CONCEPTUAL APPROACHES TO TRANSITION TO "GREEN ECONOMY" IN THE CONDITIONS OF SUSTAINABLE DEVELOPMENT OF KAZAKHSTAN

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Abstract

This article investigates important conceptual approaches to the transition to a "green economy" in the context of sustainable development of Kazakhstan. Theoretical foundations of the problems of transition to a low-carbon economy are carried out, important directions and stages in the transition to a "green economy" are shown, as well as considered foreign experience of mechanisms for the implementation of large-scale transformations on the transition to a "green economy" on the example of some countries. In order to ensure the reliability of the obtained results, the authors have addressed various sources on the available issues by the method of express analysis and interviews. The results of these scientific and experimental activities were reflected in the scientific work. The appendices and tables given in the work give quality to the work, clearly characterize and substantiate the theoretical conclusions and proposals. Certainly, we can state that this study has achieved its goal, the results of the study are fundamentally new, the work contains a number of sound recommendations for further transition to a "green economy" in the conditions of sustainable development of Kazakhstan will contribute to the economic growth of our country.

Keywords: investments, sustainable development, strategy, green economy, target indicators, SDGs, energy

I. Introduction

Transition to a "green economy" is the main way to achieve the SDGs, to fulfill Kazakhstan's promised contribution to reducing greenhouse gas emissions under the Paris Agreement with economic and environmental sustainability, a just and prosperous society, and a clean and healthy environment. The long-term vision of transition to a "green economy" for Kazakhstan is relevant for all key sectors of economic development.

Due to its undeniable merits, we believe that the adopted Strategy "Kazakhstan-2050: a new political course of the established state" (hereinafter - Strategy - 2050) sets clear guidelines for building a sustainable and effective model of the economy based on the country's transition to a "green" path of development. Due to its undeniable merits, we believe that the adopted Strategy "Kazakhstan-2050: a new political course of the established state" (hereinafter - Strategy - 2050) sets clear guidelines for building a sustainable and effective model of the economy based on the country's transition to a "green" path of development.

Transition to a "green economy", which can be defined as a successful economy with a high standard of living of the population, careful and rational use of natural resources in the interests of future generations and in accordance with the international obligations assumed by the country, is beneficial for Kazakhstan and will allow the country to move closer to its goal of becoming one of the 30 most developed countries in the world. It is estimated that by 2050, the transformation of the green economy will allow for an additional 3 percent increase in gross domestic product (GDP), the creation of more than 500,000 new jobs, the creation of new industries and services, and healthier and more equitable living conditions for the population. The transformation requires combined public and private investment averaging about 1 percent of GDP annually. Transition to a "green economy", which can be defined as a successful economy with a high standard of living of the population, careful and rational use of natural resources in the interests of future generations and in accordance with the international obligations assumed by the country, is beneficial for Kazakhstan and will allow the country to move closer to its goal of becoming one of the 30 most developed countries in the world. It is estimated that by 2050, the transformation of the green economy will allow for an additional 3 percent increase in gross domestic product (GDP), the creation of more than 500,000 new jobs, the creation of new industries and services, and healthier and more equitable living conditions for the population. The transformation requires combined public and private investment averaging about 1 percent of GDP annually.

II. Literature review

"Green economy" as an economic form of green development, includes low-carbon industry, energy-saving and environmental protection industry, ecological economy and renewable energy and other. The development of green economy is not only a strategic measure for long-term development, but also an important component of the current development of Kazakhstan's economy.

In recent years, many researchers have paid attention to the relationship between economic growth and the environment. Since the effects of environmental problems such as global warming, air pollution, increased use of natural resources and emissions, environmental and energy issues have gained paramount importance in the field of economic growth on international platforms [1-10].

It is often noted by researchers that green finance is becoming an important component for achieving global and national sustainable development goals and building a green economy, defining new environmentally sustainable growth prospects for the green segment and responsible investment [2].

There are opinions that to achieve the goals of sustainable development and transition to a "green" economy requires not only significant financial resources, but also the transformation of traditional investment. In the modern period, in the context of the world's global aspiration to sustainable development for investment projects and industries aimed at improving in the context of the world's global aspiration to sustainable development, the development of green economy and green financial instruments is relevant [3].

Many researchers have attempted to identify the main factors affecting energy consumption. They use population growth rate, balance of trade in goods and services, GDP, foreign direct investment and energy prices as determinants of energy consumption. And here we can agree with the opinions of these researchers, as their results show that the growth rate of direct investment in the energy sector affects both GDP growth and the levels of energy consumption of the population [4].

Some works clearly define the essence of responsible investment within the concept of ESG-investment, which takes into account the unity of environmental, social and corporate governance factors; they analyze the state and development of responsible investment factors and assess the

possibilities of forming an ecosystem of financial support for environmentally responsible investments [5].

According to experts, they point the main problems in the transition to a "green" economy to the processes of regulation in the sphere of environmental management, in particular, in the oil industry. They note that the mechanisms of regulation of the industrial waste processing industry are practically absent, and the problems arising in this industry are ignored by authorized bodies, which can lead to an environmental disaster [7].

III. Methods

In conducting this study as a methodological basis were used general and specific methods, in particular: dialectical, system-functional, economic-statistical and formal-logical methods. Currently, the issues of conceptual approach to the transition to a "green economy" have been reflected in many scientific studies. However, it should be noted that there is not enough theoretical review on the problems of transition to a "green economy" in the context of sustainable development of the national economy. To date, the national economy has formed certain methods and approaches to further transition to the "green economy". However, none of them can be considered universal for the study of this process. Based on the above methods, we note that the research methods are built on the principles of system-structural analysis, methods of scientific analysis and synthesis were applied.

IV. Results

Currently, our country is implementing the National Project "Green Kazakhstan" for 2021-2025 in order to transition to a "green course" of economic growth is a very high priority and strategic task of the national economy.

The main priority areas in the transition to a "green economy" are the following (Fig. 1):

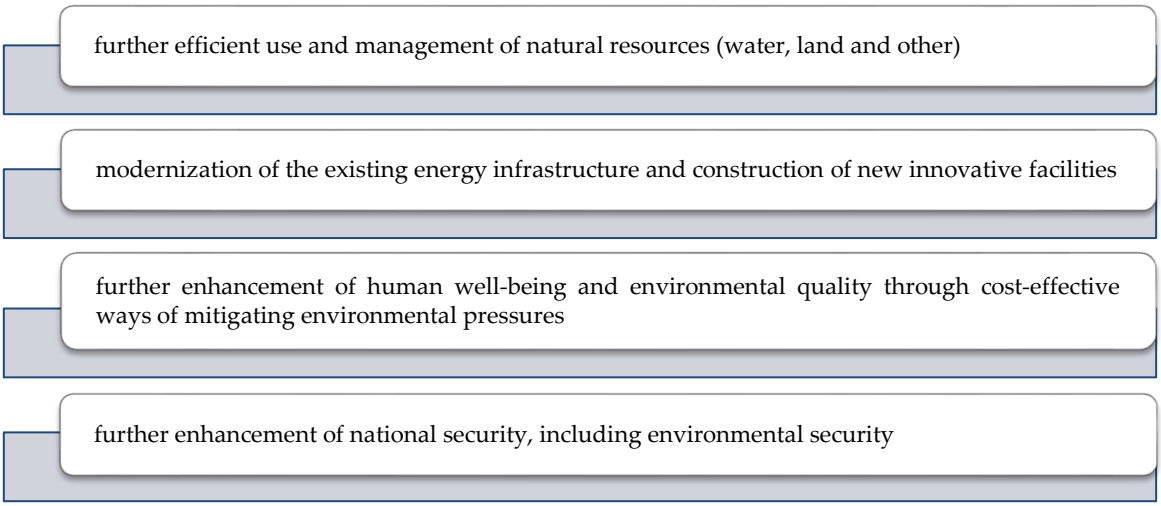

Figure 1: *Main directions for transition to "green economy"*
Source: Concept on Transition of the Republic of Kazakhstan to "green economy" [5, 6]

The total amount of investments required for the implementation of the Concept on the transition of the Republic of Kazakhstan to a "green economy" of May 30, 2013 (hereinafter the Concept) from now until 2050 will average 3-4 billion USD annually. The largest annual volume of investments will be equivalent to 1.8 % of GDP in the period from 2020 to 2024, and on average

until 2050 investments will amount to about 1% of GDP. At that, the main share of investments will be attracted at the expense of private investors' funds [5, 6].

According to this Concept, the asset renewal cycle in resource-based sectors of the economy takes a long time, and in resource-based economies the transition to a clean economy takes decades. Kazakhstan is not an exception in this sense (Fig. 2).

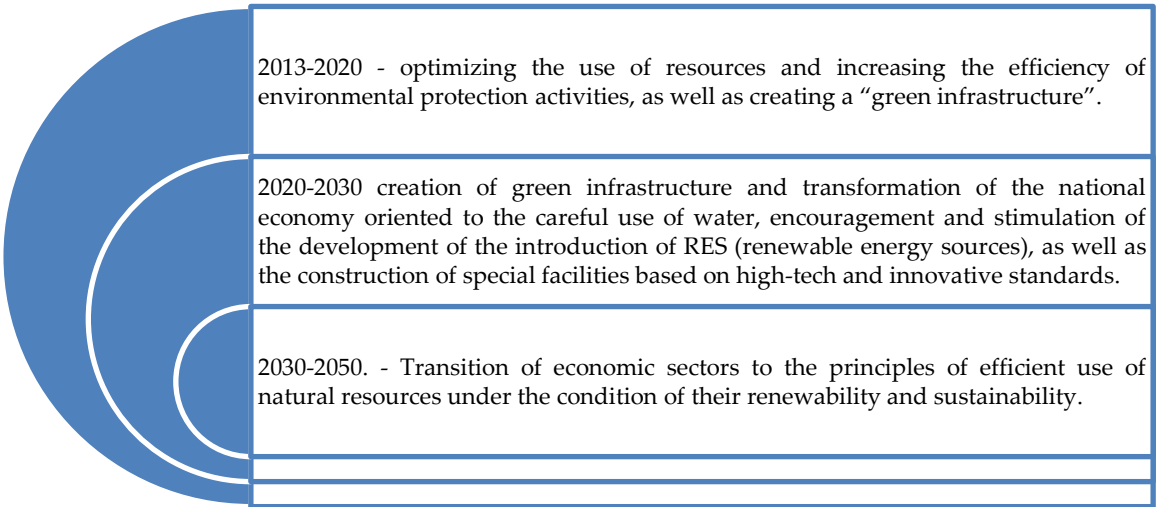

Figure 2: *Important stages of implementation of the Concept for the transition of the Republic of Kazakhstan to a "green economy" Source:* http://egov.kz/wps/portal/Content?contentPath=/egovcontent/bus_nat_eco/ecologiya/article/green_ekonomika&lang=ru [7]

Such measures should contribute to changing the behavioral patterns of the population with regard to the use of heating and cooling systems, waste disposal and water use [8].

To coordinate and control the transition to a "green economy" the Council on Kazakhstan's transition to a "green economy" will be established under the President of the Republic of Kazakhstan. This Council will review the National Report on the transition to a "green economy" every three years. Establishment of such a body is a mechanism for realization of large-scale transformations in the public sector. For example, this approach has been successfully used in Taiwan, Korea and Bahrain (Table 1).

Table 1: *Key effective approaches in the transition to a green economy in some countries*

Country	Program	Expected results
Taiwan	Reconstruction of rural areas	▪ The organization responsible for change should not replace ministries, but complement them ▪ Opportunities should be provided for innovative developments to address identified problems ▪ Local skills should be developed to sustainably implement the solutions developed in the future.
Korea	National economic development plan	▪ The organization has very broad powers and has the full support of the Prime Minister ▪ It is directly linked to the Ministry of Finance and has full control over the budget. ▪ The organization is made up of only the most effective professionals from both the public

		sector and the emerging private sector. ▪ The organization functions as an "incubator" - it has already established several independent companies that have subsequently become leading players in the private sector.
Bahrain	Bahrain's Vision 2030 Economic Development Plan	▪ There should be an optimal mix of experienced professionals and young professionals with high potential ▪ Opportunities should be created to attract top-notch talent without unduly high remuneration ▪ The responsible organization should be given significant weight through the broad powers granted to it by the country's leadership ▪ The necessary authority to make or influence budget allocation decisions should be ensured.

Source: [6-9]

Based on the data in Table 2, showing the dynamics of electricity production from 2018 to 2022 in Kazakhstan, it is possible to assess the state of production, consumption of electricity in Kazakhstan. During this period, the average tariff, which is 15.66 tenge per 1 kWh in 2022, increased several times, while electricity production increased by about 2 times. At the same time, if we correlate electricity production and consumption, we can highlight that from 2018 to 2021, consumption exceeded production [6-26].

Table 2: *Dynamics of electricity generation, consumption and estimated electricity tariff in Kazakhstan for 2018-2022*

Indicators	2018	2019	2020	2021	2022
Electricity production, billion kWh	107,27	106,48	108,63	115,08	113,45
Electricity consumption, billion kWh	103,20	105,10	107,30	113,50	112,94
Settlement tariff (average), tenge per 1 kWh	11,07	10,53	11,74	14,04	15,66

Source: [10]

However, taking into account the forecast of electricity generation and consumption in Table 2, it can be seen that after 2022 there is a probability of electricity shortage. The data in Table 2 show a downward trend, which will be realized starting from 2022 for 4-5 years. In general, the following will be envisaged to reduce consumption: increase in tariffs, which will be for all consumers of electricity; formation of new sources of production by attracting different types of electricity generation and saving of electricity received by the population [6-26].

V. Discussions

In the context of sustainable development of Kazakhstan's economy, the importance of both the implementation of the Concept and the realization of the 17 Sustainable Development Goals (SDGs), put forward by the UN in 2015 to all countries of the world to ensure economic security, in particular, environmental security, reducing emissions of environmental protection and environmental protection is increasing

For this purpose, let us consider the main goals of the SDGs realization (Figure 3). For the realization of 17 SDGs Kazakhstan has developed its national indicators, monitors and evaluates

their implementation. These activities take place both on the national scale as a whole and at the regional level.

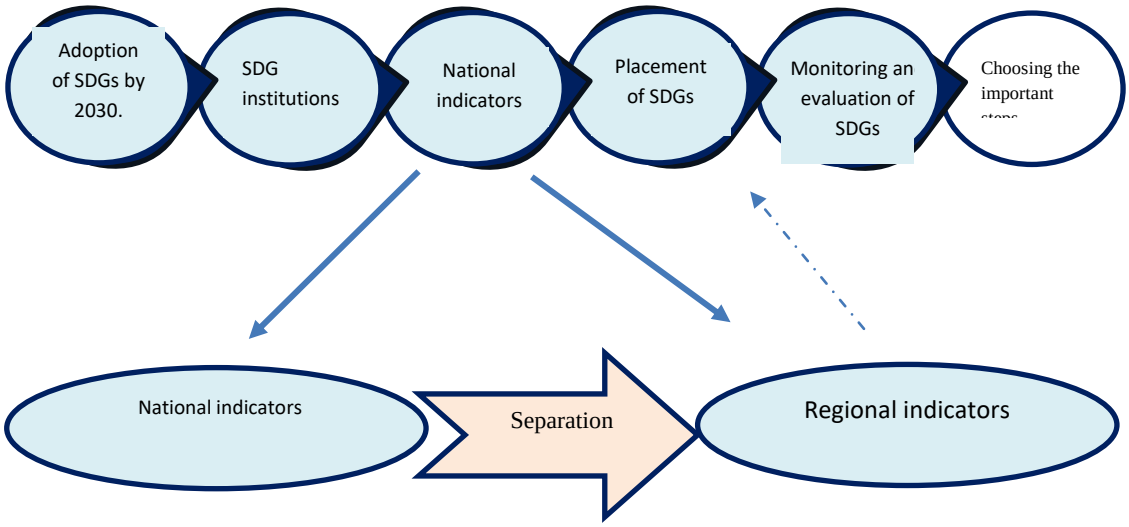

Figure 3: *Main objectives of SDG implementationy*
Source: [11]

Thus, the concept of transition of the Republic of Kazakhstan to a "green economy" is implemented in accordance with the provisions of the Constitution of the Republic of Kazakhstan, Strategy 2050 and the Strategic Development Plan of the Republic of Kazakhstan until 2020. Issues of implementation of the transition to a "green economy" will be regulated by legislative acts of the Republic of Kazakhstan on the transition to a "green economy". At the same time, the transition to a "green economy" reduces risks from global threats such as climate change, depletion of minerals and shortage of water resources

VI. Conclusion

In the process of transition of Kazakhstan some researchers consider the development and establishment of green finance in Kazakhstan. conceptual approaches to the transition to “green economy” in the conditions of sustainable development of Kazakhstan. Many literatures refer to numerous studies conducted on the principles of green economy, as current models of economic growth and development are unsustainable. The level of participation of private and public institutions in the process of implementing the principles of “green economy” varies depending on the level of economic development of the country.

“Green economy” is an inclusive system of economic growth, social protection and natural ecosystems when it does not create serious risks and environmental deficits for future generations. The link between environment and development is possible through sustainable development. Thus, it is noted that the green economy is based on the restructuring of growth and development within the framework of global resources. Various stakeholders are involved in the process of implementing the principles of green economy, and each of them plays a fundamental role. “Green economy” is an inclusive system of economic growth, social protection and natural ecosystems when it does not create serious risks and environmental deficits for future generations. The link between environment and development is possible through sustainable development. Thus, it is noted that the green economy is based on the restructuring of growth and development within the framework of global resources. Various stakeholders are involved in the process of implementing the principles of green economy, and each of them plays a fundamental role.

Thus, in the green economy, concepts such as sustainable products, clean technologies and green processes have pushed organizations to opt for change management initiatives. Organizational sustainability through application has been defined as a triad concept covering environmental issues, economic aspects and social issues. The European Union has developed a set of environmental policies, the main ones being environmental sustainability, a natural capital economy and resource-efficient and environmentally friendly development.

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