International cooperation and environmental safety in the Arctic

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Annotation. Elements of environmental safety of the Arctic at the present stage are derived from the internal and foreign policies of states. The purpose of this study is to identify the relevant issues of the present and future environmental safety of the Arctic at the international level. Due to the instability of international relations in the modern world, in view of the difficult climatic and geological conditions, this region may be headline-making. At the same time, international actors, regardless of their geographical location, consider the territory of the Arctic as a zone of national interests. The national policy of states is aimed at building up the state’s influence in the region. The dependence of modern states on the extraction and supply of energy resources also sets the national priorities to various understandings of concepts of the environmental safety in the Arctic. These and many other reasons call into question the nature and quality of environmental safety in the region.

1. Introduction

In this article, the concept of “environmental security of the Arctic” is understood as a term synthesized from the concept of sustainable development (SD) and the concepts of “soft security” and “human security”, while the term “the Arctic” means the geographic area of international relations between five states that have territories on the coast of the Arctic Ocean. In the conditions of melting Arctic ice and the struggle for the involvement of the use of environmental resources of the Arctic, as well as the proven direct impact of regional climate processes on the world community, the problem of politics and international cooperation for ensuring environmental safety in the region is especially relevant. The environmental safety of the Arctic is defined by the authors as a set of actions and rules to protect the natural environment of the Arctic region; a set of measures taken by states to prevent threats and challenges and eliminate consequences on a local, transboundary, and global scale; policies to ensure the livelihoods of the present and future generations in a favourable environment. Due to the fact that the changes that are taking place in the Arctic are affecting the situation all over the world, the problem is also evident among other regions of the earth. Here we should highlight several recent works that clearly show the relevance and globality of influence of climate change and human activity for the entire ecosystem of the planet - Auque L. F. [1], Gillespie T. W. [2], Verbyla D. [3], Viola D. [4], Berauer B. J. [5], Mourey J. [6], Feng Y. [7], Cameletti M. [8], Andrews J. T. [9], Dee J. R. [10], Wojcik R. [11], Strimbeck G. R. [12]. Among Russian researchers, it is necessary to single out the works of Yakovlev S. [13], Stolyanov A. [14], Russkova I. [15], Pokholchenko V. [16], Ilmast N. V. [17], Volchenko V. [18], Brazhnaia I. E. [19], Barzut O. S. [20].

2. Arctic environmental safety and environmental safety policies
In international political science, the need (of the definition of a concept) arose in the second half of the twentieth century. It was revealed that approaches of the realistic paradigm of the theory of international relations, which considered international security as mainly military security of states while maintaining their national interests, cannot be applied to understanding and solving the global environmental problem. Under the influence of public opinion in the international arena, several research groups arose and caused an influence on the broadening of the interpretation of environmental safety in a global context. Among them, the relationship of the environmental factor (overpopulation, lack of resources, climate change) and the possibility of disputes/military conflicts [21], the impact of the environment (climate change, air pollution, depletion of the ozone layer, human-caused pollution) on a person as an object of threat (human security), has been expressed mostly on the agenda of international organizations and the UN outcome documents. To a great extent, due to the works of the Club of Rome, an approach that is fundamentally inconsistent with the realistic paradigm is gradually being developed. According to this approach, the environment is a security object for the economic welfare and welfare of the planet’s population [22], this idea is also reflected in UN policy and correlates to E. Hurrel’s theory [23].

The essential need to respond to non-military threats led to the rooting of the idea of non-military security (as a response to non-military threats) [24] at the political level, while the concept of “soft security” appeared in the theory of international relations. A complex of these factors allowed to put environmental threats on a par with the military, if not to securitize. However, the non-traditional nature of environmental threats (the lack of a clear definition of the reference object, the subject of security) as well as transboundary nature made the idea of a joint fight and prevention at the international level the issue of time. The idea of international environmental cooperation for circumpolar territories is especially relevant since the environmental vulnerability in northern climatic conditions is high, negative natural processes of the Arctic affect the climate of the entire planet, and also cause threats to small indigenous peoples and other inhabitants of the Arctic. A UN report on environment and development released in 1987 proposed the concept of sustainable development (SD). SD demonstrated the interconnection of economic, social and environmental factors for the well-being of the population, while the idea of international environmental cooperation in the Arctic arose at the political level [24]. According to sustainable development policy [25], it was planned to level the following environmental destructive factors: the negative impact of climate change, excessive energy consumption, insufficient or improper waste disposal, a threat to public health, a threat of poverty, degradation of biodiversity and natural resources.

SD (which was conceptually close to the concept of “soft security”) has influenced the revision of domestic and foreign policy strategies of several states, as a result, the elements of environmental safety have become part of the national interests. The Arctic Environment Protection Strategy [26], developed upon the initiative of Finland and adopted in 1991, declared the willingness of eight states to jointly protect the environment by facing threats to the Arctic ecosystems, maintaining the state of flora and fauna, and preserving a unique culture of the Arctic population.

The main features of the policy and international cooperation in ensuring the environmental safety of the Arctic should be:
- a set of actions and rules to protect the natural environment of the Arctic region;
- a set of measures taken by states to prevent threats and challenges, as well as eliminate their consequences on a local, transboundary and global level;
- policies to ensure the livelihoods of present and future generations in a favorable environment.

3. State’s policy (Arctic Doctrines)
The issue of objects (therefore, politics) of ensuring the environmental safety of the region is still in discussion. Due to the uniqueness of regional development, as well as the general tendencies of changes in the system of international relations, cooperation in aim to ensure environmental safety should be aimed at nature preservation, protection of humans as part of the ecosystem, elimination of natural and man-made pollution, adaptation to climate change. At the same time, the main subjects of environmental safety policy are states.

Considering the national strategies of the five Arctic states (Russia, USA, Canada, Denmark and Norway), it should be noted that none of the doctrines contains a definition of “environmental safety”.

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In the national Arctic development strategy of the Russian Federation [27], environmental safety is considered in conjunction with environmental protection. Russian doctrine provides “ensuring the conservation of the biological diversity of the Arctic flora and fauna”, “developing and expanding the network of specially protected natural territories and water areas”, “eliminating environmental damage”, and “minimizing negative anthropogenic environmental impact” in order to ensure the environmental safety of the Arctic. The doctrine also provides for monitoring the state of the environment in the Arctic, monitoring climate change.

Five Arctic states put special importance on the introduction of mechanisms for monitoring and responding to pollution of the Arctic territory. The Arctic region is attractive for its rich natural resources, namely oil, gas, minerals, and wildlife, including plants, land, water, and air. From the point of view of the United States and other countries, these resources are of national value. The USA sees the Arctic minerals as a decrease in dependence on imported resources (for example, graphite, tin, platinum, cobalt, etc.). The Canadian government has invested $75 million to identify new energy and mineral resources [28]. Recent trends in the development of the US strategy in the Arctic indicate that the United States pays particular attention to the military security of the Arctic region [29].

Despite the fact that the circumpolar territories are characterized as a center of the intersection of the interests of various states and supranational institutions (NATO, in particular), the Arctic is a platform for dialogue and international cooperation. International cooperation in terms of ensuring environmental safety plays a special role in the study of climate change in the Arctic region. This can be seen in the Arctic strategies of all Arctic states.

Canada’s strategy [30] pays special attention to the protection of the indigenous peoples of the North. The Government of Canada seeks to make cities and towns inclusive, as well as to protect indigenous peoples from the effects of global climate change and the development of the Arctic territories, to provide the possibility of rescue operations in remote regions. One of Canada’s goals is to prevent and mitigate pollution at the regional, national and international levels.

Whereas climatic changes occurring in the Arctic are swift and difficult to predict, all five states aimed to cooperate in the scientific field. Thus, states are currently striving to preserve ecosystems, and they are ready to make more efforts to support indigenous peoples, military personnel and scientists in the future. International collaboration is also taking place to face the challenges of understanding ecosystem vulnerability.

In addition, the Arctic states note that not only the creation of safe methods for the extraction of natural resources is necessary, but also the provision of safe methods of their delivery. Moreover, each state notes the need for methods and means aimed at preventing pollution in the event of an accident in its strategy.

The Danish strategy [31] places particular emphasis on improving environmental knowledge and standards. To achieve these goals, the international cooperation, which will allow us to analyze the changes and make forecasts, is a necessity. For example, it is necessary to carry out environmental monitoring, which assesses all the threats and their impact on the Arctic in its entirety. Denmark stands for concluding international environmental agreements. The Danish Government emphasizes the particular importance of preventing marine pollution.

Norway focuses on climate change, which is a major threat to the entire ecosystem of the Arctic, making it vulnerable [32]. The strategy of Norway announces that in order to minimize the impact of human activities and the consequences of climate change in the Arctic, it is necessary to obtain new knowledge and develop new approaches, which is a promising direction for international cooperation for Norway. The government efforts are aimed at combating spreading marine litter, including the propaganda of the need for global measures to reduce toxic emissions.

The Arctic region is vulnerable to “industrial” challenges. Climatic changes in this region are difficult to predict. It causes difficulties in the prognosis of challenges facing the Arctic ecosystem, the implications for the indigenous population and the existing or future infrastructure of the Arctic. Without an understanding of how the Arctic region will develop in the context of climate change, it will not be possible to realize all the goals of states related to the extraction of natural resources, development of territories, development of military infrastructure, new types of agriculture, etc.
The above factors determine the need for international cooperation in the scientific field, the importance of ensuring environmental safety, both by individual states and through interstate cooperation.

4. Conclusion

Denmark, Norway and partly Canada are actually taking a number of measures to ensure environmental safety through cooperation in the field of environmental protection and “soft security” with an emphasis on human security, mainly through the Arctic Council. At the same time, Norway is cautious in highlighting the environmental aspect in the traditional understanding of security, although, in the sections on sustainable development and international cooperation, the above environmental safety measures can be found. The doctrines of the United States and Canada devoted more space to the justification of rights to use Arctic resources.

Thus, the Arctic doctrines of all five states at the state level indicate the need for international cooperation in the field of environmental protection in order to solve existing ad hoc problems. The policy of ensuring the environmental safety of the Arctic, including international and bilateral interaction, exists in practice, but there is no special section dedicated to it in the conceptual documents, which would indicate that the five Arctic states are not ready to conduct it comprehensively.

From the moment of the appearance of the first Arctic doctrines, the preservation of the problem of the absence of a generally accepted definition of the ecological safety of the Arctic is associated with this. In addition, there are discrepancies in the allocation of subjects of protection in Arctic program documents. Consequently, a clear separation of the direction(s) of the general foreign environmental policy of states in the Arctic or a conceptual unification of the areas of international cooperation will not happen in the near future, although the Arctic countries will be ready for spot cooperation on certain aspects of environmental protection and scientific cooperation.

References

[1] Auque L F et al 2019 Chemical weathering in a moraine at the ice sheet margin at Kangerlussuaq, western Greenland Arctic, Antarctic, and Alpine Research (51)
[2] Gillespie T W, Madson A, Cusack C F and Xue Y 2019 Changes in NDVI and human population in protected areas on the Tibetan Plateau Arctic, Antarctic, and Alpine Research (51)
[3] Verbyla D and Kurkowski T A 2019 NDVI-Climate relationships in high-latitude mountains of Alaska and Yukon Territory Arctic, Antarctic, and Alpine Research (51)
[4] Viola D, McKay C P and Navarro-González R A 2019 Method for monitoring glacial loss and temperature variation using satellite observations: Case study of Pico de Orizaba and Iztaccihuatl (Mexico) Arctic, Antarctic, and Alpine Research (51)
[5] Berauer B J et al 2019 Low resistance of montane and alpine grasslands to abrupt changes in temperature and precipitation regimes Arctic, Antarctic, and Alpine Research (51)
[6] Mourey J, Marcuzzi M, Ravanel L and Pallandre F 2019 Effects of climate change on high Alpine mountain environments: Evolution of mountaineering routes in the Mont Blanc massif (Western Alps) over half a century Arctic, Antarctic, and Alpine Research (51)
[7] Feng Y et al 2019 Effect of climate and thaw depth on alpine vegetation variations at different permafrost degrading stages in the Tibetan Plateau, China Arctic, Antarctic, and Alpine Research (51)
[8] Cameletti M, Biondi F 2019 Hierarchical modeling of space-time dendroclimatic fields: Comparing a frequentist and a Bayesian approach Arctic, Antarctic, and Alpine Research (51)
[9] Andrews J T, Jónsdóttir I, Geirsdóttir Á 2019 Tracking Holocene drift-ice limits on the northwest-southwest Iceland shelf: Comparing proxy data with observation and historical evidence Arctic, Antarctic, and Alpine Research (51)
[10] Dee J R, Stambaugh M C 2019 A new approach towards climate monitoring in Rocky Mountain alpine plant communities: A case study using herb-chronology and Penstemon whippleanus Arctic, Antarctic, and Alpine Research (51)
[11] Wojcik R et al 2019 Land cover and landform-based upscaling of soil organic carbon stocks on the Brøgger Peninsula, Svalbard Arctic, Antarctic, and Alpine Research (51)

[12] Strimbek G R, Graae B J, Lang S, Sørensen M V 2019 Functional group contributions to carbon fluxes in arctic-alpine ecosystems Arctic, Antarctic, and Alpine Research (51)

[13] Yakovlev S, Putilov V, Maslloboev A 2019 Information and analytical support for the industrial and ecological safety management of Arctic communications IOP Conference Series: Earth and Environmental Science (302)

[14] Stolyanov A, Zhuk A, Kaychenov A, Kuranova L 2019 Comparative analysis of temperature loggers used in the development of regimes for heat treatment of food production in autoclaves IOP Conference Series: Earth and Environmental Science (302)

[15] Russkova I, Dolgikh N, Salkutsan V, Loginova Y 2019 Russia’s Arctic is as an object of environmental monitoring IOP Conference Series: Earth and Environmental Science (302)

[16] Pokholchenko V, Smirnova A 2019 Energy efficient systems and regimes at fish products drying processes IOP Conference Series: Earth and Environmental Science (302)

[17] Ilmast N V, Alekseev M Y, Bochkarev N A, Sendek D S 2019 Ecological state of aquatic biocenoses in the streams of the Kola basin, Barents Sea IOP Conference Series: Earth and Environmental Science (302)

[18] Volchenko V, Grokhovsky V, Glukharev A, Nesvyashchenko S 2019 Developing the technology of foodstuffs using ingredients rich in G3-PUFA IOP Conference Series: Earth and Environmental Science (302)

[19] Brazhnaia I E, Tifanyuk A V, Kulik O M, Sudak C N 2019 Development of fish soups technology with using food supplements from fish remaining feedstock IOP Conference Series: Earth and Environmental Science (302)

[20] Barzut O S, Surso M V, Porshneva U V 2019 The influence of atmospheric emissions from the pulp and paper industry on the radial growth of the Scots pine in Arctic zone IOP Conference Series: Earth and Environmental Science (302)

[21] Commoner B How Poverty Breeds Overpopulation (and not the other way around) Available from: https://web.archive.org/web/20120720055340/http://www.marathon.uwc.edu/geography/malthus/ramparts.htm [Accessed 20 March 2020]; Homer-Dixon T 1994 Environmental Scarcities and Violent Conflict: Evidence from Cases International Security 19(1) 5-6; Starr J 1991 Water Wars Foreign Policy 82 17-36; Dupont A, Pearman G 2006 Heating up the Planet: Climate Change and Security Lowry Institute Papers. Sydney: Lowry Institute 1-6; Kaplan R The Coming Anarchy. How scarcity, crime, overpopulation, tribalism, and disease are rapidly destroying the social fabric of our planet Available from: https://www.theatlantic.com/magazine/archive/1994/02/the-coming-anarchy/304670/ [Accessed 20 March 2020]

[22] 1972 The Limits to Growth. A Report for the Club of Rome’s Project on the Predicament of Mankind Meadows D H, Meadows D L Randers J Behrens III W W Universe Books, NewYork 10-12

[23] Hurrell E 2002 International Political Theory and the Global Environment Theory of International Relations at the Turn of the Century: Trans. from English under the general. p 142

[24] Lomagin N 2003 “Soft” security in the ideas of the federal and regional elites (on the example of the North-Western regions of Russia) International processes 2 p 109

[25] The definition containes in the UN report – “Agenda 21”. Outcome document of the UN Conference on the Environment Available from: http://www.un.org/en/documents/decl_conv/conventions/agenda21_intro.shtml [Accessed 20 March 2020]

[26] Arctic Environment Protection Strategy Available from: http://docs.cntd.ru/document/1902061 [Accessed 20 March 2020]

[27] Strategy for the development of the Arctic zone of the Russian Federation and national security
for the period until 2020 Laws, codes and regulatory legal acts of the Russian Federation
Available from: https://legalacts.ru/doc/strategija-razvitija-arkticheskoi-zony-rossiiskoi-federatsii-i/ [Accessed 20 March 2020]

[28] Report on the Goals and Objectives for Arctic Research. 2019 – 2020. United States Arctic Research Commission Available from: https://storage.googleapis.com/arcticgov-static/publications/goals/usarc_goals_2019-2020.pdf [Accessed 20 March 2020]

[29] 2019 DoD Arctic Strategy: China and Russia, but No Climate Change? American Security Project Available from:https://www.americansecurityproject.org/dod-arctic-strategy-china-russia-and-no-climate-change/ [Accessed 20 March 2020]

[30] Canada’s Arctic and Northern Policy Framework Government of Canada Available from: https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587 [Accessed 20 March 2020]

[31] Denmark, Greenland and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic 2011 – 2020 from Available: http://library.arcticportal.org/1890/1/DENMARK.pdf [Accessed 20 March 2020]

[32] Norway’s Arctic Strategy – between geopolitics and social development Norwegian Ministers Available from: https://www.regjeringen.no/contentassets/fad46f0404e14b2a9b551ca7359e1000/arctic-strategy.pdf [Accessed 20 March 2020]