Russian Journal of World Politics and Law of Nations. 2024. 3(1). P. 37–53
DOI 10.24833/RJWPLN-2024-1-37-53 Research Article

The "Environmental Dimension" of Article 234 of the United Nations Convention on the Law of the Sea and Russian Legislation on the Regulation of Navigation in the Waters of the Northern Sea Route[1]

Viatcheslav V. Gavrilov, Gleb S. Liashko

Far Eastern Federal University

Abstract. Climate change in the Arctic, caused by global warming, and the political processes taking place in the world associated with the increased pressure from the countries of the collective West on the Russian Federation, once again raise the question in Western doctrine of the validity of the Russian Federation establishing a national regime for navigation in the waters of the Northern Sea Route in accordance with Article 234 of the 1982 UN Convention on the Law of the Sea. Doubts have been raised about Russia's compliance with the Convention's requirement to maintain a balance between freedom of navigation and environmental protection. The purpose of this work is to analyse the validity of claims against the Russian Federation regarding its alleged abuse of the right to establish a national regime for navigation in the Arctic under the guise of environmental protection. The problems raised in this work are structurally divided into three main groups. The first involves an analysis of the specific features of shipping in the Arctic in the context of a changing climate and outlines why a special legal regime for navigation in polar waters needs to be established. The second is devoted to the systematic interpretation of Article 234 of the UN Convention on the Law of the Sea, in its relationship with other norms of the Convention, identifying the criteria and restrictions established therein in relation to the rules of navigation adopted by the coastal State in ice-covered areas, as well as the legal content of the requirement of "due regard to navigation and the protection and preservation of the marine environment." The third part of the work is devoted to assessing the legislation of the Russian Federation on the regulation of navigation along the Northern Sea Route for its compliance with the requirements of Article 234 and maintaining the balance of freedom of navigation and protection of the marine environment in the Arctic. The legislation of the Russian Federation on the regulation of navigation in the waters of the Northern Sea Route fully meets the conditions and criteria established by Article 234 of

[1] English translation from the Russian text: Gavrilov V.V., Liashko G.S. 2023. «Ekologicheskoe izmerenie» stat'i 234 Konventsii Organizatsii Ob"edinennykh Natsii po morskomu pravu i zakonodatel'stvo Rossii o regulirovanii sudokhodstva v akvatorii Severnogo morskogo puti. *Moskovskiy Zhurnal Mezhdunarodnogo Prava* [Moscow Journal of International Law]. No. 4. P. 18–34. DOI: 10.24833/0869-0049-2023-4-18-34

the Convention, and is aimed at ensuring the functioning of a unified and centralized system for managing the safety of navigation in the particularly dangerous conditions of the Arctic, preventing accidents and environmental pollution environment. The restrictions established by Russian legislation are not discriminatory and are based on current and constantly updated scientific data. Shipping in polar waters involves enormous risks to human life, valuable property, and an extremely fragile and vulnerable environment. The effects of global warming are only exacerbating these risks, leading to increased ice instability and worsening climate problems. In this regard, in ice-covered areas, a centralized navigation management system is objectively necessary, and special, uniform legal regulation to ensure the uninterrupted functioning of such a system should be established. A systematic interpretation of Article 234 of the UN Convention on the Law of the Sea allows us to conclude that the establishment by a coastal state within its exclusive economic zone of non-discriminatory laws and regulations aimed at preventing, reducing, and control pollution of the marine environment by ships is not a privilege, but a duty of the state based on its more general obligation to protect the marine environment, established in articles 192 and 194 of the UN Convention on the Law of the Sea. The rule of "due regard to navigation" in this regard should be interpreted to mean that the restrictions and requirements imposed by the laws and regulations of the coastal State must be primarily aimed at ensuring the safety and protection of the marine environment in harsh climatic conditions, without being at the same time discriminatory, unreasonable, and excessive.

Keywords: international law of the sea, UN Convention on the Law of the Sea, ice-covered areas, Northern Sea Route, Arctic, laws and regulations of a coastal State, prevention of marine pollution, Russian legislation on Arctic shipping, climate change

Introduction

Climate change and environmental protection rank among the most critical issues in contemporary international politics. These challenges are especially pronounced in the Arctic region, which is highly vulnerable due to its exposure to climate change and fragile natural ecosystems. According to estimates by the Russian Federal Service for Hydrometeorology and Environmental Monitoring (*Roshydromet*), the Arctic is expected to warm at a rate more than 2.5 times faster than the global average over the coming decades. By the end of the 21st century, during the seasonal minimum of sea ice in the Northern Hemisphere, the Arctic could be nearly ice-free[2]

The rise in temperatures in the Arctic region will lead to profound changes in the Arctic and sub-Arctic tundra biomes. These changes may cause permafrost degradation, coastal erosion, soil loss, droughts, floods, and the decline or extinction of certain plant and animal species. Simultaneously, habitats for species from milder climatic zones are likely to expand.[3]

[2] Tretij ocenochnyj doklad ob izmeneniyah klimata i ih posledstviyah na territorii Rossijskoj Federacii. Obshchee rezyume [Third assessment report on climate change and its consequences on the territory of the Russian Federation. General summary]. Saint Petersburg: High technology Publ. 2022. P.19. (In Russian).

[3] Ibid. P. 108–109.

Interestingly, these environmental changes are closely connected to the international legal challenges concerning the future of Arctic coastal states' rights to regulate navigation within their Exclusive Economic Zones (EEZs) in the Arctic Ocean. Currently, these rights are upheld under Article 234 of the United Nations Convention on the Law of the Sea.[4]

It is clear that the inevitable reduction in Arctic ice coverage due to global warming may prompt non-Arctic states to initiate extensive debates regarding the continued applicability of Article 234 to the Arctic, or the necessity to reinterpret it under current conditions. In recent years, Western academic literature has increasingly suggested that Article 234 might be temporary, valid only while the sea remains ice-covered,[5] or that the legal status of the Northern Sea Route becomes more problematic as Arctic ice retreats more rapidly (Rossi 2014: 496–497). These developments highlight the urgent need to strengthen our country's efforts to safeguard its sovereign rights and national interests in the Arctic region (Gavrilov, Dremliuga, Kripakova 2017: 153).

Further developments in this regard became clear following the Russian Federation's launch of a special military operation in Ukraine, which led to significant opposition from the collective West against the implementation of Russia's Arctic policy. In March 2022, seven out of the eight member states of the Arctic Council issued a joint statement suspending their participation in all Council meetings during Russia's presidency.[6] Three months later, they released another joint statement expressing their intention to implement a limited resumption of their work in the Council, in projects that do not involve the participation of the Russian Federation.[7]

The ongoing political developments have triggered vigorous debate within the Western academic community regarding Russia's future role in international Arctic initiatives and the potential effects of the Ukrainian crisis on the regulation and development of Arctic shipping (Solski 2022). Particularly noteworthy is the stance of J. Solski, who in one of his publications openly questions the advisability of implementing a national navigation regime in the Arctic seas under Article 234. He writes: "Does the end justify the means? Does the objective of protecting and preserving fragile Arctic ecosystems justify the absolute unilateralism of Article 234 of the United Nations Convention on the Law of the Sea (UNCLOS)? And should we presume that a unilateral course of action must lead to better protection than the diluted common denominator of internationally agreed rules and standards, such as those adopted by

[4] The United Nations Convention on the Law of the Sea of December 10, 1982. URL: https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf (accessed: 23.11.2023).

[5] Bouffard T.A. Developing Maritime Operational Environment: Forward Presence and Freedom of Navigation in the Arctic. 12.01.2021. URL: https://www.naadsn.ca/wp-content/uploads/2021/01/Strategic-Perspectives-A-Developing-Maritime-Operational-Environment-Bouffard.pdf (accessed: 15.12.2023).

[6] Joint Statement on Arctic Council Cooperation Following Russia's Invasion of Ukraine. URL: https://www.state.gov/joint-statement-on-arctic-council-cooperation-following-russias-invasion-of-ukraine/ ((accessed: 23.11.2023).

[7] Joint Statement on Limited Resumption of Arctic Council Cooperation. URL: https://www. state.gov/joint-statement-on-limited-resumption-of-arctic-council-cooperation/ (accessed: 23.11.2023).

the International Maritime Organization (IMO)? After all, can we trust Russia to act as a better steward of Arctic ecosystems than the IMO, given that much of the dilution of the Polar Code's environmental part can be attributed precisely to Russia's resistance to more stringent regulation?" (Solski 2021: 399-400).

The way this issue is framed compels us to revisit the interpretation and application of Article 234, including an analysis of the reasons for its drafting and adoption, as well as the crucial importance of environmental preservation in establishing a national navigation regime in the Arctic. At the same time, the primary objective of this article is to assess the legitimacy of the accusations against the Russian Federation concerning its alleged misuse of the right to implement a national navigation regime in the Arctic under the pretext of environmental protection.

To address the issue, this article systematically explores how the climatic impacts of global warming affect navigation conditions in Arctic waters, assesses the continued relevance of Article 234 within the new climatic context, and evaluates Russian legislation regulating navigation in the Northern Sea Route (NSR) waters for its compliance with the Article's requirements – specifically, maintaining an appropriate balance between safeguarding freedom of navigation and protecting the marine environment, based on the available scientific evidence.

Overview of navigation conditions in the Arctic

Arctic exploration is frequently and rightly likened to space exploration due to the complexity and risks involved. Even today, the Arctic remains one of the few regions on Earth where natural conditions pose substantial challenges to human and economic activities. This is especially true for navigation in the Arctic.

Despite the rapid decline of Arctic Ocean ice cover and the steady rise in average annual temperatures, the region remains far from having the mild climatic conditions of Mediterranean resorts, and the risks associated with Arctic navigation have not diminished significantly. Moreover, experts rightly emphasize that sea ice is only one of many factors influencing shipping in the Arctic, and the belief that reduced ice cover alone will lead to increased shipping activity is a misconception.[8] Additionally, the challenges posed by free-drifting ice and the persistence of extensive ice fields during winter continue to be significant concerns.[9]

However, even if the Arctic Ocean becomes completely ice-free, this will introduce new and serious challenges that threaten navigation. For example, the expansion of open water will significantly intensify the effects of polar cyclones. As temperatures continue to rise, the frequency of icebergs breaking off from glaciers will also increase,

[8] Mednikov V., Hantington G.P. Arctic Shipping: Good Governance Based on Facts, Not Myths // Russian Sea News. 17.04.2017. URL: https://morvesti.ru/themes/1698/62546/ (accessed: 23.11.2023).

[9] Farré A., Valeeva E., Efimov Ya. Analysis of Arctic Shipping Potential // Pro-Arctic. 15.04.2015. URL: https://pro-arctic.ru/15/04/2015/expert/15541 (accessed: 23.11.2023).

posing additional hazards to shipping. Furthermore, climate warming is expected to lead to more mesocyclones, which generate destructive waves that are especially dangerous due to their sudden and rapid development.[10] Sudden weather changes will also make marine icing a much more frequent and hazardous occurrence.

It is also important to remember that the severe climatic conditions of the Arctic seas significantly heighten environmental risks in this already highly vulnerable region. Low temperatures in the Arctic Ocean inhibit the biodegradation of oil, while drifting ice can absorb spilled hydrocarbons and carry them over long distances. Additionally, responding to oil spills often requires the use of icebreakers, which may not always be able to reach the spill site quickly, allowing the oil to become firmly embedded in the ice cover.

Even minor malfunctions of marine equipment in the Arctic can result in significant environmental damage, as the pressure from drifting ice can easily cause ship failures and accidental spills (Statuto 2020: 7-8). In the event of a vessel flooding at sea, it becomes a major source of pollution due to the release of radioactive materials, fuel, and lubricants (Nersesov, Rimskij-Korsakov 2021: 20).

The foregoing indicates that the melting of Arctic ice not only fails to reduce but actually heightens the risks and challenges associated with navigation in the region. Consequently, while access to Arctic waters becomes easier, this advantage is largely counterbalanced by climatic changes that intensify the difficulties in ensuring maritime safety and require greater efforts to prevent pollution from ships.

Considering these factors, it can be confidently stated that, given the considerable length of the NSR and the unique climatic and environmental conditions of the region it traverses, Russia holds special rights over this section of the Arctic Ocean, including authority related to the regulation of NSR operation, under Article 234 (Gavrilov 2015).

However, to determine the extent of such control and the degree to which it should genuinely focus on protecting and preserving the Arctic's fragile natural environment, it is necessary to revisit a systemic interpretation of Article 234. This also requires a clearer definition of the criteria and limitations that Article 234 imposes on national laws and regulations enacted to govern navigation in polar waters.

Interpretation of Article 234 in the context of environmental protection

Section 8 of Part XII of the Convention consists of a single provision – Article 234, according to which "[c]oastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone,

[10] Sukhanovskaya T. Effects of Climate Warming on Shipping in the Arctic // RG. 05.07.2022. URL: https://rg.ru/2022/07/05/reg-szfo/kak-poteplenie-povliiaet-na-sudohodstvo-v-arktike.html (accessed: 23.11.2023).

where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence."

From a historical perspective, it is clear that Canada and Russia, as the primary beneficiaries of Article 234, intended to use it to internationally legitimize their national shipping regulations designed to mitigate the risk of marine pollution from foreign non-state vessels passing through their Arctic waters. Their position received support from other states during the drafting and adoption of the Convention. Notably, Article 234 was the sole provision included in Section 8 of Part XII, titled "Protection and Preservation of the Marine Environment," underscoring the drafters' intent to establish special rules exclusively focused on safeguarding the marine environment of a specific, clearly defined region (Gavrilov, Dremliuga, Kripakova 2017: 156).

However, the term "ice-covered areas" should not be understood in a strictly literal sense, as ice cover varies in type and form, each presenting different challenges for navigation and requiring distinct organizational and technical approaches. This variability gives rise to multiple possible interpretations of what constitutes "ice-covered areas."[11] Consequently, to ensure legal clarity, coastal states must assert their rights over ice-covered areas regardless of the specific type or extent of ice present at any given time, since the fundamental purpose of Article 234 remains constant.

In any case, both the logical interpretation of the Article and its drafting history clearly show that the special rights granted to Arctic coastal states over their EEZs aim to ensure the highest possible level of navigation safety and to strengthen control over pollution from ships – an objective necessity given the unique natural conditions of the Arctic region (Gavrilov, Dremliuga, Nurimbetov 2019: 3–4).

Taking into account the historical context of the Convention's adoption, the rules of interpretation established by the 1969 UN Vienna Convention on the Law of Treaties[12], and the fact that ongoing climate changes in the Arctic Ocean increase rather than diminish risks to navigation safety and environmental protection, the reduction of Arctic sea ice alone cannot justify Russia losing its right to regulate navigation in the Arctic Ocean.[13]

---

[11] The World Meteorological Organization's Sea-Ice Nomenclature explicitly defines "sea ice" as "*any form of ice found at sea which has originated from the freezing of sea water*". From this, it follows that, from a formal legal perspective, neither the type of sea ice (whether floating or fast), its age, nor its spatial extent should determine the interpretation of "ice-covered areas," since all forms and concentrations of sea ice pose navigational hazards. See: WMO Sea-Ice Nomenclature, 1970–2014. 2014. URL: https://library.wmo.int/records/item/41953-wmo-sea-ice-nomenclature (accessed: 15.12.2023).

[12] Vienna Convention on the Law of Treaties of May 23, 1969. URL: https://www.mid.ru/ru/foreign_policy/ international_contracts/international_contracts/international_contracts/1717276/ (accessed: 23.11.2023).

[13] The question of whether the Arctic Ocean waters can still be classified as "ice-covered areas" if they become entirely ice-free in the future remains highly significant. At present, this question cannot be answered with complete certainty and warrants further independent research to explore the possibilities and limitations of applying Article 234 under such global climatic changes.

Therefore, this research should primarily focus on the extent to which Russia complies in practice with the conditions and procedures set forth by Article 234, rather than on the legitimacy of its asserted rights under this provision.

The first important point to highlight is the requirement that laws and regulations adopted by a coastal state under Article 234 must be non-discriminatory – that is, they should apply equally to all vessels navigating the designated waters, regardless of nationality. However, we believe that this principle should be understood not only as ensuring equal access to the Arctic seas for all interested states but also as guaranteeing that the safety and environmental protection standards set by the coastal state are applied uniformly. Therefore, in the context of environmental protection, this requirement can be interpreted in two ways: first, as a safeguard against negative discrimination and the abuse of rights by the coastal state towards other countries; and second, as a mechanism to prevent positive discrimination by ensuring that vessels failing to comply with established navigation rules for ice-covered areas are prohibited from operating in Arctic waters.

Regarding the geographical scope of Article 234, it is clear that, beyond its limitation to the EEZs, the Article sets out two additional equally important and complementary criteria. The first pertains to the presence of obstructions or exceptional hazards to navigation, while the second concerns the risk of major harm to the environment.

It is important to note that the first criterion is defined in Article 234 not only by the presence of "ice covering" a particular maritime area over a certain period but also by the existence of "particularly severe climatic conditions." Based on the data discussed above, it can be confidently asserted that despite the melting of Arctic ice, these severe conditions are unlikely to change, and the current obstructions and exceptional hazards to navigation in the Arctic Ocean will remain significant. Therefore, the legal basis for upholding and continuing to apply Article 234 in the Arctic, including within Russia's EEZ, will persist.

Another key aspect of Article 234 is the explicit link it establishes between environmental risks and hazardous navigation conditions. Therefore, the scope of the coastal state's laws and regulations under Article 234 is not limited merely to their role in "prevention, reduction and control of marine pollution," but also extends to their application in areas where hazards to navigation are exceptional. In practical terms, this means that coastal state's regulations should address not only the direct prevention of marine pollution from vessels but also related navigation safety issues. These may include the designation of shipping routes, crew and vessel design requirements, compulsory icebreaker escort and ice pilotage services, and similar measures. This interpretation of Article 234 is reasonable, as navigation safety has a direct impact on the Arctic marine environment – any accident involving a vessel is likely to result in marine or air pollution, with potentially severe consequences for this ecologically vulnerable region.

To fully grasp the meaning of Article 234, it is important to remember that it is part of Part XII of the Convention, titled "Protection and Preservation of the Marine Environment," and therefore should be read in conjunction with the other articles

within that Part. Of particular relevance to this research are the provisions of Article 194, which address measures to prevent, reduce, and control pollution of the marine environment.

The general obligation of the Parties to the Convention regarding these measures is set out in Article 194 (1) as follows: "States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection."

These measures include, *inter alia*, those outlined in Article 194 (3)(b), which are designed to minimize, to the fullest possible extent, "pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels."

The Convention thus establishes a direct correlation between measures aimed at ensuring navigation safety and those designed to prevent pollution of the marine environment.

A systemic interpretation of Article 234 in conjunction with the other provisions within Part XII of the Convention leads to a significant conclusion: all its norms should be understood in light of the states' general obligation to protect and preserve the marine environment, as set forth in Article 192. According to many scholars, this obligation, due to its widespread recognition and acceptance worldwide, has effectively become a rule of customary international law. Some even consider the duty to "protect and preserve the environment" as part of the peremptory norms (*jus cogens*) of contemporary international law. These experts argue that Article 192 "does not limit the obligation to protect the marine environment solely to internal or territorial waters or to waters under the jurisdiction of coastal states. Instead, it emphasizes the need to safeguard the marine environment as a whole. Based on this, scholars such as the German researcher A. Prölß view the protection of the marine environment as a matter of interest for the entire international community, thereby creating an *erga omnes* obligation arising from this duty" (Ezhova 2014: 149). The subsequent provisions of Part XII further clarify and expand upon the principles established in Article 192 (Sun, Ma 2016: 527–528).

Article 234, which grants coastal states the right to adopt and enforce non-discriminatory laws and regulations to prevent marine pollution in the Arctic, should, therefore, be regarded as a lex specialis in relation to the more stringent procedure outlined in Article 211 (6)(a). The latter requires states to adopt similar laws and regulations for clearly defined areas of their respective EEZs only after consultations through the competent international organizations (Virzo 2015: 33-34). At the same time, the interplay between Articles 192 and 194 and Article 234 effectively *obliges* the coastal state to enact appropriate legislation to protect the fragile natural environment of the Arctic region.

The only constraints the coastal state must observe under Article 234 are the requirements to have due regard to "navigation and the protection and preservation of the marine environment based on the best available scientific evidence" when formulating national regulations.

We concur with J. Solski's view that a prudent interpretation of the standard of due regard is to require the coastal state to accommodate both concerns – freedom of navigation and the protection and preservation of the marine environment – and draw an appropriate balance between them. Solski emphasizes that the obligation to take into account the interests of other states regarding their navigation in the Arctic is one of the few explicit limitations on the coastal state's jurisdiction under Article 234. Consequently, when foreign states question the legality of Canada's or Russia's adoption of relevant laws and regulations, their concerns primarily stem from doubts about whether this requirement has been adequately respected (Solski 2021: 401).

However, based on the preceding analysis of the Arctic region's unique climatic conditions and a systemic interpretation of Article 234, the requirement to balance freedom of navigation with the protection of the marine environment cannot be construed as giving equal legal weight to both criteria in this context. The particularly severe climatic conditions and the extreme vulnerability of the Arctic ecosystem clearly establish the priority of environmental protection over navigational interests.

Thus, "Russia's authority over environmental and navigation safety extends to the Arctic waters within its exclusive economic zone, where freedom of navigation must generally be ensured under *lex generalis* in accordance with the Convention. However, in areas that are ice-covered for a significant portion of the year, stricter environmental regulation of navigation should be enforced under special rules (*lex specialis*). Russia's arguments supporting the international legitimacy of this special environmental regime for the NSR are reinforced by customary international law, as well as Article 234 of the 1982 Convention" (Vylegzhanin, Nazarov, Bunik 2020: 1114).

Based on this, the "due regard" criterion should be interpreted to empower the coastal state to enact laws and regulations that provide the highest possible degree of environmental protection without unduly infringing upon freedom of navigation.

Supporting this interpretation is the second limiting criterion of Article 234, which states that the balance must be drawn "based on the best available scientific evidence." As J. Solski emphasizes, this requirement implies that the coastal state is under a duty to actively conduct relevant scientific research or endeavor to obtain the best scientific evidence that exists and be able to convincingly argue that its measures are reasonable in light of this evidence (Solski 2021: 401). Importantly, such scientific evidence can serve as the foundation for setting specific rules and restrictions for navigation in Arctic waters.

Ensuring "due regard to navigation" in this context may depend on the scientific justification for implementing certain measures designed to preserve the fragile ecosystem. For example, if a coastal state enacts legislation allowing for the temporary complete closure of a portion of Arctic waters to navigation due to particularly hazard-

ous ice or weather conditions, it is clear that such measures do not violate the freedom of navigation. Rather, they aim to prevent potential man-made disasters that threaten not only the lives of ship crews but also the natural environment, and are based on scientific evidence.

Accordingly, a systemic interpretation of Article 234 leads to the conclusion that a coastal state's exclusive right to enact non-discriminatory laws and regulations aimed at protecting the natural environment of ice-covered areas stems primarily from the exceptionally severe navigation conditions and the fragility of the Arctic ecosystem. In this context, adopting such measures is not only a right but also a duty of the state. Allowing unrestricted and uncontrolled navigation in ice-covered waters would inevitably result in catastrophic outcomes – numerous accidents and shipwrecks causing not only loss of life and significant property damage, but also severe, irreversible harm to the unique and vulnerable Arctic ecosystem. Therefore, the requirement to have "due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence" should be interpreted as prioritizing environmental protection.

Russian legislation regulating navigation in the NSR in light of Article 234 requirements

Building on the preceding analysis of the climatic conditions of the Arctic Ocean and regulatory framework governing shipping in the region, this section of the research will focus on examining Russian practice in implementing the provisions of Article 234. The aim is to assess the extent to which the laws and regulations enacted by the Russian Federation for the prevention, reduction and control of marine pollution from vessels comply with the requirements of the Article.

To address this question, it is essential first to refer to Article 5.1 of the Merchant Shipping Code of the Russian Federation (the "Code"),[14] which outlines the fundamental requirements regarding the conditions and procedures for navigation in the NSR waters. It also provides a list of regulations governing specific aspects of navigation in this area. Among these are the Rules of Navigation in the Waters of the Northern Sea Route,[15] the Regulations on Ice Pilots,[16] the Rules of Icebreaker Escort for Vessels in the

[14] Merchant Shipping Code of the Russian Federation. No. 81-FZ of April 30, 1999. URL: https://www.wto.org/english/thewto_e/acc_e/rus_e/wtaccrus33a1_leg_15.pdf (accessed: 23.11.2023).

[15] Resolution No. 1487 of the Government of the Russian Federation of September 18, 2020, "On the Approval of the Rules of Navigation in the Waters of the Northern Sea Route" (amended on September 19, 2022). URL: https://www.consultant.ru/document/cons_doc_LAW_362718/?ysclid=lq9xwgcb8u482675596 (accessed: 23.11.2023).

[16] Order No. 424 of the Ministry of Transport of the Russian Federation of October 20, 2022, "On the Approval of the Regulations on Ice Pilots". URL: https://base.garant.ru/405845849/?ysclid=lq9y0ex9m83882664 (accessed: 23.11.2023).

Waters of the Northern Sea Route,[17] the Rules of Ice Pilotage of Vessels in the Waters of the Northern Sea Route,[18] the Rules of Route Guidance for Vessels in the Waters of the Northern Sea Route,[19] and the Regulations on Hydrometeorological Support for Vessel Navigation in the Waters of the Northern Sea Route.[20]

An analysis of the aforementioned instruments reveals the following legal regimes that impose binding rules and restrictions on vessels navigating the waters of the NSR:

1) prior authorization procedure for navigation in the NSR waters;
2) management of vessel nagivation in the NSR waters by the competent authority;
3) compulsory icebreaker escort and ice pilotage services in the NSR waters.

Each of these regimes is analyzed below to evaluate their alignment with the conditions and criteria outlined in Article 234.

The prior authorization procedure for navigation in the NSR waters is established by Clause 3 of the 2020 Rules for Navigation in the Waters of the Northern Sea Route (the "2020 Rules"). Permits for vessel navigation within the NSR are issued by the State Atomic Energy Corporation Rosatom or its subordinate organization (the "competent authority"). Without such a permit, a vessel is not allowed to enter the NSR waters.

According to Clauses 4 and 5 of the 2020 Rules, applications for a permit must be submitted electronically to the competent authority, accompanied by a set of documents including, but not limited to: 1) detailed information about the vessel and its voyage, 2) copies of classification and tonnage certificates, 3) a copy of the certificate of insurance or other financial guarantee covering civil liability for damage caused by marine pollution from the vessel, 4) a copy of the polar ship certificate issued in accordance with the Polar Code,[21] 5) a copy of the contract for icebreaker escort services, which is compulsory for vessels meeting the admission criteria, along with other relevant documents.

As outlined in the following provisions of the 2020 Rules, this set of documents is required from the applicant to provide the most comprehensive and reliable information regarding the vessel's characteristics, condition, and ice class. This information is

[17] Order No. 17 of the Ministry of Transport of the Russian Federation of January 24, 2022, "On the Approval of the Rules of Icebreaker Escort for Vessels in the Waters of the Northern Sea Route". URL: https://base.garant.ru/404779449/?ysclid=lq9y35i7gu402505390 (accessed: 23.11.2023).

[18] Order No. 25 of the Ministry of Transport of the Russian Federation ofFebruary 1, 2022, "On the Approval of the Rules of Ice Pilotage of Vessels in the Waters of the Northern Sea Route" (amended on September 28, 2022). URL: https://base.garant.ru/404779333/?ysclid=lq9y4evyeg389847237 (accessed: 23.11.2023).

[19] Order No. 18 of the Ministry of Transport of the Russian Federation of January 24, 2022, "On the Approval of the Rules of Route Guidance for Vessels in the Waters of the Northern Sea Route". URL: https://www.garant.ru/products/ipo/prime/doc/404679441/?ysclid=lq9y9e7ibz162716405 (accessed: 23.11.2023).

[20] Order No. 19 of the Ministry of Transport of the Russian Federation of January 24, 2022, "On the Approval of the Regulations on Hydrometeorological Support for Vessel Navigation in the Waters of the Northern Sea Route". URL: https://base.garant.ru/404779361/?ysclid=lq9yblzivr122252479 (accessed: 23.11.2023).

[21] The International Code for Ships Operating in Polar Waters (Polar Code). URL: http://publication.pravo.gov.ru/Document/View/0001201712260021?ysclid=lq9yd5lfne104928249 (accessed: 23.11.2023).

essential for assessing the vessel's capability to navigate under specific ice and weather conditions, as well as for verifying its compliance with binding requirements established by the Polar Code, as well as by the International Convention on Civil Liability for Bunker Fuel Pollution Damage, 2001,[22] and the 1992 Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969.[23]

An exhaustive list of grounds for rejecting a permit is provided in Clause 11 of the 2020 Rules. These include: a) the vessel's failure to meet the admission criteria; b) the applicant's failure to submit a copy of the icebreaker escort services contract when such escort is compulsory under the admission criteria; c) submission of incomplete or inaccurate information in the application or accompanying documents; d) absence of the applicant's signature; e) the vessel's expected navigation route within the NSR waters and/or navigation period falling outside the designated areas and/or seasons established by the authorized organization responsible for classification and certification of vessels; and f) the application being accompanied by an incomplete set of documents or invalid documents.

The grounds outlined in Clauses 11 a) and b) refer to Annex 2 of the 2020 Rules, titled "Criteria for Admission of Vessels to the Northern Sea Route Waters." The Annex consists of three tables detailing vessel ice classes, methods of ice navigation (either independent or requiring compulsory icebreaker escort), specific periods of the calendar year, designated areas within the NSR waters, and the types of ice conditions in those areas. Admission of vessels to the NSR waters is based on these criteria, which assess whether a vessel of a particular ice class can safely navigate under the prevailing ice conditions. The other grounds for rejection primarily concern incomplete or inaccurate information about the vessel and its voyage, which is essential for ensuring both the operational safety of navigation and the protection of the marine environment in the area.

Clause 17 of the 2020 Rules states that a vessel holding a permit must not enter the NSR waters before the permit's effective date and must exit the area no later than the permit's expiry date. If the vessel is unable to leave within this timeframe, the master is required to promptly notify the competent authority, providing the reasons for the delay, and to follow any instructions received.

Furthermore, according to Clauses 17.1 to 17.7 of the 2020 Rules, the competent authority may suspend, annul, or amend the permit. In exercising these powers, the competent authority must base its decisions solely on up-to-date data about ice conditions.

[22] The International Convention on Civil Liability for Bunker Fuel Pollution Damage of March 23, 2001. URL: https://base.garant.ru/2568139/?ysclid=lq9yfca6 zk71761703 (accessed: 23.11.2023).

[23] The 1992 Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969, November 27, 1992. URL: https://base.garant.ru/2541621/?ysclid=lq9ygx669m110709149 (accessed: 23.11.2023).

In particular, a permit may be suspended or amended only in the following cases:

a) if actual or anticipated ice conditions are more severe than those specified in the permit;

or b) if icebreaker escort is possible only by close towing, but the vessel's design makes such towing impossible (Clauses 17.1 and 17.3). In such instances, the competent authority must reinstate the permit within 72 hours of ice conditions improving (Clause 17.2). If the ice conditions do not improve within 30 days from the date of suspension, the competent authority will annul the permit (Clause 17.5).

All restrictions associated with the prior authorization procedure for navigation in the NSR waters are exclusively aimed at assessing the feasibility of admitting vessels under specific ice conditions and ensuring their safe passage. Consequently, the prior authorization procedure cannot be considered an excessively restrictive measure. This is because it is intended, first, to collect information on vessels entering the NSR waters for use in navigation management, and second, to prevent vessels from operating in hazardous ice conditions that could lead to accidents. The admission criteria do not include discriminatory or scientifically unsupported restrictions, and the process for obtaining permission is straightforward, prompt, and transparent. Any vessel technically equipped for Arctic navigation under certain conditions may be permitted to navigate in the area. Therefore, in our opinion, this legal regime is fully consistent with the restrictive criteria outlined in Article 234.

The second regime specified in Article 5.1 of the Code is the management of vessel navigation in the NSR waters by the competent authority.

According to Article 5.1 (3), vessel navigation in the NSR waters is managed by the State Atomic Energy Corporation Rosatom in accordance with the 2020 Rules and the corporation's internal regulations. This management includes, among other responsibilities: 1) coordinating the development of vessel navigation routes and the deployment of icebreaker fleet vessels in the NSR waters, taking into account hydrometeorological, ice, and navigation conditions; 2) coordinating the provision of navigation-related information services, enforcing safety requirements, and managing the implementation of icebreaker escort services; 3) assisting in the coordination of search and rescue operations within the NSR waters; 4) monitoring vessel traffic in the NSR waters; 5) providing information on hydrometeorological, ice, and navigation conditions in the NSR waters; and 6) supporting efforts to address pollution incidents involving hazardous and harmful substances from ships, as well as efforts to prevent and respond to oil and oil product spills in the NSR waters.

Clauses 18 to 25 of the 2020 Rules require the ship's master to notify the competent authority 48 hours before approaching the boundaries of the NSR water area. This notification must include the estimated arrival time, as well as detailed information about the vessel and its crew, including the ship's condition and characteristics, cargo, fuel, fresh water, and food supplies. Similar information must also be provided when the vessel calls at or departs from a Russian port or navigates Russian inland waterways. While sailing within the NSR waters, the vessel is required to report additional infor-

mation to the competent authority every 24 hours at 12:00, including any incidents or damage to the vessel, as well as current climatic and ice conditions.

Based on this information, the competent authority, pursuant to Clause 30.1 of the 2020 Rules, monitors vessel navigation in ice conditions and, when necessary, issues instructions to ensure navigation safety.

These measures are clearly designed to maximize safety of navigation in the challenging Arctic environment. The competent authority continuously receives up-to-date information on the geographical position, course, and condition of vessels operating in the NSR waters. Using this data, along with information on hydrometeorological, ice, and navigation conditions, it exercises 'manual control' over navigation, guiding vessels along the safest routes possible. Given the region's unique climatic conditions, this approach appears to be the most effective in ensuring safety and, consequently, protecting the marine environment in ice-covered areas.

The third navigation restriction in the NSR waters, as established by Russian legislation, concerns the compulsory provision of icebreaker escort and ice pilotage services for vessels operating in the region.

According to Clause 2 of the 2020 Rules, icebreaker escort in the NSR waters refers to the navigation of a vessel, or a convoy of vessels, assisted by one or more icebreakers, as well as the activities of the icebreaking fleet that support such navigation. These activities include forming a convoy of vessels and arranging their order to follow the icebreaker(s) (known as an "ice convoy"); preliminary ice channeling; towing vessels through ice; conducting ice reconnaissance by an icebreaker; and ensuring safe anchorage or drifting of vessels in ice while waiting for better ice conditions.

In describing this legal regime, it is important to highlight several key points.

First, as noted earlier, the 2020 Rules require entering into an icebreaker escort services contract only for vessels for which such escort is mandated by the admission criteria. In other words, icebreaker escorts are not compulsory for all vessels navigating the NSR waters, but only for those whose passage in certain ice conditions is either impossible or poses a significant risk to navigation safety.

Second, in accordance with Clause 30 of the 2020 Rules, icebreaking operations must be conducted by icebreakers flying the Russian Federation's state flag.

This requirement should not be interpreted as discriminatory against other countries possessing icebreaker fleets. Given that the 2020 Rules establish a uniform navigation regime across the entire NSR water area, and that overall navigation management and icebreaker escort services are under the jurisdiction of Rosatom Corporation, it is both logical and reasonable that icebreaker escort vessels be Russian-flagged and therefore subject to Russian law.

Furthermore, this requirement is well justified from a logistical standpoint, as Russia is the only country possessing a substantial nuclear-powered icebreaker fleet, managed by Atomflot, a subsidiary of Rosatom Corporation. This arrangement ensures not only a consistent legal framework but also a uniform approach to managing maritime operations, which undoubtedly enhances navigation safety.

The requirement that icebreaker escorting be carried out exclusively by vessels flying the Russian flag is thus a necessary and sufficient measure to ensure both navigation safety and environmental protection. The obligation for a vessel to receive icebreaker escort depends on whether its ice class corresponds to the anticipated ice conditions during navigation. Additionally, the requirement that the icebreaker operate under the law of its flag state ensures legal and logistical consistency in these maritime operations.

Compulsory ice pilotage is established by Clause 26 and Section II.1 of the 2020 Rules to ensure the safety of ship navigation, prevent accidents, and protect the marine environment in the NSR waters. This requirement is further detailed in the 2022 Rules of Ice Pilotage of Vessels in the Waters of the Northern Sea Route.

Essentially, this regime closely resembles the standard pilotage framework and does not impose additional burdens on shipowners, other than the obligation to take an ice pilot on board and follow their guidance. The ice pilot evaluates ice conditions and adjusts the vessel's course and speed accordingly.

Other restrictions established by the 2020 Rules, which are not directly related to the previously mentioned legal regimes, include additional requirements for vessel equipment and supplies – such as warm clothing, fuel, fresh water, and food (Clauses 38-39) – as well as the prohibition of discharging oil residues into the water (Clause 41). These measures are designed to ensure both maritime safety and environmental protection.

Therefore, based on the above analysis of the laws and regulations enacted by the Russian Federation concerning the portions of its EEZ within the NSR waters, it can be confidently affirmed that they fully comply with the requirements and criteria set forth in Article 234. The primary – and essentially sole – purpose of these laws and regulations is to establish a highly professional and centralized system for managing navigation in the severe and hazardous climatic conditions of the Arctic Ocean, while maximizing navigation safety and protecting the Arctic marine environment.

Conclusion

Shipping in polar waters involves significant risks to human life, valuable assets, and the highly fragile and vulnerable environment. These risks are further exacerbated by global warming, which causes greater instability in ice conditions and worsens climatic challenges. Consequently, there is a clear need for a centralized navigation management system in ice-covered regions, backed by a special, uniform legal framework to ensure its continuous and effective operation.

A systemic interpretation of Article 234 leads to the conclusion that a coastal state's enactment of non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels within the limits of its EEZ is not a discretionary privilege but a mandatory obligation. This obligation stems from the broader duty to protect the marine environment, as outlined in Articles 192 and 194 of the

Convention. Accordingly, the principle of "due regard to navigation" should be interpreted to mean that any restrictions or requirements imposed by the coastal state's laws and regulations must primarily aim to ensure safety and environmental protection in severe climatic conditions, without being discriminatory, unreasonable, or excessive.

Therefore, any concerns expressed by foreign states about the Russian Federation's establishment of navigation rules in the NSR waters lack legal foundation. A thorough analysis of the relevant regulations clearly shows that the legal restrictions and requirements established by Russian law are intended to maintain and operate a centralized system for managing Arctic shipping safety, based on continuous monitoring of ice and climatic conditions. These measures aim to prevent vessels unsuited to specific ice conditions from entering the area, while ensuring the systematic collection and processing of information on all ships transiting the NSR. This approach supports maritime operations that enable Arctic navigation with minimal risks to both safety and the marine environment.

About the Authors:

Viatcheslav V. Gavrilov – Doctor of Legal Sciences, Associate Professor, Director of the School of Law, Head of Public and Private International Law Department, Far Eastern Federal University,10, Ajax Bay, Russky Island, Vladivostok, Russian Federation, 690922. E-mail: gavrilov.vv@dvfu.ru

Gleb S. Liashko – Assistant at the Public and Private International Law Department, Far Eastern Federal University, 10, Ajax Bay, Russky Island, Vladivostok, Russian Federation, 690922. E-mail: liashko.gs@dvfu.ru

Conflict of interest:
The authors declare the absence of conflicts of interest.

References:

Ezhova T.G. 2014 Principy osushchestvleniya mezhdunarodnoi zashchity morskoi sredy Baltiyskogo morya [Principles for the implementation of international protection of the marine environment of the Baltic Sea]. *Vestnik Baltijskogo federal'nogo universiteta im. I. Kanta. Seriya: Gumanitarnye i obshche-stvennye nauki.* No. 3. P. 147-155. (In Russian).

Gavrilov V.V. 2015. Pravovoi status Severnogo morskogo puti Rossiiskoi Federatsii [Legal status of the Northern Sea Route of the Russian Federation]. *Zhurnal rossiiskogo prava.* No. 2. P. 147-157. (In Russian). DOI: https://doi.org/10.12737/7635

Gavrilov V.V., Dremliuga R.I., Kripakoova A.V. 2017. Tolkovanie i primenenie stat'i 234 Konvencii OON po morskomu pravu 1982 g. v usloviyah sokrashcheniya ledovogo pokrova Arktiki [Interpretation and Application of Article 234 of the United Nations Convention on the Law of the Sea of 1982 in Light of the Shrinking Ice Cover in the Arctic]. *Zhurnal rossiiskogo prava.* No. 12. P. 151-160. (In Russian). DOI: https://doi.org/10.12737/article_5a20050801d1a2.96251387

Gavrilov V., Dremliuga R., Nurimbetov R. 2019. Article 234 of the 1982 United Nations Convention on the law of the sea and reduction of ice cover in the Arctic Ocean. *Marine Policy.* Vol. 106, 103518. DOI: 10.1016/j.marpol.2019.103518

Nersesov B.A., Rimskij-Korsakov N.A. 2021. Rezul'taty ekologicheskih issledovanii rossiiskih arkticheskih morei [Results of environmental studies of Russian Arctic seas]. *Rossijskaya Arktika.* No. 13. P. 14-25. (In Russian).

Rossi C.R. 2014. The Northern Sea Route and the Seaward Extension of Uti Possidetis (Juris). *Nordic Journal of International Law.* Vol. 83. Issue 4. P. 476-508. DOI: https://doi.org/10.1163/15718107-08304004

Solski J.J. 2021. The 'Due Regard' of Article 234 of UNCLOS: Lessons from Regulating Innocent Passage in the Territorial Sea. *Ocean Development & International Law.* Vol. 52. Issue 4. P. 398-418. DOI: https://doi.org/10.1080/00908320.2021.1991866

Solski J.J. 2022. The Northern Sea route at the crossroads: what lies ahead after the war in Ukraine? *The Polar Journal.* Vol. 12. No. 2. P. 401-403. DOI: https://doi.org/10.1080/2154896X.2022.2133389

Statuto A.I. 2020. Obzor roli Arkticheskogo sudohodstva I obespe-chenie ego ekologicheskoi bezopasnosti [Overview of the Arctic Shipping Role and Ensuring of its Envirnmental]. *Rossijskaya Arktika.* No. 9. P. 5-16. (In Russian). DOI: https://doi.org/10.24411/2658-4255-2020-12091

Sun S., Ma L. 2016. Restrictions on the Use of Force at Sea: An Environmental Protection Perspective. *International Review of the Red Cross.* Vol. 98. № 902. P. 515-541.

Virzo R. 2015. Coastal State Competences Regarding Safety of Maritime Navigation: recent trends. *Seqüência Estudos Jurídicos e Políticos.* Vol. 36. No. 71. P. 19-42. DOI: http://dx.doi.org/10.5007/2177-7055.2015v36n71p19

Vylegzhanin A.N., Nazarov V.P., Bunin I.V. 2020. Severniy morskoy put': k resheniyu politico-pravovyh problem [The Northern Sea Route: towards solving political and Legal problems]. *Vestnik RAN.* T. 90. No. 12. P. 1105-1118. (In Russian). DOI: 10.31857/S0869587320120270