Greenland Environmental Laws at the Present Stage

D A Mokhorov, E V Voskresenskaya, K A Semenova, A S Kulik
Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia

semenova86@bk.ru

Abstract. The article considers the environmental legislation of Greenland as the autonomy of the Arctic state, its environmental policy and the main stages of its development. The authors describe the interaction of Greenland with Denmark and the European Union in the field of energy, water management, fishing, climate policy, and pollution control. The conclusion is drawn that, despite the fact that the environmental development of the autonomy started only at the end of the 20th century, significant improvements have already been made in the legal regulation of energy and water resources protection. The main areas of concern for Greenland are waste management and climate change. Despite the participation of Greenland in the Arctic and European Union programs and the development of its national policies to combat climate change, the level of greenhouse gas emissions from the rest of the world has a negative effect on the environmental situation in Greenland, thereby confirming the fears of researchers about the irreversibility of the Greenland glaciers melting and the general climate warming by more than 1.5 °C to the beginning of 2100. Nevertheless, despite large mineral deposits on its territory, the government of Greenland pursues the policy of sustainable environmental development.

1. Introduction

At the present stage, researchers are convinced that Greenland occupies an important place in the global and Arctic ecological system. A lot of research is devoted to the problem of melting glaciers in Greenland, and the problem of global warming. However, environmental status of Greenland is discussed in quite a limited number of publications. In order to understand the general environmental situation on the territory of the autonomy, it is necessary to consider the main areas of environmental activities in Greenland.

2. Main Body

One of the main factors allowing Denmark to retain the status of the Arctic state, to take an active part in the work of the Arctic Council and to carry out legislative regulation in the Arctic is the affiliation of Greenland with the Kingdom of Denmark [1]. Greenland is the largest island on earth, «... stretching from north to south for 2670 km, and from east to west - 1200 km» [2].

Given the fact that the processes in the Arctic seriously affect the planet’s climate, the environmental problems of the Arctic space are in the focus of attention of the entire international community. «Disruption of the ecological balance in the Arctic due to its natural and geographical features can have global consequences» [3].

In this regard, the development of environmental policy and legislation of Greenland as the main part of the Arctic state of Denmark is now becoming ever more relevant.
In the 7th century, Greenland became part of Denmark [5]. The main direction of Denmark colonial policy in Greenland was «... not the development of the fisheries, but the conservation of ... the traditional forms of the economy». These measures made it possible to maintain the traditional economic structure and «the close connection of its people with the environment» on the territory of Greenland [5].

The environmental development in Greenland should be considered since the accession of the Kingdom of Denmark to the European Community in 1973, since the accession influenced not only the politics of Greenland as a whole, but also its environmental component. It is worth noting that the Kingdom of Denmark became the EU member shortly before the decision of Greenland to hold the referendum on autonomy. As a result of the referendum in 1979, Greenland got the right to broad powers of autonomy [6; 7] and, consequently, the possibility of leaving the European Union. In 1985, the government held a referendum, which revealed that 53% of Greenlanders (corresponding to 12.6 thousand votes out of 23.7 thousand votes [8]) were in favor of leaving the European Economic Area [9]. As a result, in 1989, the responsibility for the environment protection was delegated to the government of Greenland, and since 1992 this responsibility extends to the marine environment around Greenland and its waters.

It should be noted that Greenland, as a former member of the European Union, was given the status of overseas territory after leaving the EU, which gave the autonomous territory the opportunity to obtain financial contributions from the European Union for the development of various areas, including environmental. Thus, in 1986, the European Union signed fisheries agreements [10], which regulated the volume of the fish caught and its distribution between the EU and Danish autonomies, and also included quotas for catching certain types of fish, since the European Union monitors the population of fish, crustaceans and other marine fauna in the waters of Greenland not only to ensure environmental protection for the marine environment, but also to regulate the fishing quotas to the autonomy.

**Figure 1.** Map of the Arctic [4]
In 1988, Greenland issued Basic Law No. 12 on Environmental and Ecological Issues [11]. The purpose of this regulatory legal act was the following: «air, water, ice and soil pollution prevention and control ... with noise pollution ...», the establishment of the rules that are important to ensure the environment protection and human health, «... development of the necessary administrative framework ... » for the implementation of measures to combat pollution [11].

In 2011 this law was replaced by an expanded version with the additions and amendments reflecting the environmental policy of Greenland in the 21st century [12]. In addition to the goals reflected in the outdated 1988 law, the new regulatory act enshrined the need «... to limit the use and waste of resources» and the importance of «... the disposal of waste » [12].

In 1989, the fisheries research organization began its work in Greenland, and in 1995 it was renamed as the Greenland Institute of Nature [13]. Its purpose was to study and monitor the environmental and climate changes in Greenland and to provide annual reports to the Government of Greenland on the environmental situation in the autonomy.

In 1991, Denmark (including Greenland and the Faroe Islands), together with other Arctic states - Canada, Russia, Norway, Finland, Iceland and Sweden, established the «Arctic Environment Protection Strategy (AEPS)» [3].

In 1992, Denmark began to develop climate policy in the Arctic region, in the framework of the 1992 Declaration on the Environment [14]. Altogether, 9% [14] of the budget allocated to the climate sector was distributed to the Arctic. In 1999, the government of Denmark made the decision to distribute part of the Arctic funds to support the environmental programs in Greenland. The main objectives of the program were the following: «conservation and sustainable use of natural resources, environmentally sustainable development of business and the community, monitoring, prevention and reduction of air, water and soil pollution» in the Arctic. As part of the Arctic program in 2000, the Danish government allocated grants totaling 30.7 million Danish kroner, which were partly used to improve the environment and energy in Greenland [14]. The program of the Arctic region environmental development, including Greenland, was completed by 2003.

In 1994, the Decree of the Greenland Self-Government No. 35 was issued «on the reduction of environmental pollution by enterprises that do not have a special environmental permit», the purpose of which is «... to reduce the level of environmental pollution by enterprises, plants, mechanisms, tools, incinerators and vehicles ...» [15].

In 1996, the Kingdom of Denmark became a member of the Arctic Council [16]. The main goals of this organization are aimed at developing environmental cooperation in the Arctic region, which would cover areas such as economics, trade, fisheries, education, transportation and others. Within the organization, Greenland is included into six working groups: on the elimination of pollution in the Arctic, on the implementation of the Arctic monitoring and assessment program, on the conservation of Arctic flora and fauna, on the prevention and elimination of emergency situations, on the protection of the Arctic marine environment and on the sustainable development of the Arctic. Greenland is also a member of the Inuit Circumpolar Council, whose activities are aimed at supporting the indigenous peoples of Greenland and popularizing their language and culture.

It should be noted that Greenland receives annual contributions from the Kingdom of Denmark amounting to 3.4 billion Danish kroner per year [17]. The government of Greenland distributes these funds to all spheres of the autonomy, including the environmental sphere. The Danish government also finances programs and research aimed at developing the environment in Greenland.

Despite the developed environmental legislative base, the acts, regulations and laws issued in Denmark do not apply to Greenland. With its broad powers, the autonomy has the right to issue its own laws governing the environmental sphere.

In addition to Greenland’s internal laws regarding the environment, the agreements between the autonomy and the European Union are in force on its territory, for example, fisheries agreements, the latest of which covers the period from 2016 to 2020 [18]. In 2019, the agreement included three amendments determining the amount of fish caught by Greenland, and the number and types of fish that are to be exported to the European Union. The agreement also stipulates sponsorship and other ways of
support for the development of fisheries on the territory of Greenland [18]. The first fisheries agreement between the EU and Greenland was originally signed in 1985 for a period of ten years. The agreement was then extended by another six years until it was replaced by the Fisheries Partnership Agreement. The first fisheries agreement was complemented with several sequential protocols [18].

In 2018, the Greenland government outlined the main areas for the environmental development for 2019. They included the reduction of the use of plastics and the environmentally sustainable development of fishing. To develop these areas, the government will support and finance non-governmental projects [19].

Under the ice of Greenland there are large mineral deposits, which implies that «the global climate change, with the rapid ice melting, open up great prospects for the natural resources development» [20].

![Greenland Mineral Deposits](image1.png)

**Figure 2.** Map of the Greenland mineral deposit [21]

Today, Greenland is implementing the «Mineral Strategy for 2020-2024». The strategy covers five main areas, one of which is to ensure the sustainable development of non-living resources [22]. It also reflects the correlation of economic [23] and environmental areas in the development of Greenland.

3. **Conclusion**

Due to the funding from Denmark and the European Union, Greenland as an autonomy of the Arctic state has the opportunity to develop its environmental policy and tackle environmental problems. Despite the fact that the environmental development began in Greenland only at the end of the XX century, there are noticeable improvements in the legal regulation of energy and water protection. However, the main areas of concern for Greenland are waste management and climate change.

Despite the participation of Greenland in the Arctic and European Union programs, and the development of its national policies to combat climate change, the level of greenhouse gas emissions
coming from the rest of the world has a negative effect on the environmental situation in Greenland, thereby confirming the fears of researchers about the irreversibility of the Greenland glaciers melting and the global warming by more than 1.5 °C to the beginning of 2100. Despite the large mineral deposits on its territory, the government of Greenland pursues the policy of sustainable development of its environment.

References
[1] Allayarov R A 2017 The strategic interests of Denmark in the Arctic. Greenland is the main factor in maintaining Arctic status. Problems and prospects Skiff. Student science issues 15 198-202
[2] Emelyantseva M O 2014 Greenland in Danish-American Relations in the 40s of the 20th century The Bulletin of the Peoples’ Friendship University of Russia: Series International Relations 1 104-111
[3] Konnova L A, Lyova Yu V 2018 Possible sources of environmental hazard in the territories of the Arctic zone of the Russian Federation (Murmansk and Arkhangelsk regions) Bulletin of the St. Petersburg University of the State Fire Service of the Ministry of Emergencies of Russia 2 50-56
[4] Map of the Arctic Available from: https://iakal.files.wordpress.com/2015/08/arctic-ocean.jpg [Accessed 20 January 2020]
[5] Vozgirin V E 2010 Danish Colonial Policy Models: Similarities and Differences Bulletin of St. Petersburg University 4 53-60
[6] Levit L 2014 The problem of the autonomy expansion and international activity of the Greenland self-government Culture. Spirituality. Society 10 82-86
[7] Polumin B L 2010. 2010.04.008 GÖCKE K 2008 Referendum on the autonomy of Greenland and its consequences for the future of the country. GÖCKE K. The 2008 referendum on Greenland’s autonomy and what it means for Greenland’s future. Zeitschrift für ausländisches öffentliches Recht und völkerrecht Stuttgart 2009 69 103-121 Social and human sciences. Domestic and foreign literature. State and law: Abstract journal State and law abstract journal 4 34-37
[8] Svar på spm. om Nicetraktaten, folkeafstemning, til udenrigsministeren Available on https://web.archive.org/web/20110716201059/http://www.eu-oplysningen.dk/dokumenter/ft/euu/arkiv/bilag/2000_2001/20001580/ [Accessed 20 January 2020]
[9] Markushina N Yu 2011 External Relations of the North-West Federal District of the Russian Federation and the Concepts of the «New North» Baltic Region 2 102-111
[10] Gronland: Fiskeripartnerskabsaftale Available from: https://ec.europa.eu/fisheries/cfp/international/agreements/greenland_da [Accessed 20 January 2020]
[11] Landstingsforordning 12 Available from: http://lovgivning.gl/lov?rid={5B2423F6-5423-4BEF-9B9C-05019B4C2696 [Accessed 20 January 2020]
[12] Inatsisartutlov 9 Available from: http://lovgivning.gl/lov?rid={DD908A25-E80F-47EA-BF4D-FF8EF8473250} [Accessed 20 January 2020]
[13] Department of Environment and Mineral Resources Available on http://www.natur.gl/en/environment-and-mineral-resources/about-department-of-environment-and-mineral-resources/ [Accessed 20 January 2020]
[14] Virksomhedsregnskab 2000 Available from: https://www2.mst.dk/udgiv/publikationer/2001/87-7944-488-1/html/kap06.htm [Accessed 20 January 2020]
[15] Decree of the Greenland Municipality N 35 On the reduction of environmental pollution by enterprises that do not have a special environmental permit Available from: http://lovgivning.gl/lov?rid=%7bF92B2AD7-6FAA-4A10-A874-3A6A8A246078%7d [Accessed 20 January 2020]
[16] Declaration on the establishment of the Arctic Council Available from: https://oaarchive.arctic-
council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y [Accessed 20 January 2020]

[17] Permanent Forum on Indigenous Issues of the United Nations Economic and Social Council Available from: https://www.un.org/esa/socdev/unpfii/documents/E_C_19_2009_4_Add_4_en.pdf [Accessed 20 January 2020]

[18] Genforhandling af fiskeriaftalen med EU gennemført Available from: https://naalakkersuisut.gl/da/Naalakkersuisut/Nyheder/2017/12/0412_genforhandling [Accessed 20 January 2020]

[19] Official website of the Government of Greenland Available from: https://naalakkersuisut.gl/en/Naalakkersuisut/News/2020/03/0203_mineralstrategi [Accessed 20 January 2020]

[20] Plevako NS 2019 Greenland in Trump's plans: the revival of «Dollar Diplomacy»? Scientific and Analytical Bulletin of the Institute of Europe, Russian Academy of Sciences 5 pp 60-66

[21] Map of the Greenland Mineral Deposit Available from: https://www.mapsland.com/north-america/greenland/large-detailed-greenland-geology-and-selected-mineral-occurrences-map [Accessed 20 January 2020]

[22] The Greenland Self-Government Arrangement Available from: https://naalakkersuisut.gl/en/Naalakkersuisut/News/2020/03/0203_mineralstrategi [Accessed 20 January 2020]

[23] Antipov S K, Bocharov A A, Kobicheva A, Krasnozhenova E E 2019 Assessment of Region Economic Development on the Basis of Neural Network Model IOP Conference Series: Earth and Environmental Science 302 012094 DOI: 10.1088/1755-1315/302/1/012094