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# The ecological and legal aspects of ensuring the food security of the republic of Kazakhstan under the transition to a "green" economy

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## Abstract

This paper presents the environmental aspects of the legal issues encountered in ensuring food security, under the transition to a "green" economy and the routes toward improving the existing legislation of Kazakhstan.

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## 1. Introduction

### 1.1 Defining the problem in relation to key scientific and practical problems

‘Strategy Kazakhstan 2050: the new political course of the established state’, which was conveyed by the President of the Republic of Kazakhstan, observes the ten global challenges of the 21<sup>st</sup> century. One of these is the global food security threat [1]. Awareness of the need to ensure food security did not come immediately, as in the first years of the independent and sovereign Kazakhstan, this question was not high on the agenda. Current economic reforms are concerned with questions related to the elimination of the state monopolies. As well as the creation of favourable conditions for the establishment of new forms of ownership and management in the

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agricultural sector. This was to put into place during the transition to a market economy.

In 2008, the United Nations Environment Programme (UNEP) called for a global "green, new deal". This initiative was one of nine crisis initiatives proposed by the UN Secretary General and the Chief Executives' Board of the UN in response to the financial crisis of 2008. At the 6th Conference of the Environment Ministers of the Asia-Pacific region (Astana, 2010), The Green Economy (Green Growth) initiative was adopted as a tool for sustainable development. Kazakhstan has assumed obligations toward implementing the principles of "green economy" in its national development strategy. At the 7th Ministerial Conference "Environment for Europe", ministers and heads of delegations from 44 countries, including Kazakhstan agreed "... to play a leading role in the transition to a green economy and make a significant contribution to the discussion of green economy, in the context of sustainable development and poverty reduction [2]. In this context, movement toward a green economy in Kazakhstan is to be achieved via the extensive existing system of environmental management. It is based in turn on the combination of two ideological concepts - "environmental protection and rational use of natural resources" and "sustainable development" [3].

### *1.2 The purpose of this research*

The purpose of this research was to make scientifically based suggestions and practical recommendations, which will improve the environmental and legal aspects of policies for ensuring the food security of the Republic of Kazakhstan. These policies are part of its transition toward becoming a "green" economy.

### *1.3 The literature review concerning this problem*

Scientists in Kazakhstan, the CIS and countries worldwide have researched issues surrounding environmental and legal aspects of ensuring food security under transition to the "green" economy.

John M. Reilly stated that one of the mantras of green growth is the need to move to renewable resources and away from depletable resources. It would seem self-evident that use of depletable resources is unsustainable whereas a resource that renews itself—a flow and not a stock that can be drawn down—could be used sustainably if harvest did not exceed regrowth or replenishment. But switching away from depletable resources simply because they are depletable is not necessarily consistent with sustainable growth [4]. Hasnelly, Hasrini Sari and Core have suggested that the resources of the green food product industry have a significant effect on customer value and customer satisfaction. Moreover, customer value and customer satisfaction have a significant effect on customer loyalty to green food products. Therefore, the implementation of a resource-based strategy by green food product companies will enable them to obtain a competitive advantage in the marketplace [5]. O.S. Kolbasova observes that the negative environmental impacts of agricultural food production can be separated into three groups. The first group includes the destruction of the natural environment harming agriculture itself: the loss of fertile land, as a result of over-exploitation, processes of soil erosion, salinization, waterlogging, pollution, destruction of water sources and contribution to desertification. The second group concerns damage not only to agriculture but also to other sectors of the economy. This comprises water pollution, destruction of forests, native forest communities and air pollution. The third group concerns direct threats to the lives and health of the public as consumers of agricultural products, as well as people directly engaged in agricultural production [6]. A.A. Kaigorodtsev considers elements in the formulation and implementation of a mechanism of "green revolution" in agriculture, stipulating: a) the introduction of new high-yielding varieties of domestic and foreign crops to increase yields; b) the mechanization and use of agricultural chemicals; c) the drainage and irrigation of land; d) restoring the fertility of degraded soils with humus and e) the stimulation of the environmental and economic systems of agriculture [7]. A.E. Bekturganov suggests that going "Green" in agriculture also requires organizational strength and the development of infrastructure in the rural areas of developing countries. Policy changes should be aimed, first of all, at reducing harmful environmental subsidies that create an inaccurate impression of the true costs of unsustainable agricultural production. Policies should target the reform of pricing and regulation, with the result that costs associated with environmental degradation, would be included in the price of food and commodities [8].

## 2. The main part

The state is interested in solving the problems of environmental protection and the rational use of natural resources in the production of competitive agricultural products. There is an interest in meeting environmental requirements; this demands the development of legal instruments for environmental protection in agricultural production. Failure to comply with standards and requirements of environmental legislation in the implementation of agricultural production can lead to huge losses to agriculture itself, as well as causing damage to the environment, human health and life [9]. In the transition to a "green" economy, agriculture should gradually shift to the efficient use and conservation of agricultural land, the use of less water-intensive crops, reducing agrochemical loads, giving priority to biological (organic) means and methods of plant protection, the integrated control of pests and anti-erosion technologies.

The study of the composition and structure of agricultural land has shown that the existing structure of Art. 97 Land Code requires clarification, since it does not give a clear indication of what lands are agricultural [10]. The phrase "provided for agricultural needs or intended for use for these purposes" is quite abstract. The current legislation does not convey the concept of agriculture or agricultural needs. It is proposed that paragraph 1 of article. 97 Land Code should read as follows: "Agricultural land means, land allocated on a permanent basis for farming and/or other agricultural needs"[10]. This definition is advantageous in that it clearly stipulates that the use of these lands for agricultural production is a priority. Second, the permanent characteristic of their usage is for agricultural needs. Third, the secondary use of these lands for other agricultural needs is to accommodate farm buildings and structures. The principle of the "special protection of farmland" requires further legislative protection. In this respect, it is proposed that Art. 4 Land Code is utilized as the basic principle of land legislation within the country.

The introduction of private ownership of agricultural land has not produced the desired effect in the development of a land market within the agricultural sector. Study of the practice of land legislation has shown that it is necessary to establish legal restrictions in the turnover of agricultural land. In particular, it is proposed that restrictions are imposed on the transfer of irrigated land or pastures, ensuring the needs of transhumance and semi-transhumance in private ownership. These restrictions are in place in other countries, for example, in Art. 16 of the Federal Law "On the regulation of agricultural land" suggests parts of agricultural land occupied by forests and trees and shrubs are not included in the forest fund. Neither is land which is underwater, part of a reclamation system, land-farm roads, forest belts, ravines, swamps and other non-agricultural land. These cannot be provided in a private property and are withdrawn from circulation [11].

Study of the current legislation of the Republic of Kazakhstan governing the fight against land degradation and desertification showed that the Land Code contains only general provisions concerning the protection of the earth. The Environmental Code contains no direct prescriptions and/or mechanisms for the rehabilitation of degraded lands [12]. In the Land Code there are no stipulated legal mechanisms for sustainable land use in the principles of land law (Article 3 of the Land Code). At the legislative level, the economic mechanisms for the promotion of the prevention of land degradation and desertification are not clearly stated. The principle of the ecosystem has not received sufficient legal definition. In connection with the above-indicated legal problems, we suggest the development of the project special law "On the protection of soils." Secondly, for the purposes of ensuring public access to information about the land, we proposed to the Land Code of Kazakhstan that reports (summary) on the state land fund are published every year in the official media. This will be an effective mechanism of controlling the activities of government and governance. Third, we need to prepare comments on the Land Code of Kazakhstan and the Environmental Code of Kazakhstan. This will ensure that the understanding of the law is accurate and that enforcement is uniform. Preparation of such an important document should be conducted by qualified collectives, which include specialists in different fields of knowledge.

In Kazakhstan practice has shown that agricultural producers do not often pass the procedure of obtaining environmental permits, many people do not know about the obligation for completion of this procedure. Failure to comply in the given area of social production the requirements of environmental legislation has his reasons. First, agricultural producers are often peasants and farmers who are not legal entities. The Ministry of the Environment is used to working with legal entities. Although, We would like to draw attention to the fact that a proportion of

agricultural producers are joint stock companies, business partnerships, cooperatives, which are also frequently not obtaining environmental permits. Secondly, there are also legal reasons, namely the lack of unique legislation prescribed by environmental and legal mechanisms within agricultural production. Third, in the current legislation the principle of "production of environmentally friendly agricultural production" is absent. Fourth, the state is pursuing quantity rather than quality, which suggests that it will take time for awareness of the problems discussed above and what's more there is a need for quick solutions. Meanwhile, under the conditions of the accession of Kazakhstan to the WTO, there is an issue of compliance for Kazakhstan's agricultural products, agricultural producers to the international standards and quality requirements. This issue is not quiescent and requires, above all, legal study and the implementation of the necessary measures.

The state's interest is in resolving environmental problems in the course of production of competitive agricultural products and consequently meeting environmental requirements. So this demonstrates the necessity for the development of legal instruments of environmental protection in agricultural production. Failure to comply with the standards and requirements of environmental legislation concerning agricultural production can lead to huge losses to agriculture itself; moreover this can cause damage to the environment, human health and life. Under the 'green economy' we understand that many sectors of the economy and institutional arrangements are present for improving the environment. There is a need for protecting environmental quality of life on a cost-effective and long-term basis, including indirect economic efficiency, poverty reduction and broad public access to clean energy, food, water, and sustainable land resources.

Indirect efficiency technologies for a green economy can be associated with a reduction in environmental and energy costs in the cost of production, reduction in health costs for people and animals, increasing working capacity and productivity. It may also increase tourism and the investment attractiveness of regions, reclamation of reclaimed land and purified water. It may increase the processing of local raw materials, including low-cost raw materials from waste. As well as improving transport and energy infrastructure, independent energy supply in remote regions, decrease in migration of rural population to urban areas; allow a synergistic cluster of green industries, synergistic technologies. This may improve fish farming and animal husbandry, improvement of the international division of labour and cooperation, etc.

"Green" agriculture is characterized by a shift toward the use of environmentally sustainable practices, such as the efficient use of water, the widespread use of organic and natural fertilizers, optimal tillage and integrated pest control. Creating a "green" agriculture requires tangible assets, financial investment, research and competency in diverse areas:

- management of soil fertility,
- more efficient and sustainable use of water for crops and livestock;
- efficient management of the health of plants and animals;
- the mechanization of farms.

### **3. Conclusion**

The transition to a green economy requires urgent and effective solutions to the problems of environmental security in the sphere of agricultural production. As indicated above, initiatives in Kazakhstan require the implementation of the provisions for the "green economy" in the national system of governance, which, in turn, should begin with the creation of a legal framework. This requires the revision of the existing regulatory requirements in important areas (investment, tax, budget, tariffs, etc.), the formation of systems of government regulation oriented toward the "green" economy, as well as reform of economic regulatory instruments in the context of the transition to a "green" economy.

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