insights

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Maritime Safety and Outer Space Dimensions of the European Union's New Arctic Policy

Introduction

On October 13, 2021, the European Union (EU) launched its new Arctic policy document[1] in the form of a joint communication by the European Commission (the EU's executive) and the High Representative of the Union for Foreign Affairs and Security Policy (the closest institution the EU has to a Secretary of State or Foreign Minister) to the European Parliament (EP), the Council (in which the governments of the 27 member states are represented) and two advisory bodies, the European Economic and Social Committee (EESC) and the Committee of Regions (CoR). In this policy document, the role of outer space-related EU policies features prominently, in particular in the context of safety at sea. This *Insight* is intended to provide an introduction to the connection between the European Union's outer space and Arctic policies from an international legal perspective.

Dangers of Ship Operations in Polar Waters

Among the most obvious effects of climate change is the melting of sea ice in the Arctic. Temperatures in the Arctic warm three times as fast as the global average.[2] The reduction of sea ice cover makes the Arctic ocean attractive for transport purposes, in particular as a shortcut for the transport of goods between East Asia on one end and Europe and the East Coast of North America on the other end, but also for the transport of raw materials and hydrocarbons, especially gas from Russia to China along the Northern Sea Route (NSR). In addition, Arctic cruise tourism had seen a boom in recent years before the ongoing COVID-19 pandemic, in particular in Northern Europe and in Canada's[3] North West Passage (NWP). Some cargo shipping companies have recently indicated a lack of interest in using the Arctic as a transportation route, due to concerns for the Arctic marine

environment.[4] In the long run, however, the Arctic ocean will see more maritime traffic. The European Union is planning for this future by extending the transportation infrastructure in its member states, including port infrastructure in the Northern part of the Baltic Sea[5] and Arctic digital connection infrastructures.[6]

Warming temperatures, however, do not mean that the Arctic ocean will become safe from the threat posed by sea ice overnight. Indeed, the Polar Code,[7] a binding legal instrument under International Convention for the Safety of Life at Sea[8] (SOLAS) and the International Convention for the Prevention of Pollution from Ships[9] (MARPOL) that entered into force on January 1, 2017, identifies a number of specific hazards in polar waters.[10] Among these hazards are bergy waters, i.e., large pieces of ice floating in the water that pose a risk to ships. Situational awareness, in particular awareness of the presence of sea ice, is essential for the safety of ship operations in the Arctic. This concern is well-founded: it was only due to the presence of another cruise ship in the vicinity that the loss of the *MS Explorer* in the Southern Ocean in 2007 did not result in the loss of human life.

Oil spills pose another concern in the context of disaster risk reduction and maritime safety law in the Arctic. Oil spills in the Arctic are notoriously difficult to clean[11] and an oil spill from a maritime disaster in the Arctic would prove devastating for the fragile marine environment in the region. In addition, the limited Search-and-Rescue (SAR) infrastructure in the Arctic means that any ship-related disaster involving cruise ships with potentially thousands of passengers would likely become a mass-casualty event.[12]

Enhancing Maritime Safety in the Arctic through EU Space Policies

Ship operations in the Arctic remain inherently dangerous. While the Polar Code has contributed significantly to enhancing maritime safety by focusing on ship operations, the European Union is making significant technical contributions by tasking its space infrastructure with enhancing maritime safety. While the EU's space activities are in practice operated by the European Space Agency (ESA), which is independent of the EU,[13] policy decisions made by the EU regarding outer space have an impact beyond the EU itself.

The EU's fleet of Copernicus Earth observation satellites and the associated forecasting and monitoring center for the Arctic Ocean contribute to improvements in maritime safety, not only for citizens of the European Union but, in principle, for everybody. Through Copernicus, the European Union provides an important tool to increase awareness of ship operators in polar waters. EU-funded Copernicus data is available free of charge to

the general public, including for commercial purposes. There are already companies operating in Europe that provide information on the presence of sea ice in the Arctic Ocean and the Baltic Sea based on this freely available data.[14] Based on these efforts, the EU has already established the Copernicus Emergency Management Service[15] that provides geographical information in the form of customized maps for disaster management and emergency response services.

In addition, Galileo, a service similar to Russia's GLONASS and the American GPS, is being used to support SAR services.[16] In general, satellites have connectivity problems at high latitudes, and the EU has taken this concern and the needs of ship operators and local communities in the Arctic into account. Accordingly, "[t]he Galileo Public Regulated Service will ensure unlimited and uninterrupted access to robust navigation services in the Arctic to its authorized users, enhancing the security of operations in the region".[17] A new service offered in this context is the Galileo Return Link Service which "offers new functions for sailors and pilots operating in hostile environments"[18] and which is available globally without cost.[19]

Utilizing Existing Structures

In addition to making technical tools to enhance maritime safety available free of charge, the EU is also utilizing existing governance structures and cooperative mechanisms. For example, the Arctic Policy provides that the EU will "extend civil protection capacities and search and rescue cooperation,"[20] by utilizing the Union Civil Protection Mechanism (UCPM) that already cooperates with the Emergency Prevention, Preparedness and Response Working Group (EPPR) of the Arctic Council.[21] Other EU efforts in this field include the European Marine Observation and Data Network (EMODNet)[22] and the Global Disaster Alert and Coordination System (GDACS).[23] The EU is committed to utilizing these resources within the Arctic to support cooperative structures such as the Arctic Coast Guard Forum.[24] Increased cooperation between coast guards is already part of the EU Maritime Security Strategy Action Plan that was adopted in 2014.[25] The benefits that the EU adds to maritime safety in the Arctic are not only technical but also cooperative in nature.

Conclusions

The new EU Arctic policy will strengthen existing ties between the maritime and space sectors and, in doing so, will materially benefit maritime safety in the Arctic. Bringing together EU space activities and Arctic maritime safety are just two pieces of the puzzle that make up the policies of the European Union with regard to the Arctic. Although not

formally an observer at the Arctic Council, the EU is part of the governance of the Arctic and has economic and/or political connections to all Arctic states. In its new Arctic policy, the EU recognizes that it already plays a role in the Arctic and that its activities impact the Arctic.[26] The EU's policy towards the Arctic is becoming more holistic, covering issues as diverse as climate change, indigenous rights, the protection of the environment, sustainable development, safety, and security. At the heart of the new policy is a fundamental change in the approach Brussels brings to the Arctic: while the Arctic was seen in the past as a source of natural resources,[27] today the interests of the people who live in the Arctic matter more to the EU than ever before.[28] This change is due to many years of conversations with Arctic stakeholders and the result of an ongoing learning process.

In the context of Arctic maritime safety, the EU is playing on its strengths, utilizing existing technical capacities to provide an important contribution to disaster risk reduction in Arctic waters, both in the Arctic Ocean and in the Baltic Sea, which also experiences ice cover in the winter months. In an early analysis of the policy, Stepien and Raspotnik describe the EU as "confident"[29] and connect this new-found confidence to the transformative nature of Europe's pivot to a greener future.[30] While it remains to be seen whether the EU will be able to live up to its own goals, the practical benefits for maritime safety are already tangible today.

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[1] European Commission & High Representative of the Union for Foreign Affairs and Security Policy (2021). Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A stronger EU engagement for a peaceful, sustainable and prosperous Arctic (Oct. 13, 2021), JOIN(2021) 27, https://eeas.europa.eu/sites/default/files/2_en_act_part1_v7.pdf.

[2] IPCC, Special Report: Global Warming of 1.5 ºC – Summary for Policymakers (2021), https://www.ipcc.ch/sr15/chapter/spm/.

[3] Canada has drawn straight baselines around its Arctic waters, making the NWP internal waters. This view of the legal status of the NWP is contested, for example by the United States. In practice, this difference in legal interpretation does not impede the successful cooperation between Canada and the United States in the region.

[4] Malte Humpert, *Two more shipping companies say they won't use Arctic routes*, ARCTIC TODAY (Oct. 21, 2019), https://www.arctictoday.com/two-more-shipping-companies-say-they-wont-use-arctic-routes/.

[5] *See supra*, note 1, p. 15.

[6] *Id.*, pp. 15 et seq.

[7] International Code for Ships Operating in Polar Waters, MEPC 68/21/Add.1, Annex, https://wwwcdn.imo.org/localresources/en/MediaCentre/HotTopics/Documents/POLAR%20CODE%20TEXT%20AS%20ADOPTED.pdf.

[8] International Convention for the Safety of Life at Sea (SOLAS), 1184 U.N.T.S. No. 18961, https://treaties.un.org/doc/Publication/UNTS/Volume%201184/volume-1184-I-18961-English.pdf.
[9] International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, and Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1340 U.N.T.S. No. 22484, https://treaties.un.org/doc/Publication/UNTS/Volume%201340/volume-1340-A-22484-English.pdf.
[10] *See supra*, note 7, Introduction, § 3.
[11] Peter Wadhams, *A Farewell to Ice – A Report from the Arctic* (2017) 99.
[12] Experiences from incidents in near-Arctic waters, such as the long-term effects of the 1989 Exxon Valdez oil spill in the North Pacific off the coast of Alaska that devastated the regional environment and local economy, the challenges seen in the 2019 evacuation of passengers from the cruise ship Viking Sky in the immediate vicinity of Norway's coast in the North Atlantic and the loss of life during the crash of a U.S. Coast Guard rescue helicopter during the rescue operation during the Selendang Ayu disaster off Unalaska island in 2004, highlight the risks associated with ship operations in extreme waters.
[13] On the relationship between EU and ESA, *see* Press Release, ESA, ESA and EU celebrate a fresh start for space in Europe, Press Release No. 20-2021 (June 22, 2021), https://www.esa.int/Newsroom/Press_Releases/ESA_and_EU_celebrate_a_fresh_start_for_space_in_Europe.
[14] Commission Delegated Regulation 1159/2013 of July 12, 2013, supplementing Regulation 911/2010 of the European Parliament and of the Council on the European Earth monitoring programme (GMES) by establishing registration and licensing conditions for GMES users and defining criteria for restricting access to GMES dedicated data and GMES service information, 2013 O.J. (L 309) 1, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1159.
[15] Supra, note 1, p. 5.
[16] *Id.*, p. 3.
[17] *Id.*
[18] *Id.*, p. 5.
[19] *Id.*
[20] *Id.*, p. 2.
[21] *Id.*, p. 5.
[22] *Id.*
[23] *Id.*
[24] *Id.*, p. 6.
[25] *Id.*
[26] *Cf. id.*, p. 7.
[27] Communication from the Commission to the European Parliament and the Council, The European Union and the Arctic Region (Nov. 20, 2008), COM(2008) 763 final, § 3.1.
[28] *See supra*, note 1, p. 13.
[29] Adam Stepien & Andreas Raspotnik, Continuity with great confidence – The European Union's 2021 Arctic Policy update, THE ARCTIC INSTITUTE (Oct. 2021), https://www.thearcticinstitute.org/wp-content/uploads/2021/10/Continuity-with-Greater-Confidence-The-EUs-Arctic-Policy-Update-2021.pdf, p. 1.
[30] *Id.*, p. 16.