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GREEN FINANCE IN KAZAKHSTAN'S CONTEXT: MARKET OVERVIEW

Abstract

The adoption of the concept of "sustainable development" necessitated the search for ways to achieve sustainable goals, the definition of directions for the transformation of economic relations, and the emergence of a new term: "green economy", or "green finance". Through the transition to a "green" economy and "green" financing, the Government of Kazakhstan will be able to fulfill an important task – the development of a new financial system. Financing of green projects contributes to improving the quality of life in society; aims to preserve natural resources and the environment. The main purpose of the scientific article is to determine the sources of investment to finance the "green" economy of Kazakhstan today. The following research methods were used: general scientific research methods, and quantitative methods of statistical, causal, and comparative data analysis for analyzing the current state of green finance in Kazakhstan and identifying problems with green finance. Research results show that in the Concept for the transition of Kazakhstan to a "green" economy, the corresponding investments are estimated at approximately $3-4 billion, or about 1% of GDP per year. The most active green projects are being developed in Akmola, Atyrau, Kostanay, and Zhambyl regions. Research findings suggest that a "Green" transformation of the economy is impossible without the implementation of the principles of responsible investment (PRI). The results of the study will be helpful for entrepreneurs and business entities engaged in the green finance industry or for government agencies responsible for the development of green infrastructure in Kazakhstan.

Key words: green economy, finance, green bonds, lending, green investments.

Introduction

As the events of recent years show, the importance of environmental protection and overcoming the consequences of climate change is growing in almost all countries. It is also important to conduct

various studies to determine the optimal investment in the development of a green economy and reduce the negative impact of human activities on the environment.

A green economy minimizes the use of energy and water in production and consumption, and thereby significantly reduces the negative impact on the environment and climate [1]. The concept of "green" investments is interpreted as investments in environmentally friendly and resource-saving technologies. Such investments involve investments in various programs and projects, the purpose of which is usually the development of a "green" economy. Supporting the transition to a green economy and Kazakhstan's path to carbon neutrality. Emphasis on green transition is hailed as the key to economic transformation [2].

Issues of investment in the green economy are considered by various authors. S.I. Mishulina argues that "green" investments are considered an integral part of responsible investments and involve long-term financial investments directed to the introduction of "green" technologies [3]. Yu.A. Danilov proposes to divide "green" investments into two types: 1) investments aimed at the development and implementation of environmentally friendly production technologies (waste-free / energy-saving) with a minimum potential impact on the environment; 2) investments directed to the commissioning of environmental protection and environmental cleaning fixed production assets [4]. OECD documents refer to the "green", following types of investments:

- investments in "green" infrastructure and greening of the existing one;
- investment in the sustainable management of natural resources, ecosystems and the services they provide;
- investments in the sector of environmental goods and services, as well as in all segments of green value chains [5].

Thus, the above definitions allow us to conclude that the interpretations of sustainable, green, and responsible investments are similar.

Findings published in earlier studies differ significantly. For example, active international technology transfer may result in a country investing less in environmental R&D at home (because it will benefit from the results of research conducted abroad). Gerlagh believes that as the level of investment increases, the accumulation of knowledge moves from energy production to energy-saving technologies and proposes to increase the degree of technological change not a unit of investment. [6]. Carraro, Massetti, Nincita, De Cian, and Tavoni analyze climate policy and believe that investments in energy-related R&D do not crowd out investments in other sectors and do not lead to a deterioration in human capital [7, 8].

Among the Kazakhstani authors who studied this issue, one can single out A.A. Pasternak, who compared the main indicators on the example of Kazakhstan and the United States in terms of renewable sources [9]. E.V. Varavin and M.V. Kozlova proposed a methodology for assessing the degree of development of the green economy at the mesa level using approaches to constructing the environmental and economic index of Russia. This index was calculated based on the principles of the World Bank applied in the development of the Adjusted Net Savings Index (ANSI) [10]. K.O. Nurgalieva considered foreign experience in the framework of energy-related investment needs [11]. N.B. Shamuratova, M.T. Zhetesova, K.N. Tastanbekova and N.N. Nurlanova considered the economic growth of the country through the management of natural resources [12]. B.K. Kazbekov outlined the main problems, as well as possible solutions and mechanisms for the development of a green economy in Kazakhstan [13].

As international and national research experience shows, an important aspect that determines the sustainable development of society is an investment in the development of a green economy.

Materials and methods

The review is based on primary and secondary sources, with references provided. This article used the official statistical reporting on investment activities in the green economy of the Republic of Kazakhstan. Period: from 2016 to 2022. Government policy documents related to the development of the green economy were also used. The following research methods were used: general scientific research methods, and quantitative methods of statistical, causal, and comparative data analysis. The methodology is based on two groups of basic indicators.

It should be noted that these parameters themselves vary significantly over the years and often do not have a clearly defined vector. Therefore, from our point of view, it is necessary to use these parameters not in their absolute values, but with their conversion into specific indicators, which in this case will allow us to level the gap in the values of these parameters in accordance with the dynamics of the country's economic development.

Main provisions

Through the transition to a «green» economy and «green» financing, the Government of Kazakhstan will be able to fulfill an important task – the development of a new financial system. Also, financing of green projects contributes to improving the quality of life of society; aims to preserve natural resources and the environment. The green economy is based on the idea of improving the quality of life of the population and economic growth while reducing the burden on the environment. Numerous green finance indicators developed to date reflect the complexity of comprehensively assessing economic, environmental and social development outcomes.

The conclusions and recommendations of the study, obtained as a result of the study, are useful to entrepreneurs and business entities engaged in the green finance industry, or government bodies responsible for the development of green infrastructure in Kazakhstan.

Literature review

There is also no uniform understanding of the essence of "green" finance. The OECD links green finance and investment to green development, which means achieving economic growth while reducing pollution and greenhouse gas emissions, as well as minimizing waste and increasing the efficiency of the use of natural resources [14].

The G20 Green Finance Study Group (GFSG) believes that green finance can be understood as financing of investments that provide environmental benefits in the broader context of environmentally sustainable development [15].

Sitnik A. [16] explores the scientific understanding of the concept of "green finance" and the systematization of social relations covered by this category.

Violetta Arkhipova [17] has identified green finance at various levels. The purpose of the work is to determine the role of the greening of the modern world financial system in solving two complex blocks of global problems: on the one hand, financial and economic, among which global imbalances and negative financial effects from cross-border capital flows are highlighted, and, on the other hand, natural resources, climatic and ecological.

Results and discussion

In recent years, an increasing number of countries have defined the concept of a "green" economy and the transition to "green" economic growth as a strategic model for the development of national economies (OECD countries, Japan, South Korea, etc.).

Currently, the market for "green" technologies in Kazakhstan is at the stage of formation and requires activation. As the ex-vice minister of ecology, geology, and natural resources of the Republic of Kazakhstan Akhmetzhan Primkulov said at the opening of the Green Talks, the development of green technologies in the Republic of Kazakhstan necessarily requires appropriate legislative and regulatory frameworks. This is one of the instruments of state support.

The Astana International Financial Center (AIFC), together with the European Bank for Reconstruction and Development (EBRD), has developed a concept that defines the main approaches to building a "green" financial system in Kazakhstan and attracting investment in it. In 2013, the Government of the Republic of Kazakhstan adopted the Concept of Transition to a Green Economy. In this regard, at the state level, it became necessary to move towards sustainable development based on the principles of "green growth". What led to the adjustment of the model of economic development? By joining the Paris Climate Agreement, Kazakhstan has pledged to make every possible effort to

achieve its goals to reduce the content of greenhouse gases in the atmosphere. In this regard, there is an urgent need to create an appropriate infrastructure and develop a market for "green" technologies. Kazakhstan has adopted national and regulated programs and strategies to create prerequisites for sustainable development. The government has created conditions for the transition to "green" growth by adopting a number of bills such as: the Environmental Code; the Law on Supporting the Use of Renewable Energy Sources; The concept of transition to a green economy. With these beginnings, Kazakhstan set an example for the countries of Central Asia. In February 2018, the National Development Plan of Kazakhstan until 2025 was adopted, in which the "green" economy is singled out as a separate priority area.

In 2021, a new Environmental Code was adopted, which defines the standards of state environmental regulation, stimulates the attraction of green investments, and ensures the fulfillment of international environmental obligations.

A regulatory framework is being created for the formation of a "green" financial system for the Republic of Kazakhstan. A Green Finance Advisory Council has been established with the participation of local and international experts in the field of green finance. With the participation of the EBRD, a fundamental framework was adopted in the form of the Green Financial System Concept for Kazakhstan and the AIFC Green Finance Leadership Strategy until 2025. The portfolio of this bank includes 25 projects in the energy sector of the country. The total number of projects is 236 for a total investment of 7.3 billion euros, including 115 active projects (2.7 billion euros), 43% of which are concentrated in the energy sector. The EBRD has been involved in Kazakhstan's largest solar (Burnoye solar plant and expansion project), wind (Ereymentau wind farm) and renewable energy financing projects in Kazakhstan [18].

According to a study by DKN World News, Deutsche Bank recommended that the government and local companies issue green bonds and financial instruments related to ESG (environmental, social, and governance). Use this capital to stimulate and develop the non-commodity sector. One of the tasks of the taxonomy is second-tier banks. Kazakh banks are only looking at green finance. A number of credit organizations do not have any environmental projects at all. It is important to note Kazakh banks, which nevertheless took a risk and invested in green finance. The first of these were Mastercard and Eurasian Bank. They issued the first ecomap country. Part of the bonuses from each transaction will be directed not only, to the landscaping of Kazakhstan, but also to waste sorting.

In Kazakhstan, economic growth in the foreseeable future will be significantly affected by how effectively aspects of environmental management and natural resource management are integrated into the economic planning process. In this regard, the issues of mobilizing the funds necessary for investing in sustainable green growth come to the fore. In the Concept for the transition of Kazakhstan to a "green" economy, the corresponding investments are estimated at approximately $3–4 billion, or about 1% of GDP per year. The bulk of these funds can be raised through the private sector, by international standards for providing such funding.

The country has seen a record increase in investment in clean energy. The most active green projects are being developed in Akmola, Atyrau, Kostanay, and Zhambyl regions. The priority is the construction of solar and wind power plants, as well as the development of clean transport.

In recent years, the number of investments has been growing by an average of 87.2% per year. At the end of 2018, investments aimed at protecting the environment increased by 2.5 times over the year and amounted to 80.2 billion tenges. In subsequent years, the level of investment rose by 21%. These funds are aimed at solving problems related to emissions of pollutants into the atmosphere, disposal of pollutants, etc. In 2017, the number of investments invested in environmental protection was 32.5 billion tenges, while the annual growth was only 0.9% (Figure 1, p. 161) [19].

The highest concentration of investments aimed at protecting the environment is observed in the Akmola region: 25.7 billion tenge – more than 6.5 times more than in the same period a year earlier (3.8 billion tenges). The top three regions leading in terms of investment in environmental protection also include Zhambyl (from 133.8 million to 12.7 billion tenges) and Atyrau (9.1 billion tenges, more than 2 times annual growth) regions (Table 1, p. 161).

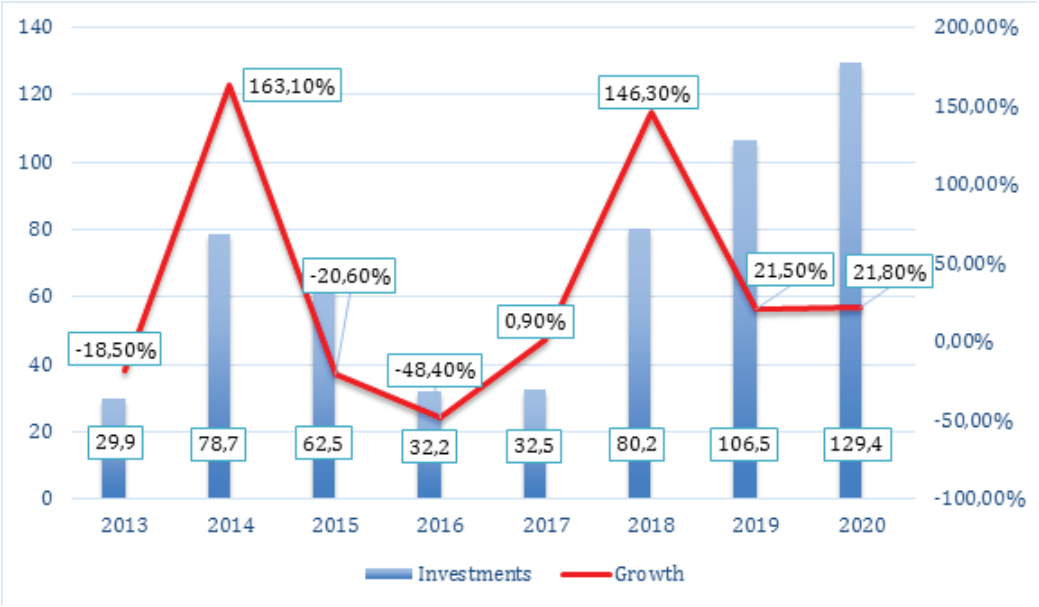

Figure 1 – Investments aimed at the green economy in the Republic of Kazakhstan, billion tenge

Note: Compiled by the authors based on sources [19].

Table 1 – Investments aimed at the "green economy", 2021 year

	Total	in per cent by 2020	Including		
			activities – renewable energy	activities – energy-saving technologies and energy efficiency	reduction of greenhouse gas emissions
Total in Kazakhstan	103 766 939	82,9	98 901 557	4 833 394	31 988
Akmola region	11 231 934	17,8	11 231 934	-	-
Aktobe region	25 643 662	246,9	25 643 662	-	-
Almaty city	21 801	3,7	21 801	-	-
Atyrau region	46 806	186,4	-	30 861	15 945
Jambyl Region	52 400 425	8,1 times more	52 400 425	-	-
Kostanay region	8 152 845	73,2	8 152 845	-	-
Kyzylorda	1 201 632	8,8	1 201 632	-	-
Mangistau region	16 513	1,1	-	470	16 043
Turkestan region	466 164	32,7	249 258	216 906	-
The East Kazakhstan region	40 257	0,4	-	40 257	-
Nur-Sultan city	4 544 900	76,7	-	4 544 900	-
Note: Compiled by the authors based on sources [20].					

Energy saving and energy efficiency improvement. The head of state set a crucial task for Kazakhstan: to reduce the energy intensity of the gross domestic product by at least a quarter by 2020, and by half by 2050. The same guidelines are set in the Concept of Transition to a "Green Economy". Innovation trends are influenced by inefficient market mechanisms, changes in fossil fuel prices and subsidies. Recently, a new opportunity has appeared in Kazakhstan to attract investment in the renewable energy sector.

Table 2 – Dynamics of the share of investments aimed at protecting the environment and related to the green economy, for 2013–2022

Indicators	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Share of investments aimed at environmental protection in total investments, %	1,3	1,6	1,2	0,6	1,0	1,0	1,0	1,1	1,0	-
Share of investments related to the green economy, %	0,2	0,0	0,2	0,0	0,5	0,7	0,8	0,81	0,90	0,94
Note: Compiled by the authors based on sources [19, 20, 27].										

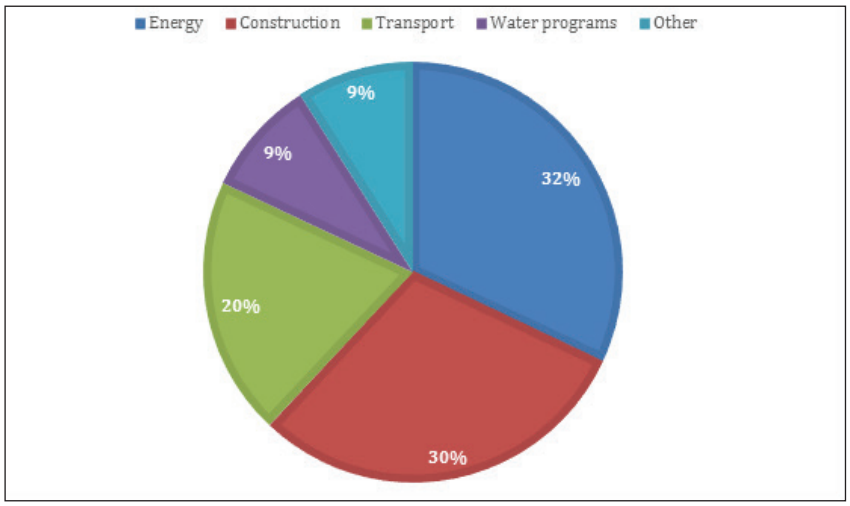

Figure 2 – Structure of "green investments" by areas, 2021

Note: Compiled by the authors based on sources [24].

According to the Ministry of Energy of the Republic of Kazakhstan, the volume of electricity production by renewable energy facilities (SPP, WPP, BGS, small hydropower plants) in the Republic of Kazakhstan for January–June 2022 amounted to 2,392.5 million kWh. Compared to January–June 2021 (2,011.9 million kWh), the increase was 380.6 million kWh or 18.9%. An increase in electricity generation is observed at wind farms, solar power plants, and small hydropower plants compared to the same period in 2021, while biogas generation decreased compared to last year [21].

In total, according to the Ministry of Energy of the Republic of Kazakhstan, as of June 2022, 140 renewable energy facilities operate in Kazakhstan (wind farms – 893.95 MW; SPPs – 1147.51 MW; Small HPPs – 280.98 MW; BioPP – 7.82 MW) [19].

Table 3 – Analysis of RES in Kazakhstan

Types of RES	2019		2020		2021		Growth	2022		Growth
	Qty	Power, MW	Qty	Power, MW	Qty	Power, MW		Qty	Power, million kWh	
HPS	45		46	885	47	281	22,7%		4 484,4	-3,9%
WES	15	18	533		22	684	13,8%		1 052,7	28,9%
WES	21		25	427	27	1037,6	40,6%		851,6	2,6%
BioES	1		1	1	1	7,8	0%		0	-100%
Total	90	1050,1 МВт	111	1846 МВт		2010,3 МВт	23,0%			
Note: Compiled by the authors based on sources [22, 23, 24].										

The Law on RES Support was first issued in 2009, however, only further refinements of this law, which took place from 2013 to 2017, gave a truly tangible impetus to the development of RES in Kazakhstan.

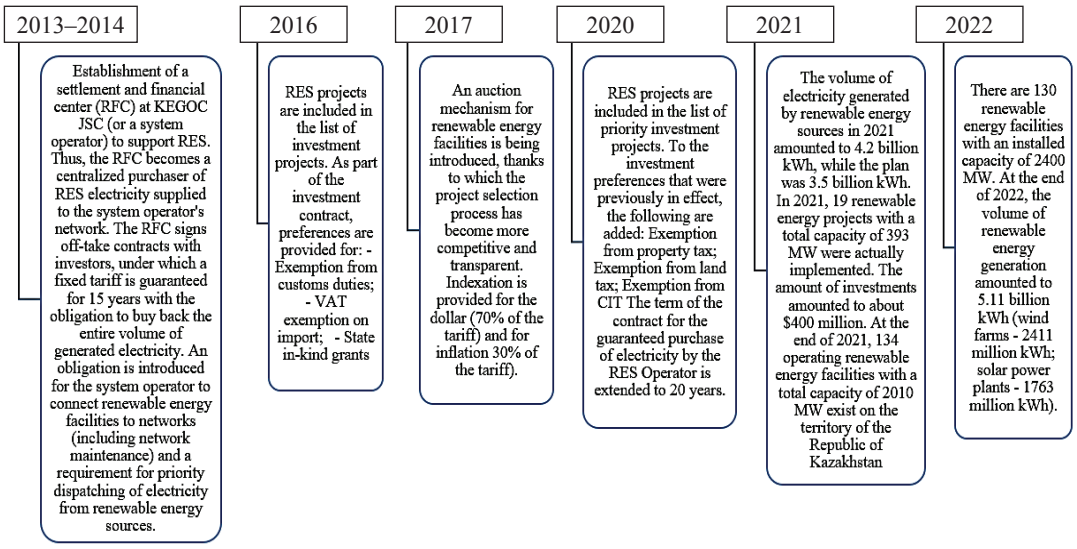

Figure 3 – Chronology of RES development in the Republic of Kazakhstan

Note: Compiled by the authors based on sources [24].

According to PwC estimates, at least 628.5 billion tenges have been spent on the construction of renewable energy sources since 2011. Considering the impact of changes in investment volumes for RES by type, it should be noted that there has been a decrease in the share of electricity from hydroelectric power plants by 12% over 6 years. The share of electricity from wind power plants increased 6 times, and from solar power plants – by 22 times. From this, it follows that the Republic of Kazakhstan puts more emphasis on the development of solar and wind power plants.

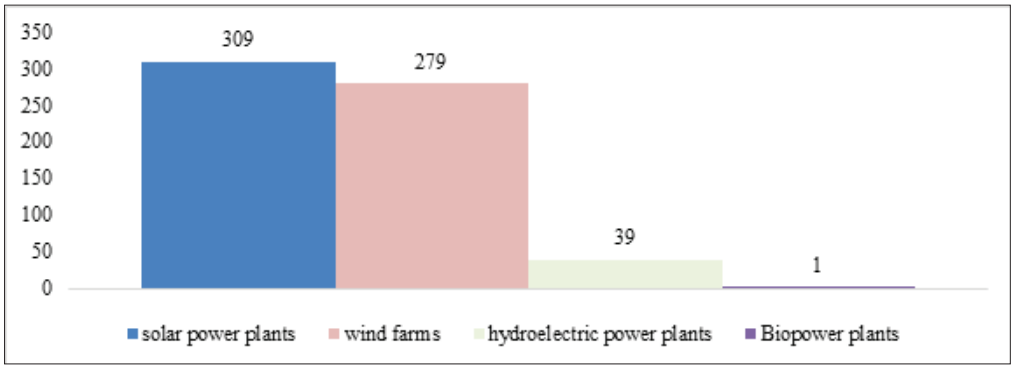

Figure 4 – Construction costs by types of power plants in billion tenges, 2011–2021

Note: Compiled by the authors based on sources [24].

According to the analysis of data from open sources, investors in RES in Kazakhstan mainly come from the energy sector, including the renewable energy sector, and the oil and gas sector. Investors from the RES sector mainly include subsidiaries of energy companies specializing in RES, as well as manufacturers of RES equipment.

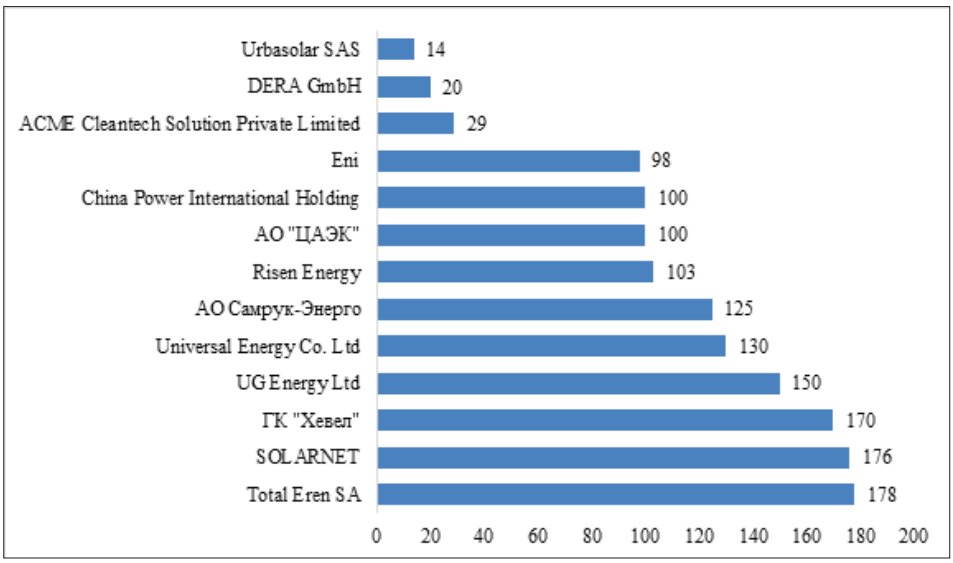

Figure 5 – Investors of large and medium
operating RES (SPP and WPP) in Kazakhstan, in MW*

Note: Compiled by the authors based on sources [24].

Kazyna Capital Management manages 13 funds whose work is aimed at promoting the sustainable development of the national economy. At the end of 2017, the investment portfolio of Kazyna Capital Management JSC, equal to 66.1 billion tenges (202.8 million dollars): included 25 projects located in Kazakhstan, which cost 46.9 billion tenges (71% of the entire investment portfolio). The remaining 29% of the investment portfolio is formed by 34 projects in other countries. The largest number of projects invested by Kazyna Capital Management JSC is being implemented in the energy sector (22 projects) and the transport sector (7 projects) [22].

The participation of funds and institutional investors in such projects contributes to the implementation of Kazakhstan's strategy for the transition to a "green" economy, within which the head of state set the goal of bringing the share of alternative energy to 30% by 2030. Kazakhstan aims to increase the share of alternative energy to 50% by 2050, from the current figure of 1.3%. This will, of course, require tools, including green finance, to raise funds for new industries. These are green bonds, loans, subsidies, etc. They are usually concentrated in "green" funds, the number of which, for example, in Europe already exceeds 200 [25].

"Green" financing. To increase interest on the part of borrowers, the Rules for issuing "green" bonds on the AIFC Exchange were adopted. Eurasian Development Bank JSC acquired a stake in the Green Finance Center, thereby contributing to the promotion of green finance instruments at the regional level. In 2018, regional akimats issued government securities worth more than 110 billion tenges to implement green projects. Shymkent, Atyrau, and Astana became record holders. They issued securities in the amount of about 42 billion tenges. In early August 2018, at AIX, the Damu Fund, as part of an agreement with UNDP to reduce the risks of investing in renewable energy sources, registered and issued green coupon bonds for 200 million tenges with a maturity of 36 months. This offering was the first listing of securities that comply with the exchange's green bond rules and the first listing of green bonds in Kazakhstan. The funds raised will be placed in second-tier banks and microfinance organizations with the aim of further lending to small and medium-sized businesses implementing small-scale renewable energy investment projects as part of the Damu Fund's policy in the field of green bonds.

In August 2020, the Damu Entrepreneurship Development Fund successfully issued the first "green" bonds in Kazakhstan and Central Asia on the AIFC Exchange with a coupon rate of 11.75% per annum and a maturity of three years. In 2021, the funds raised through the issuance of bonds were used to finance the construction of a solar power plant in the Turkestan region [27].

Thus, opportunities for the development of green finance are expanding in Kazakhstan, which can help expand the potential of green industries, promote technological innovation, and create new growth conditions for businesses and the financial industry.

Table 4 – Issue of green bonds in Kazakhstan

Issuer	Output volume, tenge	Output volume (USD)	Date of placement	Maturity date	Conclusion of the external evaluation	Coupon rate (%)
EDB	20 billion	46828940	21.09.21	04.10.24	AKPA	10,5
ADB	3875505000	9074289	19.11.20	22.10.22	CICERO	10,12
ADB	10097018000	23641632	19.11.20	22.10.22	CICERO	10,1
JSC Entrepreneurship Development Fund Damu	200 million	469739	10.08.20	11.08.23	AIFC GFC Ltd	11,75
Overall volume:	34 172 523 000	80 014 600				
Note: Kazakhstan green bonds market, experience and best practice [27].						

Patents that matter for green growth. In order to ensure the necessary level of economic growth without creating additional environmental risks, special mechanisms have been launched in most countries. A number of intellectual property offices apply an accelerated procedure for the examination of developments and their patenting, thereby contributing to the fact that these technologies appear on the market as soon as possible. This means that environmental innovations can benefit the environment much faster. Since 2009, the United States and many EU countries have adopted a program to accelerate the consideration of patent applications for environmentally friendly technologies. The Green Technology Pilot Program is initially aimed at accepting patent applications related to environmental quality, energy conservation, the development of renewable energy sources or the reduction of greenhouse gas emissions, and considering them as a priority. Kazakhstan's intellectual property market is also showing positive results. The number of patents and developments in the field of environmental protection is increasing every year. In 2021, compared to 2017, it is 57% more. The total number of patents relevant for green growth is 2,750 patents, which is 7.6% of the total number of patents. The general situation of Patents that matter for green growth is illustrated in the figure 6.

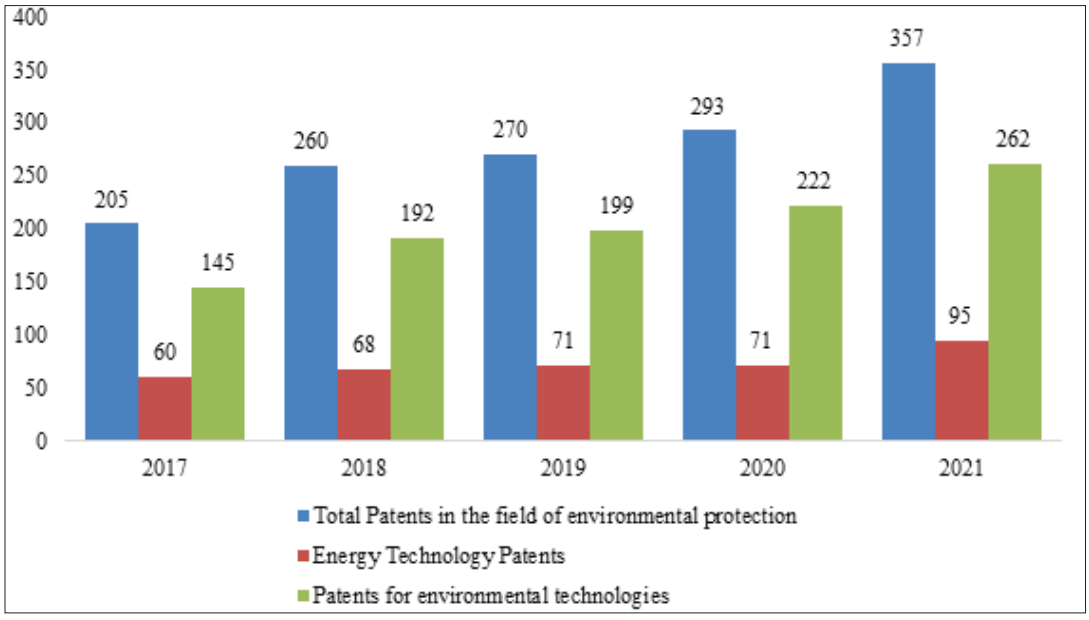

Figure 6 – Number of granted patents, 2017–2021

Note: Compiled by the authors.

The number of enterprises with environmental innovations. Starting in 2022, Kazakhstan will launch the "Global Program for Promoting Innovations in the Field of Clean Technologies and Entrepreneurship in SMEs to create Green jobs in Kazakhstan" (GCIP-Kazakhstan), the national executor of which is the International Center for Green Technologies and Investment Projects. The main goal of the project is to promote innovations in the field of clean technologies through an intersectoral and multi-level approach to reduce greenhouse gas emissions and create sustainable innovation ecosystems for small and medium-sized enterprises, as well as startups. The project provides a good opportunity and opens the way for enterprises engaged in environmental (green) innovations. Also, this indicator is comparable with the United Nations Sustainable Development Goals (Goal 9, Target 9.4 – "to modernize infrastructure and re-equip industrial enterprises to make them sustainable by 2030").

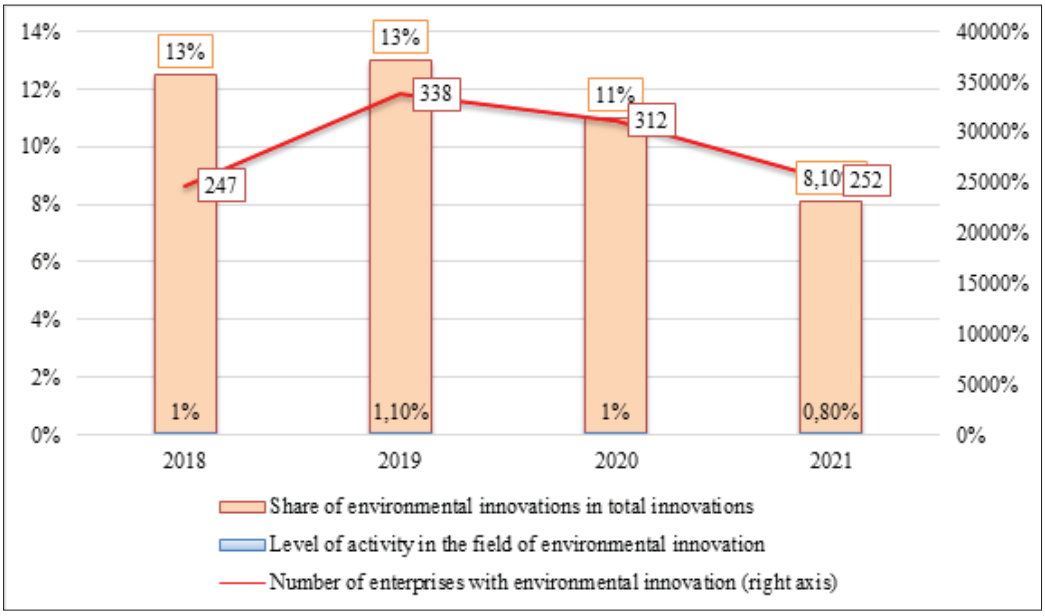

Figure 7 – The number of enterprises with environmental innovations, %, units, 2018–2021

Note: Compiled by the authors.

Kazakhstan continues to stimulate and encourage innovation and investment in green technologies, clean production of goods and services, and reduction of greenhouse gas emissions, as well as in the application of technologies resistant to climate change. To date, the country has achieved the following results: The share of environmentally friendly products in total production in 2018 is 0.3%, in 2020 – 0.7%, and in 2021 – 0.2%. The share of environmental innovations in the total number of innovations decreased from 12.7% to 8.5% from 2018 to 2021.

"Green" buildings' investments. To date, the foundations of the science of "green buildings" have already been created. "Green buildings" are a systematic continuation of the development of energy-efficient buildings, smart buildings, bioarchitecture buildings, healthy buildings, etc. In a global trend, the goal of zero carbon emissions is expected to push the global green building market to grow. In particular, by increasing the requirements for buildings. In such facilities, solutions are being implemented that reduce energy costs, increase the efficiency of employees, and in the long term – have a positive effect on the environment. This indicator is comparable to the UN SDG, Goal 11, Target 11 "….financial and technical assistance, in the construction of sustainable and sustainable buildings using local materials".

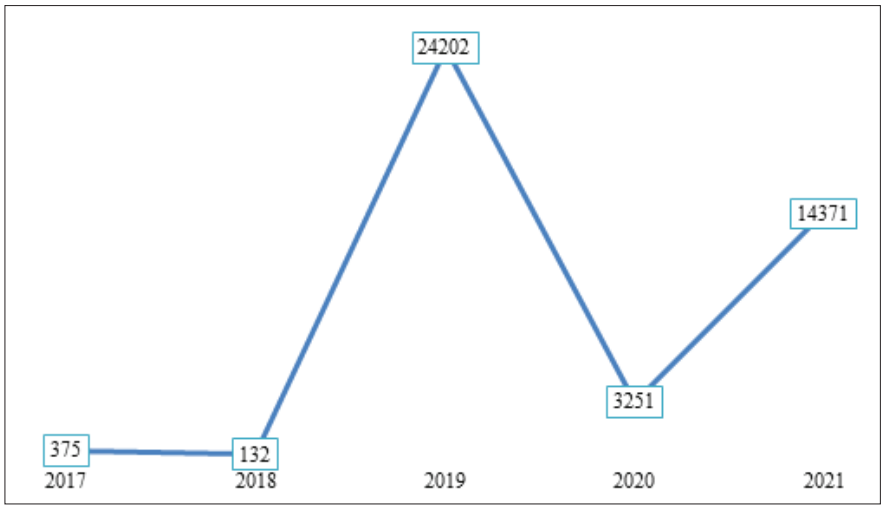

Figure 8 – “Green” construction investment, million tenge, 2017–2021

Note: Compiled by the authors based on source [28].

According to the figure, investments in “green” construction for 2017–2021 increased by 38 times and amounted to 14.4 billion tenges in 2021. The share of works performed on “green” construction in 2019 amounted to 0.8%, in 2020 – 0.1%, and in 2021 – 0.4% of the total investment in construction work. An analysis of investments in the “green” economy by direction showed that priority is given to renewable energy sources (RES), where there is a steady increase in investments until 2019.

The list of factors influencing the development of these criteria correlates with ESG factors and can be presented in the form of Figure 9.

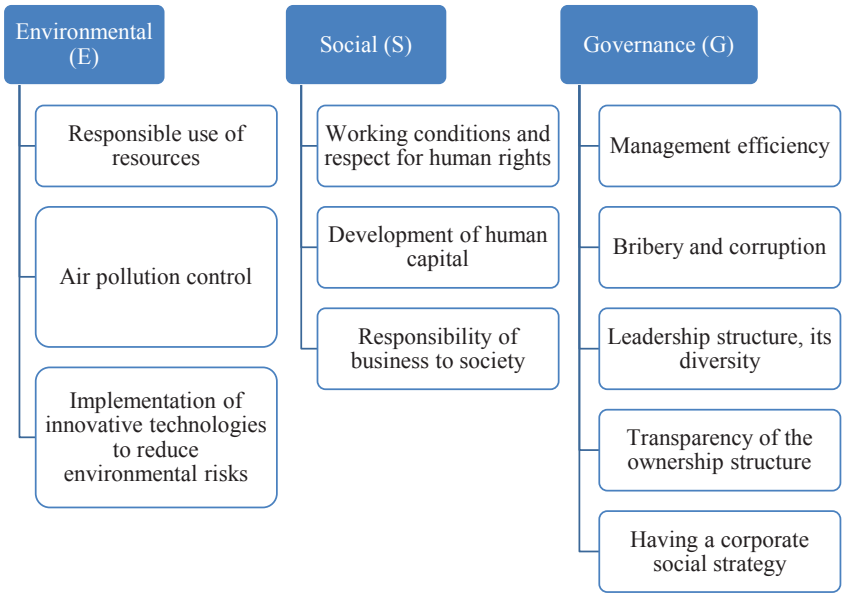

Figure 9 – Factors influencing the choice of objects of responsible investment

Note: Compiled by the authors.

As depicted in figure 9, there are the factors stimulating and limiting “green” investments and “green” growth. They singled out the key role of the state in stimulating “green” investments.

According to the results of the model (table 6), the level of investment in the green economy is influenced by energy variables and the level of GDP: a 1% change in the level of energy intensity leads to a decrease in investment by 0.67%, and GDP growth to 0.27% growth investment.

Table 5 – Assessment of the influence of the identified factors on the change in investments in the green economy

The growth of the factor by one cause:	Change in investment volume
Energy intensity level (MJ/$2011 PPP GDP)	- 0,67
Energy use kg. AD per 1 thousand GDP	+ 0,034
GDP per AD	+0,27

It follows from the model that GDP growth leads to an increase in costs for the green economy, and the growth of energy intensity leads to a decrease, which may be due to a decrease in incentives for improving technologies.

Conclusion

Based on the analysis, an assessment was made of the level of investment in the green economy of Kazakhstan. Thus, the assessment of the required level of the total investment for Kazakhstan was 0.7% of GDP and in value terms 500 billion tenges annually against the current 302 billion in general, while the difference between the existing level and the required level is 198 billion tenges per year.

In conclusion, it is important to note the fact of weak interest of second-tier banks in the transition to a green economy. This is due to the low involvement of the regulators of the Republic of Kazakhstan in the international agenda of green finance. In our opinion, banks do not have such requirements in regulatory documents. Also, the lack of interest among our financial sector players in borrowing abroad plays an important role. Because in global markets, sustainability issues are playing an increasingly important role when making decisions about buying bonds or lending. The participants in the country's financial market have more urgent and complex problems, from their own point of view.

REFERENCES

1 Official site «GEFF in Kazakhstan». URL: https://ebrdgeff.com/kazakhstan/ru/the-facility/ (дата обращения: 22.09.2022)

2 Проект Страновой стратегии по Казахстану 2022–2027. URL: https://www.ebrd.com (дата обращения: 22.09.2022)

3 Mishulina S.I. «Green» Investments as an Element of the Mechanism of Greening the Regional Economy // Sochi Journal of Economy. 2019. No. 13(2), pp. 155–164.

4 Данилов Ю.А. Современное состояние глобальной научной дискуссии в области финансового развития // Вопросы экономики. – 2019. – № 3. – С. 29–47.

5 OECD. Policy Framework for Investment. 2015 Edition. – OECD Publishing. Paris, 2015, 136 p. DOI: http://dx.doi.org/10.1787/9789264208667-en.

6 Gerlagh R. A climate-change policy induced shift from innovations in carbonenergyproduction to carbon-energy saving // Energy Economics. 2008. No. 30. P. 425–448.

7 Carraro C., Massetti E., Nicita L. How Does Climate Policy Affect Technical Change? An Analysis of the Direction and Pace of Technical Progress in a Climate-Economy Model // Fondazione ENI Enrico Mattei, Notadi Lavoro. 2009, No. 08.

8 Carraro C., De Cian E., Tavoni M. Human Capital Formation and Global Warming Mitigation: Evidence from an Integrated Assessment Model. Munich: CESifo Group, 2009, no. 27.

9 Пастернак А.А. Развитие возобновляемых источников энергии: сравнение основных показателей на примере Казахстана и США // Экономика. Стратегия и практика. – 2014. – № 2(30). – С. 105–108.

10 Варавин Е.В., Козлова М.В. Оценка развития зеленой экономики в Республике Казахстан // Развитие региона. – 2014. – № 5(4). – С. 1282–1297.

11 Нургалиева К.О. Зарубежный опыт трансформации традиционной экономической системы в зеленую экономику // Статистика, учет и аудит. – 2018. – № 3(70). – С. 119–123.

12 Шамуратова Н.Б., Жетесова М.Т., Тастанбекова К.Н., Нурланова Н.Н. Рост экономики Казахстана через призму управления природными ресурсами // Вестник Национальной академии наук Республики Казахстан. – 2015. – № 1(16). – С. 143–148.

13 Казбеков Б.К. Зеленая экономика: проблемы, пути и механизмы построения в Казахстане // Вестник КазНУ. Серия экологическая. – 2013. – № 2(38). – С. 67–74.

14 Green Finance and Investment. URL: https://www.oecd-ilibrary.org/environment/green-finance-and-investment_24090344 (дата обращения: 10.10.2022)

15 G20 Green Finance Synthesis Report. P.3. URL: http://www.g20.utoronto.ca/2016/green-finance-synthesis.pdf (дата обращения: 10.10.2022)

16 Ситник А.А. «Зеленые» финансы: понятие и система // Актуальные проблемы российского права. – 2022. – № 17(2). – С. 63–80. https://doi.org/10.17803/1994-1471.2022.135.2.063-080

17 Arkhipova V. «Green Finance» as Recipe for Solving Global Problems // HSE Economic Journal. 2017, vol. 21, no. 2, pp. 312–332.

18 Зеленая экономика: реалии и перспективы в Казахстане. URL: https://sk.kz (дата обращения: 23.10.2022)

19 Официальный сайт Стратегия "КАЗАХСТАН–2050". URL: https://strategy2050.kz/ru/news/kak-razvivaetsya-zelenoe-finansirovanie-v-kazakhstane/ (дата обращения: 09.10.2022)

20 Об инвестиционной деятельности в Республике Казахстан. URL: https://stat.gov.kz/official/industry/157/publication (дата обращения: 06.10.2022)

21 Анализ рынка электроэнергетической отрасли Казахстана. Июнь 2022 года. URL: https://www.samruk-energy.kz/ru/press-center/analytical-review (дата обращения: 10.11.2022)

22 Официальный сайт информационного ресурса Капитал. URL: https://kapital.kz/economic/75628/investitsii-v-zelenuyu-ekonomiku-sostavili-80-2-mlrd-tenge.html (дата обращения: 10.11.2022)

23 Официальный сайт Самрук-Энерджи. URL: https://www.samruk-energy.kz/ru/press-center/analytical-review (дата обращения: 10.10.2022)

24 Официальный сайт информационного ресурса PwC. URL: https://www.pwc.com/kz/en/publications/esg/may-2021-rus.pdf (дата обращения: 02.12.2022)

25 Официальный сайт информационного ресурса Информбюро. URL: https://www.inform.kz/ru/zelenye-investicii-v-kazahstane_a3733809 (дата обращения: 10.10.2022)

26 The Ecolomist, 2022. URL: https://ecolomist.kz/zelenoe-finansirovanie-v-kazahstane/ (дата обращения: 10.12.2022)

27 Бюро национальной статистики Агентства по стратегическому планированию и реформам Республики Казахстан. URL: https://www.stat.gov.kz/ (дата обращения: 10.12.2022)

28 Суйеубаева С.Н., Варавин Е.В., Козлова М.В., Бетимбаева И.Б. Инвестиции в возобновляемые источники энергии как рычаг достижения целей устойчивого развития Республики Казахстан // Вестник университета «Туран». – 2022. – № 2(94). – С. 89–99. URL: https://doi.org/10.46914/1562-2959-2022-1-2-89-99

REFERENCES

1 Official site «GEFF in Kazakhstan». URL: https://ebrdgeff.com/kazakhstan/ru/the-facility/ (data obrashhenija: 22.09.2022). (In English).

2 Proekt Stranovoj strategii po Kazahstanu 2022–2027. URL: https://www.ebrd.com (data obrashhenija: 22.09.2022). (In Russian).

3 Mishulina S.I. «Green» Investments as an Element of the Mechanism of Greening the Regional Economy // Sochi Journal of Economy. 2019. No. 13(2), pp. 155–164. (In English).

4 Danilov Ju.A. (2019) Sovremennoe sostojanie global'noj nauchnoj diskussii v oblasti finansovogo razvitija // Voprosy jekonomiki. No. 3. P. 29–47. (In Russian).

5 OECD. Policy Framework for Investment. 2015 Edition. – OECD Publishing. Paris, 2015, 136 p. DOI: http://dx.doi.org/10.1787/9789264208667-en. (In English).

6 Gerlagh R. (2008) A climate-change policy induced shift from innovations in carbonenergyproduction to carbon-energy saving // Energy Economics. No. 30. P. 425–448. (In English).

7 Carraro C., Massetti E., Nicita L. (2009) How Does Climate Policy Affect Technical Change? An Analysis of the Direction and Pace of Technical Progress in a Climate-Economy Model // Fondazione ENI Enrico Mattei, Notadi Lavoro. No. 08. (In English).

8 Carraro C., De Cian E., Tavoni M. (2009) Human Capital Formation and Global Warming Mitigation: Evidence from an Integrated Assessment Model. Munich: CESifo Group, no. 27. (In English).

9 Pasternak A.A. (2014) Razvitie vozobnovljaemyh istochnikov jenergii: sravnenie osnovnyh pokazatelej na primere Kazahstana i SShA // Jekonomika. Strategija i praktika. No. 2(30). P. 105–108. (In Russian).

10 Varavin E.V., Kozlova M.V. (2014) Ocenka razvitija zelenoj jekonomiki v Respublike Kazahstan // Razvitie regiona. No. 5(4). P. 1282–1297. (In Russian).

11 Nurgalieva K.O. (2018) Zarubezhnyj opyt transformacii tradicionnoj jekonomicheskoj sistemy v zelenuju jekonomiku // Statistika, uchet i audit. No. 3(70). P. 119–123. (In Russian).

12 Shamuratova N.B., Zhetesova M.T., Tastanbekova K.N., Nurlanova N.N. (2015) Rost jekonomiki Kazahstana cherez prizmu upravlenija prirodnymi resursami // Vestnik Nacional'noj akademii nauk Respubliki Kazahstan. No. 1(16). P. 143–148. (In Russian).

13 Kazbekov B.K. (2013) Zelenaja jekonomika: problemy, puti i mehanizmy postroenija v Kazahstane // Vestnik KazNU. Serija jekologicheskaja. No. 2(38). P. 67–74. (In Russian).

14 Green Finance and Investment. URL: https://www.oecd-ilibrary.org/environment/green-finance-and-investment_24090344 (data obrashhenija: 10.10.2022). (In English).

15 G20 Green Finance Synthesis Report. P.3. URL: http://www.g20.utoronto.ca/2016/green-finance-synthesis.pdf (data obrashhenija: 10.10.2022). (In English).

16 Sitnik A.A. (2022) «Zelenye» finansy: ponjatie i sistema // Aktual'nye problemy rossijskogo prava. No. 17(2). P. 63–80. https://doi.org/10.17803/1994-1471.2022.135.2.063-080. (In Russian).

17 Arkhipova V. (2017) «Green Finance» as Recipe for Solving Global Problems // HSE Economic Journal, vol. 21, no. 2, pp. 312–332. (In English).

18 Zelenaja jekonomika: realii i perspektivy v Kazahstane. URL: https://sk.kz (data obrashhenija: 23.10.2022). (In Russian).

19 Oficial'nyj sajt Strategija "KAZAHSTAN–2050". URL: https://strategy2050.kz/ru/news/kak-razvivaetsya-zelenoe-finansirovanie-v-kazakhstane/ (data obrashhenija: 09.10.2022). (In Russian).

20 Ob investicionnoj dejatel'nosti v Respublike Kazahstan. URL: https://stat.gov.kz/official/industry/157/publication (data obrashhenija: 06.10.2022). (In Russian).

21 Analiz rynka jelektrojenergeticheskoj otrasli Kazahstana. Ijun' 2022 goda. URL: https://www.samruk-energy.kz/ru/press-center/analytical-review (data obrashhenija: 10.11.2022). (In Russian).

22 Oficial'nyj sajt informacionnogo resursa Kapital. URL: https://kapital.kz/economic/75628/investitsii-v-zelenuyu-ekonomiku-sostavili-80-2-mlrd-tenge.html (data obrashhenija: 10.11.2022). (In Russian).

23 Oficial'nyj sajt Samruk-Jenerdzhi. URL: https://www.samruk-energy.kz/ru/press-center/analytical-review (data obrashhenija: 10.10.2022). (In Russian).

24 Oficial'nyj sajt informacionnogo resursa PwC. URL: https://www.pwc.com/kz/en/publications/esg/may-2021-rus.pdf (data obrashhenija: 02.12.2022). (In Russian).

25 Oficial'nyj sajt informacionnogo resursa Informbjuro. URL: https://www.inform.kz/ru/zelenye-investicii-v-kazahstane_a3733809 (data obrashhenija: 10.10.2022). (In Russian).

26 The Ecolomist, 2022. URL: https://ecolomist.kz/zelenoe-finansirovanie-v-kazahstane/ (data obrashhenija: 10.12.2022). (In English).

27 Bjuro nacional'noj statistiki Agentstva po strategicheskomu planirovaniju i reformam Respubliki Kazahstan. URL: https://www.stat.gov.kz/ (data obrashhenija: 10.12.2022). (In Russian).

28 Sujeubaeva S.N., Varavin E.V., Kozlova M.V., Betimbaeva I.B. (2022) Investicii v vozobnovljaemye istochniki jenergii kak rychag dostizhenija celej ustojchivogo razvitija Respubliki Kazahstan // Vestnik universiteta «Turan». No. 2(94). P. 89–99. URL: https://doi.org/10.46914/1562-2959-2022-1-2-89-99. (In Russian).

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ҚАЗАҚСТАН КОНТЕКСТІНДЕГІ ЖАСЫЛ ҚАРЖЫ: НАРЫҚҚА ШОЛУ

Аңдатпа

«Тұрақты даму» концепциясының қабылдануы тұрақты мақсаттарға жету жолдарын іздестіру, экономикалық қатынастарды қайта құру бағыттарын анықтау, «жасыл экономика» және «жасыл қаржы» атты жаңа терминдердің пайда болуына әкелді. «Жасыл» экономикаға және «жасыл» қаржыландыруға көшу арқылы Қазақстан Үкіметі маңызды міндет – жаңа қаржы жүйесін дамытуды жүзеге асыра алады. Сондай-

ақ жасыл жобаларды қаржыландыру қоғамның өмір сүру сапасын жақсартуға ықпал етіп, табиғи ресурстар мен қоршаған ортаны сақтауға мүмкіндік береді. Ғылыми мақаланың негізгі мақсаты – бүгінгі таңда Қазақстанның «жасыл» экономикасын қаржыландыру үшін инвестиция көздерін анықтау. Қазақстандағы жасыл қаржының ағымдағы жай-күйін бағалау және жасыл қаржының дамуындағы проблемаларды анықтау үшін зерттеудің жалпы ғылыми әдістері, деректерді статистикалық, себеп-салдарлық және салыстырмалы талдаудың сандық әдістері пайдаланылды. Зерттеу нәтижелері Қазақстанның "жасыл" экономикаға көшу тұжырымдамасында тиісті Инвестициялар жылына шамамен 3–4 миллиард долларға немесе ЖІӨ-нің шамамен 1%-на бағаланатынын көрсетеді. Сондай-ақ, жасыл жобалар Ақмола, Атырау, Қостанай, Жамбыл облыстарында белсенді дамып келеді. Зерттеу нәтижелері экономиканың «жасыл» трансформациясы жауапты инвестиция (PRI) қағидаттарын жүзеге асырмайынша мүмкін емес екенін көрсетті. Зерттеудің нәтижелері мен ұсыныстары жасыл қаржыландыру индустриясымен айналысатын кәсіпкерлер мен бизнес субъектілеріне немесе Қазақстандағы жасыл инфрақұрылымды дамытуға жауапты мемлекеттік органдарға пайдалы болады.

Тірек сөздер: «жасыл» экономика, қаржы, жасыл облигациялар, несиелеу, жасыл инвестициялар.

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ЗЕЛЕНЫЕ ФИНАНСЫ В КОНТЕКСТЕ КАЗАХСТАНА: ОБЗОР РЫНКА

Аннотация

Принятие концепции «устойчивое развитие» обусловило необходимость поиска путей достижения устойчивых целей, определения направлений трансформации экономических отношений, появления нового термина – «зеленая экономика» или «зеленые финансы». Через переход к «зеленой» экономике и «зеленому» финансированию Правительство Казахстана сможет выполнить важную задачу – развитие новой финансовой системы. Также финансирование зеленых проектов способствует повышению качества жизни общества, направлено на сохранение природных ресурсов и окружающей среды. Основной целью научной статьи является определение источников инвестиций для финансирования «зеленой» экономики Казахстана на сегодняшний день. Были использованы общенаучные методы исследования, количественные методы статистического, причинно-следственного и сравнительного анализа данных для оценки текущего состояния зеленых финансов в Казахстане и выявления проблем с развитием зеленых финансов. Результаты исследования показывают, что в Концепции перехода Казахстана к «зеленой» экономике соответствующие инвестиции оцениваются примерно в 3–4 миллиарда долларов, или около 1% ВВП в год. Также наиболее активно зеленые проекты развиваются в Акмолинской, Атырауской, Костанайской, Жамбылской областях. Результаты исследований свидетельствуют о том, что «зеленая» трансформация экономики невозможна без реализации принципов ответственного инвестирования (PRI). Выводы и рекомендации исследования будут полезны предпринимателям и хозяйствующим субъектам, занятым в индустрии зеленых финансов, или государственным органам, отвечающим за развитие зеленой инфраструктуры в Казахстане.

Ключевые слова: «зеленая» экономика, финансы, зеленые облигации, кредитование, зеленые инвестиции.