

**"GREEN" ECONOMY: REALITIES AND PROSPECTS
IN AGRICULTURE IN THE REPUBLIC OF KAZAKHSTAN**

**"ЖАСЫЛ" ЭКОНОМИКА: ҚАЗАҚСТАН РЕСПУБЛИКАСЫНЫҢ
АУЫЛ ШАРУАШЫЛЫҒЫНДАҒЫ ШЫНДЫҚТАР МЕН ПЕРСПЕКТИВАЛАР**

**«ЗЕЛЕНАЯ» ЭКОНОМИКА: РЕАЛИИ И ПЕРСПЕКТИВЫ В СЕЛЬСКОМ ХОЗЯЙСТВЕ
РЕСПУБЛИКИ КАЗАХСТАН**

ZH.S. BULKHAIROVA^{*1}

PhD, Associate Professor

A.O. ALIEVA²

Master of Economic Sciences

¹*S. Seifullin Kazakh Agro Technical University, Nur-Sultan, Kazakhstan,*

²*K. Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan*

**corresponding author e-mail: honeyzhu@mail.ru*

Ж.С. БУЛХАИРОВА^{*1}

PhD докторы, қауымдастырылған профессор

А.Ө. ӘЛИЕВА²

экономика ғылымдарының магистрі

¹*С. Сейфуллин атындағы Қазақ агротехникалық университеті, Нұр-Сұлтан, Қазақстан*

²*Қ. Жұбанов атындағы Ақтөбе өңірлік мемлекеттік университеті, Ақтөбе, Қазақстан*

**автордың электрондық поштасы: honeyzhu@mail.ru*

Ж.С. БУЛХАИРОВА^{*1}

PhD, ассоциированный профессор

А.О. АЛИЕВА²

магистр экономических наук

¹*Казахский агротехнический университет им С. Сейфуллина, Нур-Султан, Казахстан*

²*Актюбинский региональный государственный университет им. К. Жубанова,*

Актөбе, Казахстан

**электронная почта автора: honeyzhu@mail.ru*

Abstract. The issues of "green" economy as a paradigm for the development of agricultural sector of the country's economy is analyzed. The main elements of the transition to ecosystems are summarized: price regulation in accordance with the basic principles of sustainable development of rural areas; reforming and developing an "ecological" tax system; sustainable public investments and their increase in natural capital; socially oriented strategies. The ways of implementing the concept of "green" economy: general economic and technological are shown. The main objectives of its development as significantly reducing the adverse impact on the environment and risks of environmental degradation are determined, as well as the possibilities and prerequisites for expanding its sphere in agriculture of the republic. It is noted that several projects have already been implemented in Kazakhstan that fully meet environmental criteria. It is indicated that in rural areas there are necessary conditions for production process of organic products. Data on organic producers of the Republic of Kazakhstan and other types of operators in the world are presented. As a result of the study, it was concluded that the ultimate goal of green economy is to create living conditions that optimize the interaction of its financial, environmental and social components, the relationship with the most advanced agricultural enterprises, the development of environmental management support programs that stimulate the formation of innovative networks and cluster structures in rural areas. The main principle of "green" economy is the expansion of organic agriculture sector, introduction of certificates for environmentally friendly products and increase in their exports.

such technologies are not sufficiently developed in Kazakhstan.

As a result, many authors identify the main elements of the transition to a "green economy":

- price regulation in accordance with the main principles of sustainable rural development and also includes the natural resources' monetary valuation and a tax on environmental damage;
- reform and development of the "environmental" tax system, aimed at paying attention to the tax on environmental pollution;
- sustainable public investment and increased public investment in natural capital to restore, conserve and potentially increase natural capital;
- social strategies developed to ensure compliance with current or proposed economic strategies for social development [2].

All of the above will stimulate the development of the country's regions, promote social stability and its further growth, create new jobs in the "green economy" sector, increase the country's economic potential and the agriculture growth.

Material and methods of research.

Evaluation of "green" economy Concept is a necessary condition for stimulating sustainable ecological and economic regional development in the country. "Green" economy concept will become a new global financial model for sustainable development, which will be reflected in several scientific and theoretical fields.

The first group of researches in "green" economy field can be described as a general economic approach. According to I.A. Zalygina, V.I. Klyuchenovich, K.Yu. Podvorskaya, today, the "green" economy is increasingly developing for the whole world, as it is a ref-

erence to a new type of relationship in terms of living standards and the emergence of a new social paradox. According to the technological approach presented by K.A. Berdenova and M.S. Egorova, "green" economy implies the transition of all industries to technologies that will ensure the creation of environmentally friendly industrial and food products.

The next model is the model of V.S. Bochko and M. Johnson, which includes a civilized or moral-technological approach. The main goal is the formation of an environmentally friendly and ecologically environment, transformation to a new and more efficient stage of the country's economic development, including the transformation to "green" technologies in all fields of human activity, including agriculture.

In the course of writing the article, various sources of literature were used: scientific literature, analytical materials; abstract-logical, systematic approaches, economic and statistical methods of data processing and analysis, methods of comparative analysis, inductive and deductive methods.

Results and their discussion. Today, one of the priorities in the state regulation field is agriculture development, namely, the introduction of a strategic steps number for the rural areas development. And as a result, we can see that the foreign experience of introducing "green" technologies in agriculture shows significant efficiency, namely, traditional types of production organization in agriculture and less energy-efficient management methods are beginning to take a back seat.

The importance of developing "green" economy in agriculture is determined by the tasks to be solved, which are presented in figure 1 [Ik.2].

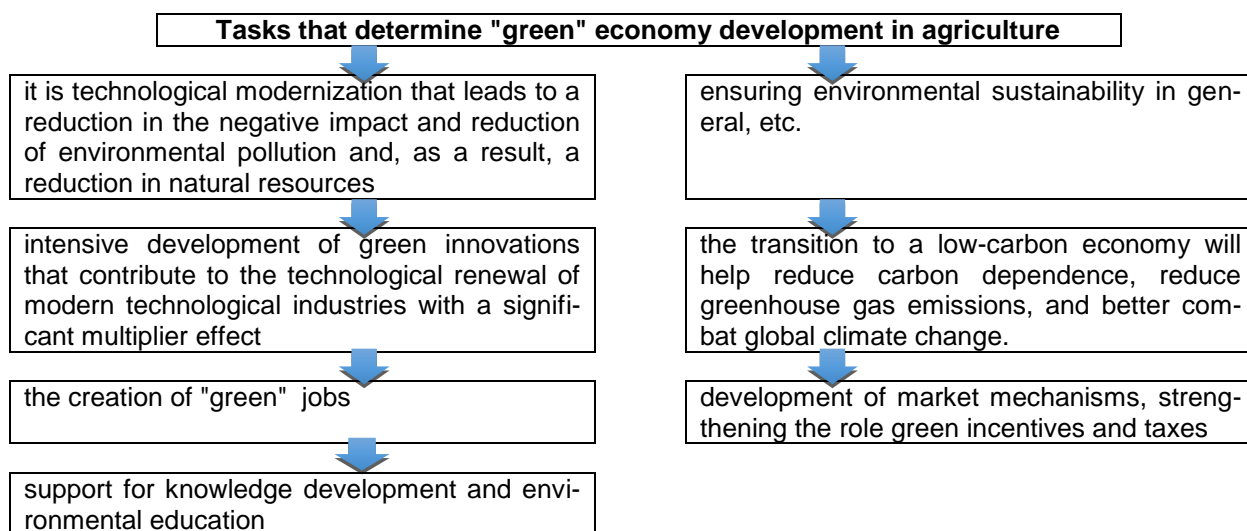


Figure 1 -Tasks that determine "green" economy development in agriculture [Ik.2]

It is today that "green" technologies are increasingly being used in agriculture. As part of the transition to a "green economy" to stimulate the introduction of modern irrigation systems, subsidizing 10% of the interest rate on loans and leasing.

By 2022, it is planned to increase the acreage to 2 million hectares. At the same time, work will continue to reduce the area for water-intensive crops, such as rice and cotton.

To encourage farmers to adopt advanced greenhouse technologies, a special investment passport has been developed, which provides for the purchase of appropriate equipment systems and integrated solutions. Investment subsidies have been introduced with 30% reimbursement for the construction and expansion of greenhouse complexes. The market volume of greenhouse production increased by 2,4 times from 90 thousand tons to 216,9 thousand tons, and the area of greenhouse farms-by 2,1 times from 575,9 ha to 1236,7 ha.

Currently, out of 180,1 million hectares of pasture land, 106,2 million hectares (59%) have been watered. To stimulate the development of pasture lands, investment subsidies of up to 80% cost of creating water infrastructure have been introduced. In the period 2014-2019, 5,978 wells were built to water pastures, with a planned figure of 3,633 units.

Kazakhstan has unique opportunities and conditions for the introduction of a green economy in agriculture: vast territories, a favorable geopolitical situation, affordable financial and natural resources, the growth of an effective and affordable market for green technologies, and other factors. The most important segments of the economy that require reform from the point of applying view of the green development principles are the waste disposal sector, the energy sector and the water consumption sector [3].

Kazakhstan has already implemented several projects that fully meet the environmental criteria. For example, in the small village of Arnasay, 30 kilometers from Astana, a Center for "Green" Technologies appeared in 2015. It develops 35 innovative projects in the field of organic farming and resource conservation. 168 houses in the village use drip irrigation, 5 houses have pyrolysis furnaces. Arnasay has a year-round greenhouse where different heating sources are combined. In the summer, a children's tent camp worked in the village. The tents were lit by solar panels [4].

At the present stage of development, organic farming is gaining wide popularity, the development of which is also a significant step

in the transformation of agriculture to a "green" economy. In some regions of Kazakhstan, it is possible to note a fairly high share of private subsidiary farms and the availability of the necessary conditions for the production process based on the principles of organic farming, which can be of great importance for the "green" economy development in agriculture.

You must also include measures to control the development of organic agriculture by local authorities, which contributed to the growth of the agricultural production process, saving manpower in rural areas [5].

However, at this point in time there are no official statistics on agricultural producers who is involved in the organic production process, including organic farming. Though, in accordance with the Food and Agriculture Organization of the United Nations (FAO), in 2020 there are 29 producers and 19 processing enterprises on the market, mainly in the Akmola, Almaty and Kostanay regions [6].

According to FiBI survey, in 2018 year the largest share of organic land is located in Australia and is 35 687 799 hectares. As for Kazakhstan, in 2018 the area of organic agricultural land was 192 134 hectares, the organic share is 0.1% of the total organic land' volume. In the meantime, in terms of organic land areas, Kazakhstan is inferior to Australia – 35 687 799 hectares, China - 3 135 000 hectares, Spain - 2 246 475 hectares, Argentina-3 629 968 hectares and the United States of America – 2 023 430 hectares, Russia almost 63 times (606 975 hectares) [7].

And now let us analyze the statistics of organic producers and the rest of the world's operators. In accordance with the FiBL survey, in 2018, the number of organic producers in Kazakhstan is 63, and those who import organic products - 7 and exporters – 14. At the same time, Kazakhstan is ahead of the Russian Federation by 23 in terms of organic producers' number, but lags behind such countries as: Australia - 25 795 organic producers, Argentina - 1 366, Spain - 39 505, France - 41 632, the United States of America – 18 166 [8].

And to determine the effect of the green economy on agriculture, the authors conducted a survey using the Google form in August 2020. 163 people aged 18 to 60 years were surveyed, where 59,1% were young people aged 18-28 years. Among the respondents, 22,7% have higher education, 20,5% have incomplete higher education and 18,2% have secondary vocational education.

When conducting the survey, it was revealed that 36,8% know "what "green econo-

my" is", 36,4% - find it difficult to answer. In the course of the survey, answers were received to such a question as: "What do you see the disadvantages the current model of the economy in the country (to a large extent, and in most world countries), based on the extensive use of natural resources, including fossil fuels (coal, oil, gas), which many experts call the brown economy?" As a result, it was revealed: 31,8% respondents believe that the main drawback is environmental pollution and the destruction of flora and fauna, 25% decrease in the life quality and the population health due to accumulating environmental problems, 20,5% depletion of natural resources, 22,7%-preservation of the country's technological lag and its low competitiveness in the global space.

Also to the question: Do you believe in the need (expediency) of a gradual transition from a brown to "green" economy in agriculture, taking into account the reduction in the quantity and quality of natural resources, harm to the environment (excessive exploitation of nature) and the inability to ensure sustainable development and well-being of subsequent people generations. Replies have been received: 47,7% respondents said that the transition to a green economy will be uncontested for mankind because of the growing environmental

problems; 20,5% respondents - transition to a green economy is a very long process that will take several decades due to political conflicts in the world; 18,2% respondents - transition to a green economy appropriate, will be gradual and spread from developed countries to developing; 13,6% respondents - the transition to a green economy is almost impossible due to the unresolved contradictions between economic and environmental interests in the world and in society.

In the course of the study, it was revealed that the question: If you are for a "green" economy, what areas should be worked out first? As a result, the following results were obtained: 29,5% respondents said that it is necessary to optimize agriculture with the help of "green" technologies, while the rest believe that industrial and household waste management, energy efficiency and water disposal should be included.

The next question was: Would you like to work in agricultural enterprises, enterprises using "green" technologies and under what conditions, the answers to which are presented in figure 2. According to figure 2, 40,9% respondents believe that enterprises using "green" technologies bring huge environmental benefits and the respondent will be happy to work for them, even for less pay.



Figure 2-Would you like to work in agricultural enterprises, enterprises that use "green" technologies and under what conditions

The most recent and important question was the following: What measures are being taken by state and local authorities, housing and communal services, etc. Could you suggest in order to save money and use resources more efficiently in agriculture? And the results are presented in figure 3. Most of the respondents- 34,1% - believe that there are significant measures of support from the state authorities for the "green" economy in agriculture are the tax incentives introduction for agricultural enterprises and individuals using alternative types of energy; 34,1% - dissemination and promotion of successful experience

in the energy saving measures implementation.

Thus, one of the main tasks is the introduction of "green" technologies of the economy in the country's agriculture should be [9, 10]:

- elaboration of mechanisms for innovative agriculture development, improvement of scientifically based methods, forms and means of land policy implementation;
- financing of the most progressive agricultural enterprises, increased support for agricultural entrepreneurship in the scientific and technical sphere;



Figure 3 - Measures by state and local authorities, housing and communal services, etc., that can be proposed in order to save and use resources more efficiently in agriculture

- development of necessary programs to support the efficient and rational use of natural resources;
- use of agro-resource potential for production of environmentally friendly and organic food;
- active promotion of the using resource-saving and energy-saving technologies in the agriculture production process;
- rural development based on the improvement of financial and economic indicators through the development of systemic innovative development;
- stimulating the development of innovative projects with the use of "green" technologies in agriculture, including the development of small agribusiness and the creation of new jobs in rural areas.

Conclusions

Thus, a more active introduction of "green" technologies in Kazakhstan's agriculture will bring a significant socio-economic development that will meet the modern living conditions of the advanced countries of the world, improve the well-being of the population of rural areas, create infrastructure in rural areas, create effective infrastructure, reduce the existing environmental burden and sustainably increase environmental security.

Список литературы

[1] Оборин, М.С. Инновационные технологии "зеленой" экономики в сельском хозяйстве/ М.С.Оборин// Экономика. Налоги. Право. - 2019. -Т. 12. № 5. - С. 90-100.
 [2] Халил, М.Р.А. Концепция «зеленой экономики»: основные положения и перспективы, экономические механизмы и условия перехода к «зеленой экономике»/ М.Р.А. Халил // Молодой ученый. - 2018. - № 45 (231). - С. 98-100.
 [3] Байжолова, Р.А. Проблемы и перспективы формирования "зеленой экономики" в Казахстане/ Р.А.Байжолова, Ж.М.Орынка-

нова// Вестник университета Туран. - 2019. - № 1 (81). - С. 182-186.

[4] Как в Казахстане стимулируют переход к «зеленой экономике» [Электронный ресурс].- 2020.- URL: [https:// kapital.kz/ economic/88084/kak-v-kazakhstan-stimuliru-yut-perexhod-k-zelenoy-ekonomike.html](https://kapital.kz/economic/88084/kak-v-kazakhstan-stimuliru-yut-perexhod-k-zelenoy-ekonomike.html) (дата обращения: 08.01.2021).

[5] «Зелёная» экономика: как она развивается в мире и Казахстане? – [Электронный ресурс].- 2018.- URL: [https:// informburo.kz/stati/zelyonaya-ekonomika-kak-ona-gazvivatsya-v-mire-i-kazahstane.html](https://informburo.kz/stati/zelyonaya-ekonomika-kak-ona-gazvivatsya-v-mire-i-kazahstane.html) (дата обращения: 27.12.2020).

[6] Зеленая экономика: реалии и перспективы в Казахстане [Электронный ресурс].- 2018.-URL:<https://www.sk.kz/upload/iblock/3f5/3f5f8e2087688517bcc667eeebc82630.pdf> (дата обращения: 20.12.2020).

[7] FiBl& IFOAM. Organics International: The world of Organic Agriculture [Electronic resource].-2020.-URL: <https://orgprints.org/37222/9/willer-et-al-2020-full-document-2020-02-28-4th-corrigenda.pdf> (date of access: 27.12.2020).

[8] FiBl survey 2020, based on information from private sectors, certifiers, and governments [Electronic resource].- 2020.- URL: [https:// statistics.fibl.org/data-info-and-use.html](https://statistics.fibl.org/data-info-and-use.html) (date of access: 27.12.2020).

[9] Digilina, O.B. Regional aspects of dairy development industry in the Republic of Kazakhstan/ O.B. Digilina, N.D.Yesmagulova, T.H. Raskaliyev// Problems of AgriMarket. - 2017. - № 4. – PP. 125-132.

[10] Daribayeva, A. Public support of agri-industrial complex of Kazakhstan/ A.Daribayeva, Sh.Karbetova, K.Otyzbayeva// Problems of AgriMarket. - 2018. - № 1. - PP. 90-97.

References

[1] Oborin, M.S. Innovative technologies of "green" economy in agriculture / M.S. Oborin // Economics. Taxes. Law.- 2019. -Vol. 12.-No. 5.- PP. 90-100.

[2] Khalil, M.R.A. The concept of "green economy": basic provisions and prospects, economic mechanisms and conditions for transition to "green economy" / M.R.A. Khalil // Young scientist.- 2018.- No.45(231).-PP.98-100.

[3] Bayzholova, R.A. Problems and prospects of the formation of "green economy" in Kazakhstan / R.A. Bayzholova, Zh.M. Orynkayeva // Bulletin of the Turan University. - 2019. - No.1 (81). - PP. 182-186.

[4] How transition to "green economy" is stimulated in Kazakhstan [Electronic resource].- 2020.- URL: <https://kapital.kz/economic/88084/kak-v-kazahstane-stimuliruyut-perekhod-k-zelenoy-ekonomike.html> (date of access: 08.01.2021).

[5] "Green" economy: how is it developing in the world and in Kazakhstan? - [Electronic resource].-2018.-URL:<https://informburo.kz/stat/zelyonaya-ekonomika-kak-ona-razvivaetsya-v-mire-i-kazahstane.html> (date of access: 27.12.2020).

[6] Green Economy: Realities and Prospects in Kazakhstan [Electronic resource].-

2018.-URL: <https://www.sk.kz/upload/iblock/3f5/3f5f8e2087688517bcc667eeebc82630.pdf> (date of access: 20.12.2020).

[7] FiBI& IFOAM. Organics International: The world of Organic Agriculture [Electronic resource].-2020.-URL: <https://orgprints.org/37222/9/willer-et-al-2020-full-document-2020-02-28-4th-corrigenda.pdf> (date of access: 27.12.2020).

[8] FiBI survey 2020, based on information from private sectors, certifiers, and governments [Electronic resource].- 2020.- URL: <https://statistics.fibl.org/data-info-and-use.html> (date of access: 27.12.2020).

[9] Digilina, O.B. Regional aspects of dairy development industry in the Republic of Kazakhstan/ O.B. Digilina, N.D.Yesmagulova, T.H.Raskaliyev// Problems of AgriMarket. - 2017. - № 4. – PP. 125-132.

[10] Daribayeva, A. Public support of agri-industrial complex of Kazakhstan/ A.Daribayeva, Sh.Karbetova, K.Otyzbayeva// Problems of AgriMarket. - 2018. - № 1. - PP. 90-97.

Information about authors:

Bulkhairova Zhanna Serikovna; PhD, Associate Professor; S.Seifullin Kazakh Agro Technical University; Nur-Sultan, 010011 Zhenis avenue 62, Kazakhstan; e-mail: honeyzhu@mail.ru; <https://orcid.org/0000-0002-9744-4104>

Alieva Ardak Omirkalikyzy; Master of Economic Sciences; K.Zhubanov Aktobe Regional State University; Aktobe, 030000 Moldagulova ave. 34, Kazakhstan; e-mail: ardaknurbai@mail.ru; <https://orcid.org/0000-0002-1131-9565>

Авторлар туралы ақпарат:

Булхайрова Жанна Сериковна; PhD докторы, қауымдастырылған профессор; С.Сейфуллин атындағы Қазақ агротехникалық университеті; Нұр-Сұлтан қ., 010011 Жеңіс даңғылы 62, Қазақстан; e-mail: honeyzhu@mail.ru; <https://orcid.org/0000-0002-9744-4104>

Әлиева Ардақ Әмірқалиқызы; экономика ғылымдарының магистрі; Қ.Жұбанов атындағы Ақтөбе өңірлік мемлекеттік университеті; Ақтөбе қ., 030000 Ә.Молдағұлова даңғылы 34, Қазақстан; e-mail: ardaknurbai@mail.ru; <https://orcid.org/0000-0002-1131-9565>

Информация об авторах:

Булхайрова Жанна Сериковна; доктор PhD, ассоциированный профессор; Казахский агротехнический университет им.С.Сейфуллина; г.Нур-Султан, 010011 пр.Женис 62, Казахстан; e-mail:honeyzhu@mail.ru; <https://orcid.org/0000-0002-9744-4104>

Әлиева Ардақ Әмірқалиқызы; магистр экономических наук; преподаватель кафедры «Государственное управление, финансы и маркетинг»; Актобинский региональный государственный университет им. К.Жұбанова, г.Актобе, 030000 проспект А.Молдагуловой 34, Казахстан; e-mail: ardaknurbai@mail.ru; <https://orcid.org/0000-0002-1131-9565>.