The establishment of a "green economy" has become an urgent matter in the reform of the national economy. Consequently, the "Strategy for the Transition of the Republic of Uzbekistan to the 'Green' Economy in 2019-2030," approved by the President of the Republic of Uzbekistan on October 4, 2019, serves as a crucial foundation for ensuring sustainable development in our nation predicated on the 'green economy.' The primary objectives of the transition to a "green economy" encompass enhancing the energy efficiency of the economy and promoting the judicious consumption of natural resources. To attain these objectives, the modernisation of technologies and the development of financial mechanisms are necessary. By 2030, the implementation of the strategy in our country will result in a ten percent reduction in greenhouse gas emissions per unit of gross domestic product from the 2010 level, while ensuring that the population and economic sectors receive 100% affordable and reliable electricity supply.

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The green economy in Uzbekistan is a promising and significant sector of the country's development. In recent years, the government of Uzbekistan has been actively engaged in the implementation of environmentally sustainable technologies and the promotion of renewable energy sources.

What constitutes the "green" economy? We shall endeavour to ascertain an answer to the question. The primary objective of the "green" economic system is to advance all sectors of the economy while safeguarding the ecology of our planet. The "green" economy refers to a certain trajectory of economic activity focused on the advancement of production and service sectors while conserving the resources essential for humanity, the environment, and ecology as a whole.

Literature Analysis.

If we look at the stage of formation, "green" economy is a branch of economics that emerged at the end of the 20th century, which implies the need to reduce the negative impact of economic activity on the environment. The concept of "green economy" began to be formed as a result of the creation of the concept of "green economy" in close connection with the fields of economics, such as ecological economics and environmental economics, and the introduction of principles based on the development of the economy into economic policy. The term was first coined in 1989 by leading economists for the UK government in a report entitled 'Green Economy Development Plan' (Beder, 2011). The first scientific studies devoted to the development of the "green" economy were considered in Stockholm in 1972 at the International Conference on Socio-Economic Development and Environmental Problems, aimed at the preservation and development of the environment (Report UNEP, 2009).

Kozhevnikova and Terakopov (2013) in their work entitled "Green economy" is one of the directions of sustainable development" justify the need to switch to ecologically oriented production in the economy. In doing so, the "green economy" is seen as an important and contemporary guiding principle for sustainable development, poverty reduction and social justice.

Shodimetov and Ayrapetovlar (2022) in the article entitled "The path to green economic sustainable development" researched the social, economic, and ecological aspects of green economy in ensuring sustainable development in modern societies. The experience of developed countries and the countries of the Shanghai Cooperation Organization is studied and its benefits for Uzbekistan are shown.

V. Vyk's work "Green economy" and sustainable development"150 shows that in the last year significant results have been achieved in the field of sustainable development in the world practice, and it is shown that the ecological, social and economic aspects of sustainable development are being seeded. In this, "green economy" was researched as a direction of resource-efficient and less negative impact on the environment in the sustainable development of the world economy.

Voymik and Husain Shah's (2014) work entitled "Green economy as a factor of sustainable development and poverty reduction" in the case of the Republic of Bangladesh shows that "the green economy is becoming an important trend in sustainable development and poverty reduction in the regions of the world".

2. Materials and Methods

This study's methodology centres on analysing the green economy's role in mitigating Uzbekistan's environmental issues. The methodology incorporates qualitative examination of existing literature and policy frameworks, including the "Strategy for Transition to the Green Economy" ratified in Uzbekistan. This qualitative methodology prioritises descriptive and interpretative studies to explore the potential of renewable

energy sources, modernisation of manufacturing facilities, and enhancements in efficiency to mitigate environmental effect. Data obtained from several governmental reports, publications from international organisations, and case studies underscores Uzbekistan's substantial renewable energy sources and the socio-economic advantages of implementing green technologies. The report assesses current policies, emphasising their objectives to mitigate greenhouse gas emissions, decrease reliance on hydrocarbon energy, and promote sustainable economic development. The methodology examines the socio-economic effects of green economy initiatives on employment, public health, and energy accessibility. The study aims to develop a comprehensive framework that highlights the environmental and economic advantages of transitioning to a green economy by analysing these aspects. This methodology offers a comprehensive view of the role of green economic practices in sustainable development, providing guidance for future policy initiatives in Uzbekistan.

3. Results

In order to rapidly develop the national economy and ensure high growth rates, the active introduction of "green" economic technologies in all areas is one of the goals of the Development Strategy of New Uzbekistan for 2022-2026.

Uzbekistan is actively working on the implementation of the national development strategy. These measures cover various aspects of the green economy, including the use of renewable energy sources (RES), improving energy efficiency and reducing emissions.

The transition to a "green" economy will help solve environmental problems such as overuse of natural resources (including water), air pollution, deforestation, land degradation, and climate change.

The shift to a "green economy" presents numerous chances for Uzbekistan. With the rise in population and economic levels in the country, the need for energy resources would correspondingly escalate. A crucial element of the "green economy" is the generation and utilisation of renewable energy sources. Uzbekistan possesses significant potential in this context. International financial institutions estimate that the yearly reserve of alternative energy, particularly solar energy, in the republic is comparable to 270 million tonnes of conventional fuel. This amount exceeds our actual requirements by thrice. Furthermore, the execution of initiatives in the domain of "green energy" will enable a more than threefold growth in the proportion of renewable energy sources in Uzbekistan over the next decade. This constitutes an unparalleled advantage to the economy.

Research indicates that Uzbekistan forfeits a minimum of 4.5% of its GDP annually owing to reliance on hydrocarbon energy sources, including oil, gas, and coal. Moreover, around fifty percent of the nation's power producing capacity is outdated. Their rehabilitation or modernisation necessitates substantial financial investment. It is significantly more advantageous to transition to "green energy," which is deemed both economically and environmentally effective. The entire world is opting for this approach. Uzbekistan was the inaugural Central Asian nation to participate in this initiative. The "Strategy of Transition to Green Economy," established two years ago, signifies our country's progression towards "green development."

Indeed, the "green economy" encompasses more than merely reforming the energy sector. It encompasses multifaceted and extensive measures including issues related to clean drinking water, food security, agricultural innovations, sustainable cities, rational waste management, expansion of forest areas, and reduction of desertification.

Within the framework of the national development strategy until 2030, measures were developed to improve the ecological condition of our country. These include:

- a. Promoting the use of renewable energy sources such as solar, wind and hydropower. At the moment, several solar power plants are operating in Uzbekistan.
- b. Modernization of production in order to reduce the emission of harmful substances into the atmosphere;
- c. Increase energy efficiency in industrial and residential construction to reduce energy consumption while maintaining comfortable living and working conditions;
- d. Introduction of strict environmental standards that impose limits on pollutant emissions and require environmental assessment when planning new projects;
- e. Creating new environmentally friendly jobs and improving the professional qualifications of personnel in the field of ecology.

It should be noted that Uzbekistan actively cooperates with international organizations in the field of environmental protection and renewable energy. In 2021, it was officially announced that Uzbekistan will join the Paris Agreement aimed at reducing global warming by 1.5 degrees Celsius.

The use of renewable energy sources is one of the main directions of the transition to a green economy in Uzbekistan. Currently, solar energy is actively developing in the country and there are several solar power plants. In the future, it is planned to develop renewable energy sources such as wind and hydropower.

Improving energy efficiency is also an important direction of the transition to a green economy. Many buildings in Uzbekistan still do not meet modern standards for energy efficiency, and there is an opportunity to improve comfort while reducing energy consumption. In the long term, large companies will be interested in increasing the energy efficiency of their production facilities.

Improving energy efficiency is also an important direction of the transition to a green economy. Energy efficiency includes improving energy efficiency and efficient use of energy, thereby reducing energy consumption and minimizing negative impacts on the environment:

Improving energy efficiency applies to various sectors of the economy, such as industry, transport, buildings and households. Some examples of measures that can help improve energy efficiency include:

1. Energy-efficient technologies and equipment: Replacing outdated and inefficient equipment with more modern and energy-efficient options can significantly reduce energy consumption. For example, the use of LED lighting, energy-saving equipment and energy management systems.
2. Thermal insulation and insulation of buildings: in the construction and real estate sector, energy efficiency is achieved through proper thermal insulation and insulation of buildings. This reduces heat loss and increases the energy efficiency of buildings.
3. Optimization of process and control: optimization of work processes and effective management of energy consumption in industry can significantly reduce energy costs. Implementation of energy monitoring and management systems allows to identify and eliminate excess energy consumption and increase production efficiency.

Education and Awareness: Creating awareness about the importance of energy efficiency is an important aspect. Conducting educational campaigns and disseminating information about the benefits and practices of energy efficiency can help engage the public and change behavior.

Improving energy efficiency not only reduces resource consumption, but can also bring significant economic benefits. Reducing energy costs allows you to reduce the cost of electricity and fuel, which has a positive effect on the financial situation of enterprises and households. In addition, it helps to reduce greenhouse gas emissions and improve the quality of the environment.

In Uzbekistan, measures are being taken to increase energy efficiency in various sectors of the economy. Within the framework of state programs and initiatives, measures are being taken to modernize production, introduce energy-saving technologies, and encourage energy-saving behavior.

Improving energy efficiency is a useful and effective approach to achieving a green economy and sustainable development. It helps to reduce the consumption of resources, improve the environmental situation and direct resources to other socially important goals.

Also, reducing emissions of harmful substances is another important component of Uzbekistan's green economy. The best environmental standards and environmentally friendly production technologies help to reduce harmful emissions and improve air quality in the cities of Uzbekistan.

Modernization of production in order to reduce emissions of harmful substances into the atmosphere is one of the important steps towards green economy and sustainable development. In Uzbekistan, active measures are being taken by the government to realize this goal.

One of the approaches to modernization of production is the introduction of more efficient and environmentally friendly technologies. For example, replacing outdated equipment with modern equipment that uses energy more efficiently and emits less waste. It is also important to use equipment with modern cleaning and filtering systems to minimize the release of harmful substances into the atmosphere.

The government of Uzbekistan actively supports and encourages companies that are modernizing their production. This may include various measures such as tax breaks, subsidies or other forms of support. Special investment zones and business parks were established to attract investment in green technologies and modernize production.

Informing and training employees about the need to comply with safety measures and environmental protection standards is also an important part of modernizing production. Regular employee training helps to prevent accidents and reduce negative impacts on the environment.

The environment and public health are important arguments in favor of modernizing production and reducing emissions of harmful substances. Clean production helps reduce air pollution that harms human health and saves natural resources.

In Uzbekistan, significant progress has been made in terms of modernization of production and reduction of emissions of harmful substances. However, this is a continuous process that requires constant attention and effort. The government and enterprises should continue work on modernization of production in order to improve the environmental situation and create a stable and healthy environment for future generations.

Another important point is that the "green economy" will primarily benefit ordinary people, not the state or business. This is its social significance.

It is known from the world experience that the introduction of "green technologies" in various sectors of the economy has a positive effect on improving the living conditions of the population. And of course, as a result, life in cities becomes much more comfortable, infant mortality decreases more and more, the average life expectancy increases, etc. In some regions of Latin America and Africa, the flow of external migration has decreased and the development of human capital has been observed.

Uzbekistan also joined the UN Sustainable Development Goals and the Paris Agreement on Climate, and these documents oblige national governments to fulfill the requirements of "green development". So, sooner or later we will inevitably switch to a "green economy".

4. Discussion

In the process of "green growth" Uzbekistan may face a number of problems and obstacles:

First, problems of varying intensity are inevitable. A strategy has also been adopted to prepare for and deal with them in time.

Before transitioning to the "green economy", it is necessary to adapt the national legislation to global requirements and bring it into a unified system. Some countries have faced additional challenges because they started with practice and then created the legal framework. This slows down the transition.

There are many inconsistencies and mutually exclusive aspects in our laws related to energy, science and innovation, and tourism, which can be the driver of "green development". The documentation itself is a lot. Let's say that the mechanisms for delivering electricity to the consumer, setting the price, and making the payment are designed to match the existing traditional system. There are no legal norms that allow working with alternative energy sources. For example, it is necessary to coordinate relations between new market entities by clarifying questions such as how renewable energy is produced, how it is delivered to the population according to the order and tariff, and reflecting it in legal documents.

Secondly, it is essential to identify the financial instruments the state intends to employ in the transition to a "green economy". At the outset, substantial investment in economic areas is essential. The state budget is insufficient for this; it may be essential to seek assistance from international donor organisations. Importantly, in what form may local beneficiaries - residents, businesses, and economic entities - receive it? All state efforts will be futile if businesses are not encouraged and motivated to operate within the principles of a "green economy."

Enterprises, organisations, and various demographic segments receive preferential or interest-free loans, subsidies, grants, and tax incentives for adopting alternative energy sources, minimising carbon consumption in production, utilising "green technologies," and acquiring pertinent equipment. Consequently, it is imperative that the banking and financial sector supports this initiative, and that banks prioritise business projects aligned with the UN Sustainable Development Goals.

The aforementioned financial support mechanisms should be predominantly utilised for small company enterprises. The rationale is that they exhibit heightened sensitivity to fluctuations in market conditions and may struggle to swiftly adjust to the altered competitive landscape. Large organisations possess a "safeguarding buffer". Consequently, certain organisations experience no challenges in adapting to the "green economy". Otherwise, it can mitigate potential risks by broadening the range of products or services offered.

Another critical challenge is identifying the economic sectors that will be pivotal in the transition to the "Green Economy". We believe it is preferable to invest in the tourist and service sectors during the initial period. Moreover, enhanced efficiency is anticipated in the machine building and automotive sectors. The state must determine which sector to transition to a "green economy," as well as the timing and method of this transfer, at this moment.

Thirdly, a forthcoming issue will be the scarcity of qualified workers, seen as the intellectual foundation of "green development". The training of such specialists is a

significant concern for Uzbekistan. We must commence this task immediately; else, we will grow reliant on foreign nations and incur greater expenses in the future.

The swift advancement of science and innovation is essential for an expedited and more effective transition to a "green economy". This economic model is fundamentally dependent on scientific advancements and efficient inventive strategies. For instance, the global cost of utilising solar energy has decreased by 80 percent over the past decade. This pattern persists. Scientists, engineers, and technologists are always seeking methods to enhance existing equipment, develop new devices, and minimise costs. Uzbekistan must undertake such research and develop unique products domestically rather than importing them from outside. Nonetheless, there are also challenges in the transition to a green economy. One primary issue is the constrained financial resources available for investment in green technologies. Additionally, in certain regions, there exists a deficiency of qualified personnel to operate in the domain of green technologies.

The establishment of new ecologically sustainable workplaces and the enhancement of professional qualifications of personnel in the field of ecology are crucial components of the transition to a green economy and the attainment of sustainable development. Events and programs targeting these objectives are also being conducted in Uzbekistan.

One method to generate new green jobs is to expand the renewable energy sector. For instance, solar energy necessitates specialists in solar energy, solar panel design and installation, maintenance, and technical support. The advancement of such sectors generates new opportunities for employment and specialisation in the field of environmental studies. Protection.

Furthermore, it is essential to enhance the professional qualifications of employees within enterprises and organisations operating in the field of ecology. This enables them to utilise resources more efficiently, mitigate negative environmental impacts, and adopt new green technologies. The curriculum, courses, and training in ecology and sustainable development equip employees with essential knowledge and skills.

Governments and educational institutions should collaborate to develop curricula focused on environmental and sustainable topics, encompassing training in green technology utilisation and practical skills for environmental engineers, energy conservation specialists, environmental impact assessment experts, and other related fields. Such programs assist in cultivating a workforce adept at effectively managing and advancing a green economy.

It is important to acknowledge that enhancing professional abilities and generating new employment opportunities in the field of ecology necessitates continual adaptation to emerging technologies and requirements. Consequently, the collaborative efforts of educational institutions, enterprises, and the state must guarantee the pertinence of employees' knowledge and abilities, while the training of personnel for the advancement of the ecological industry should be continuous.

Consequently, the establishment of new green employment opportunities and the enhancement of environmental competencies are crucial in the transition to a green economy and sustainable development. These measures would not only facilitate the creation of jobs associated with renewable energy sources and environmental technologies but also enhance the environmental culture and competencies of employees inside existing enterprises.

It is essential to motivate our neighbouring countries to adopt "green development." Undoubtedly, attaining regional unity is imperative. Only at that point can the green development process accelerate. For all Central Asian states, the preservation of ecological balance and the judicious utilisation of natural resources are of paramount importance. Inherently, nature possesses no political boundaries. The creation of eco-friendly production facilities or the "green energy" system will benefit not only Uzbekistan but also its neighbouring countries. This perspective advocates for collaboration and the implementation of mutually advantageous strategic strategies. However, the decision of

each nation to transition to a "green economy" remains a separate matter. Uzbekistan has already made

Consequently, it can be asserted that the green economy holds significant importance for Uzbekistan, and the nation's government is diligently pursuing initiatives in this domain. The advancement of environmentally sustainable technologies and renewable energy sources facilitates the reduction of ecological burden on the natural environment and enhances the quality of life for the populace.

5. Conclusion

"Green development" enhances the investment appeal of Uzbekistan. Globally, major enterprises and multinational firms are adopting the ideas of "green development" in their operations. They intentionally exhibit their dedication to the Sustainable Development Goals to preserve their corporate reputation. The nations that have opted for "green growth" are garnering the interest of international organisations and the business community. International lenders and investors are currently investing in these nations. Uzbekistan's shift towards a "green economy" represents a noteworthy development for the global community.

It would be great if we could get funding from major donor organizations, especially Western companies, for important investment projects aimed at the realization of our "green development" goals.

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