
ENVIRONMENTAL SCIENCE

DOI: <https://doi.org/10.23649/jae.2019.3.11.8>

Voronina N.P.*

Kutafin Moscow State Law University (MSAL), Moscow, Russia

* Corresponding author (nvoroninamgua[at]yandex.ru)

Received: 24.08.2019; Accepted: 05.09.2019; Published: 16.09.2019

ON THE MODEL OF LEGAL REGULATION TO PROVIDE ENVIRONMENTAL SAFETY OF THE ARCTIC WITH GENOMIC TECHNOLOGY

Research article

Abstract

The article analyzes the legislation governing the implementation of economic activity using genomic technologies in the Arctic region, as well as regulatory legal acts aimed at ensuring the environmental safety of the Arctic region. Legal conflicts and gaps identified. Theoretical approaches to the definition of a model of legal regulation of ensuring environmental safety of the Arctic region using genomic technologies are formulated.

Keywords: model of legal regulation; environmental safety; Arctic region; genomic technologies.

Воронина Н.П.*

Московский государственный юридический университет имени О.Е. Кутафина (МГЮА), Москва, Россия

* Корреспондирующий автора (nvoroninamgua[at]yandex.ru)

Получена: 24.08.2019; Доработана: 05.09.2019; Опубликована: 16.09.2019

ОБ ОПРЕДЕЛЕНИИ МОДЕЛИ ПРАВОВОГО РЕГУЛИРОВАНИЯ ОБЕСПЕЧЕНИЯ ЭКОЛОГИЧЕСКОЙ БЕЗОПАСНОСТИ АРКТИЧЕСКОГО РЕГИОНА ПРИ ПРИМЕНЕНИИ ГЕНОМНЫХ ТЕХНОЛОГИЙ

Научная статья

Аннотация

В статье проанализировано законодательство, регулирующее осуществление хозяйственной деятельности с применением геномных технологий на территории Арктического региона, а также нормативные правовые акты, направленные на обеспечение экологической безопасности Арктического региона. Выявлены правовые коллизии и пробелы. Сформулированы теоретические подходы к определению модели правового регулирования обеспечения экологической безопасности Арктического региона при применении геномных технологий.

Ключевые слова: модель правового регулирования; экологическая безопасность; Арктический регион; геномные технологии.

1. Introduction

It has been a huge issue of the scientific literature that “the Arctic region is a unique ecological system, the natural heritage of the peoples of Russia, an indicator of climate processes, most noticeably experiencing the negative impact of global changes and where the dynamics of natural processes is slow, and the absorption capacity of natural objects is reduced, and consequently, the Arctic is a particularly vulnerable system” [1]. Therefore, environmental safety of the region is a strategic task of the Russian Federation.

2. Materials and methods

Working on this article the author has studied regulatory legal acts already in force as well as strategic planning documents aimed at ensuring the environmental safety of economic activities in the region, including those using genomic technologies, for the Arctic. Formal and logical, and comparative - legal methods made it possible to find theoretical approaches to a legal regulation model of environmental safety of the Arctic region while using genomic technologies.

3. Result and discussion

High level of anthropogenic impact on the nature and environment is inherent for the ecological situation in the Russian Federation. Unfortunately, there are numerous environmental problems in the Arctic region and their solution has an immense impact on the environment on the globe at large. The main environmental problems of the Arctic are as follows, to mention but a few:

- "unsatisfactory state of atmospheric air...,
- a threat to species diversity of flora and fauna ...,
- land degradation, transboundary air and ocean pollution,
- radioactive pollution of the environment" [2].

All measures to protect the nature of the Arctic (organizational, economic, environmental) are reflected in the rules of law, and thus, finding an efficient model of legal regulation of environmental safety of the region in question has become a relevant and urgent issue. The construction of this model should be based on a system-structural method. It is this method that will help to create an integrated structure of a complex and coordinated system of legislation in the domain of environmental safety and environmental management.

The President of the Russian Federation has set a task to develop genomic technology. Foreign experience shows that such technologies are successfully applied in agriculture, in particular, livestock breeding and fish farming.

In livestock including aquaculture the prospects for the development of genetic technologies are associated with the work of breeding and introducing new species of animals with improved quantitative and qualitative characteristics. Besides, these animal samples have increased resistance to diseases. Then, they are used as a source of high-quality and healthy food.

Another reason why genomic technologies are so important for the Arctic region is because the climate change is transforming the living conditions of aboriginal small peoples. These changes, often negative ones, are as follows:

- number of reindeers is decreasing dramatically and these animals are a part of this region's cultural heritage;
- grazing shortage and lack of fodder;
- animals become weaker and smaller in size;
- epizootics;

mass fading and extinction of species [3]. That is why, the transition to innovative development is urgent which implies new challenges for the Russian government and state, the harmonization of normative legal acts included. These acts should regulate the development of the Arctic region, the use of genomic technology, the traditional use of natural resources for indigenous minorities, the implementation of livestock breeding and, the last but not the least, food and environmental safety.

A model of legal regulation to ensure environmental safety of the Arctic with genomic technology is supposed to have two sides: internal and external. The inner side of the model of legal regulation is the content of legal regulation. The external side of the model of legal regulation is a set of its normative legal acts and legal norms [4].

To begin with, let's consider the external side of the model of legal regulation of environmental safety of the Arctic region while applying genomic technology. The author is of the opinion that this model is multi-level and multi-aspect and has some system and structure.

As for system, (horizontal construction of a model of legal regulation for environmental safety of the Arctic region when applying genomic technology) we mean a set of legal norms: 1) norms aimed at developing the Arctic region, 2) norms on the use of genomic technologies, 3) norms regulating pedigree animal husbandry and fish farming (aquaculture), 4) norms aimed at ensuring traditional nature management of local minorities, 5) norms for food safety; 6) norms aimed at ensuring environmental safety.

The aim of the norms of the first group is to develop the Arctic region. Among them are:

1. Strategy of the Development of the Arctic Zone of the Russian Federation and Ensuring National security for the period up to 2020;
2. Decree of the Government of the Russian Federation of March 7, 2000 No. 198 "On the Concept of State Support of Economic and Social Development of the Northern Areas";
3. Decree of the Government of the Russian Federation of April 21, 2014 No. 366 "On Approval of State Program of the Russian Federation "Socio-economic Development of the Arctic Zone of the Russian Federation".

However, these documents for strategic planning do not contain measures to develop and apply genomic technology in the Arctic region.

The second group of norms includes the rules to regulate genetic engineering. But only one article of the basic normative legal act of the second group, i.e. the Federal Law of May 5, 1996 № 86-FZ "On State Regulation in the Field of Genetic Engineering" mentions the use of genetic technology in agriculture. To be precise, Article 6 of this Law says that increasing efficiency of agriculture means improving state regulation of genetic engineering. Meanwhile, the development of genomic technologies required strategic planning and the Decree of the President of the Russian Federation of November 28, 2018 No. 680 "On the Development of Genetic Technologies in the Russian Federation" provided for federal scientific and technical program for 2019-2027 to be taken to accelerate the development of genetic technologies, including biotechnology for agriculture.

The above-mentioned Program was approved by the Russian Government Resolution No. 479 of April, 22 2019. The objectives of genomic technologies in agriculture is to strengthen Russia's food security by increasing efficiency of agriculture and enhancing competitiveness of Russian agricultural produce on the world markets. This requires development of genetic technology used for crops; genetic technologies used in animal husbandry and aquaculture; genetic technologies used in the production of vaccines for farm animals; technologies for microorganisms, animals and plants due to effective use of genetic resources of microbiomes of agrocenoses. It is believed that these measures create lines of highly productive farm animals that will be genetically resistant to the most common diseases. Their nutritional value will also be better. At the same time, these

documents do not indicate yet another goal of the development of genomic technologies, namely, ensuring the traditional way of life of indigenous peoples.

The norms of the third group regulate livestock breeding and fish farming and breeding of aquaculture. However, the study of the Federal Law of August 3, 1995 № 123-FZ "On Livestock Breeding" and the Federal Law of July 2, 2013. No. 148-FZ "On Aquaculture (fish farming) and on Amendments to Certain Legislative Acts of the Russian Federation" shows that there are no rules concerning the use of genomic technologies involved in these types of agricultural activities. Consequently, there is no way to construe a comprehensive legal framework for the use of genomic technologies in livestock breeding and fish farming. Nevertheless, the literature on this issue has repeatedly noted the need for early inclusion of the Russian Federation in the world process of application of genomic technologies in livestock breeding [5].

The fourth group contains norms aimed at ensuring food security. However, neither the Federal Law of December 29, 2006 No. 294-ФЗ "On Agriculture Development", nor "The Food Security Doctrine", approved by the Decree of the President of Russia of January 30, 2010 No. 120, nor the Decree of the Government of the Russian Federation of July 14, 2012. No. 717 "On the State Program for the Development of Agriculture and the Regulation of Agricultural Products, Raw Materials and Food Markets" does not provide for individual government support measures for people using genomic technologies in animal husbandry.

The fifth group includes norms aimed at ensuring the traditional environmental management of indigenous peoples. But also in the Federal Law of May 7, 2001 No. 49-ФЗ "On Territories of Traditional Nature Management of Indigenous Minorities of the North, Siberia and the Far East of the Russian Federation" as well as in "The Concept of Sustainable Development of the Indigenous Minorities of the North, Siberia and the Far East of the Russian Federation", approved by Decree of the Government of the Russian Federation of February 4, 2009 No. 132-r, there are no normative acts on the use of genomic technologies in reindeer husbandry as a way of ensuring the traditional way of life of indigenous peoples living in the Arctic zone.

The group six has norms aimed at ensuring environmental safety. Among them are the Federal Law of January 10, 2002 No. 7-ФЗ "On Environmental Protection", "The Fundamentals of State Policy in the Field of Environmental Development of the Russian Federation for the period until 2030", approved by the President of the Russian Federation of April 30, 2012, the State Program of the Russian Federation "Environmental Protection" for 2012 - 2020. However, these documents do not contain an assessment of the environmental and legal risks of using genomic technologies, as well as principles and mechanisms to ensure environmental safety when using the technologies in question.

Legal support for the environmental safety of the Arctic region, including genomic technology, should be comprehensive. But both the strategic planning documents and the legal norms analyzed above are far from perfect.

Presumably, although it is very likely that when setting the strategic objective for the development of genomic technologies, the state has not so far assessed any risks, nor has it determined any principles and tools to ensure the environmental safety of using genomic technologies in territories where the ecological system is unique.

By structure (vertical construction of a model of legal regulation) we mean a combination of federal, regional and local legal norms. Regulatory legal acts of the constituent entities of the Russian Federation and its municipal entities shall be based on objects of joint jurisdiction of the Russian Federation and regions of the Russian Federation and Federal Law of October 6, 2003 No. 131-ФЗ "On General Principles of Organization of Self-government". In addition, all of the above-mentioned regulatory legal acts (on agriculture, livestock, aquaculture, traditional wildlife management, environmental protection) also contain opportunities for regional legislators.

We believe that a comprehensive model of legal regulation of environmental safety can be implemented in the form of a special federal law. From a scientific point of view, it makes sense to develop and adopt a unified federal law "On special environmental conditions in the Arctic zone of the Russian Federation" [6] or in the form of a federal law "On the development of the Arctic zone of the Russian Federation". [7]. In our opinion, the second option is more preferable, since it is this special general law that will take into account all the features and characteristics of all types of activities, including the use of genomic technologies, and will ensure the environmental safety of the Arctic region.

4. Conclusions

Summing up, we figure out that the system and structure of legal regulation, which is the external side of the model of legal regulation of ensuring environmental safety of the Arctic region using genomic technologies, are still under research and require further systematic work to bring it into the line with the state policy in the field of genomic technology.

Conflict of Interest

None declared.

Funding

The reported study was funded by RFBR according to the research project № 18-29-14034

Конфликт интересов

Не указан.

Финансирование

Исследование выполнено при финансовой поддержке РФФИ в рамках научного проекта № 18-29-14034.

References

1. Боголюбов С.А. Право и спасение природы российской Арктики /Боголюбов С.А., Краснова И.О. // Актуальные проблемы российского права. – 2018. – № 6. – С. 178.
2. Шевчук А.В. О развитии основных направлений научных исследований Арктической зоны Российской Федерации /Шевчук А.В., Куртеев В. В. // Арктика и Север. – 2016. – № 22. – С. 76.
3. Южаков А. А. Ямальское оленеводство в XXI веке: генетический ресурс, культурное наследие или бизнес? /Южаков А. А. // Научный вестник Ямало-Ненецкого автономного округа. – 2017. – № 1. – С. 93.
4. Хабриева Т.Я. Миграция в России: о модели правового регулирования /Хабриева Т. Я. // Журнал российского права. – 2006. – № 7. – С. 3-12.
5. Арнаутовский И.Д. Племенному животноводству: инновационные, молекулярно-генетические, биотехнические технологии и современные кадры /Арнаутовский И.Д., Шарвадзе Р.Л., Гоголов В.А. и др. // Дальневосточный аграрный вестник. – 2017. – № 3. – С. 84-91.
6. Панкратова М. Е. Перспективы правового регулирования природопользования в Арктическом регионе России / Панкратова М. Е. // Известия высших учебных заведений. Арктический регион. – 2015. – № 1. – С. 26.
7. Никишин В.В. Экологическая безопасность в Российской Арктике: системный подход к правовому регулированию / Никишин В.В. // Российский юридический журнал. – 2017. – № 4. – С. 186.

References in English

1. Bogolyubov S.A. Pravo i spasenie prirody rossijskoj Arktiki [Law and the salvation of the nature of the Russian Arctic] /Bogolyubov S.A., Krasnova I.O. // Actual problems of Russian law. – 2018. – № 6. – P. 178. [in Russian]
2. Shevchuk A.V. O razvitií osnovnyh napravleníí nauchnyh issledovanií Arkticheskoj zony Rossijskoj Federacii [On the development of the main directions of scientific research of the Arctic zone of the Russian Federation] /Shevchuk A.V., Kurteev V.V. // Arctic and North. – 2016. – №. 22. – P. 76. [in Russian]
3. Yuzhakov A. A. YAmalskoe olenevodstvo v XXI veke: geneticheskij resurs, kul'turnoe nasledie ili biznes? [Yamal reindeer husbandry in the 21st century: genetic resource, cultural heritage or business?] / Yuzhakov A. A. // Scientific Bulletin of the Yamal-Nenets Autonomous Okrug. – 2017. – №. 1. – P. 93. [in Russian]
4. Khabrieva T.Ya. Migraciya v Rossii: o modeli pravovogo regulirovaniya [Migration in Russia: on a model of legal regulation] /Khabrieva T.Ya. // Journal of Russian Law. – 2006. – №. 7. – P. 3-12. [in Russian]
5. Arnautovsky I.D. Plemennomu zhitovnovodstvu: innovacionnye, molekulyarno-geneticheskie, biotekhnicheskie tekhnologii i sovremennye kadry [Breeding livestock: innovative, molecular genetic, biotechnological technologies and modern personnel] /Arnautovsky I.D., Sharvadze R.L., Gogulov V.A. and others // Far Eastern Agrarian Bulletin. – 2017. – №. 3. – P. 84-91. [in Russian]
6. Pankratova M.E. Perspektivy pravovogo regulirovaniya prirodopol'zovaniya v Arkticheskom regione Rossii [Prospects for the legal regulation of environmental management in the Arctic region of Russia] / Pankratova M.E. // News of higher educational institutions. Arctic region. – 2015. – №. 1. – P. 26. [in Russian]
7. Nikishin V.V. Ekologicheskaya bezopasnost v Rossijskoj Arktike: sistemnyj podhod k pravovomu regulirovaniyu [Environmental safety in the Russian Arctic: a systematic approach to legal regulation] /Nikishin V.V. // Russian Journal of Law. – 2017. – №. 4. – P. 186. [in Russian]