Chairmanship of the Russian Federation of the Arctic Council in 2021–2023

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1.1 The Arctic and the Arctic zone of the Russian Federation

The Arctic is the Earth's northern polar region including the northern fringes of Eurasia and North America (except for southern Greenland and the Labrador Peninsula), the Arctic Ocean and its islands, as well as adjacent regions of the Atlantic and Pacific Oceans (Figure 1).

The Arctic has a total area of some 27 million km^2, if the southern border of the tundra zone is taken as its land boundary. If the Arctic Circle is taken as the southern border, the area will be 21 million km^2.

The region's natural and climatic features include low air temperatures (around 0 °C –10 °C[1] on average in summer and a below-zero average annual temperature), predominantly frozen precipitation, alternation of polar day and polar night, presence of glaciers, ground ice and permafrost, and absence of forests.

1 Climate of the Arctic Air temperature, GoArctic.
URL - https://goarctic.ru/news/seo-temperatura-klimat-arktiki-temperatura-vozdukha/ (accessed on: 01.06.2023).

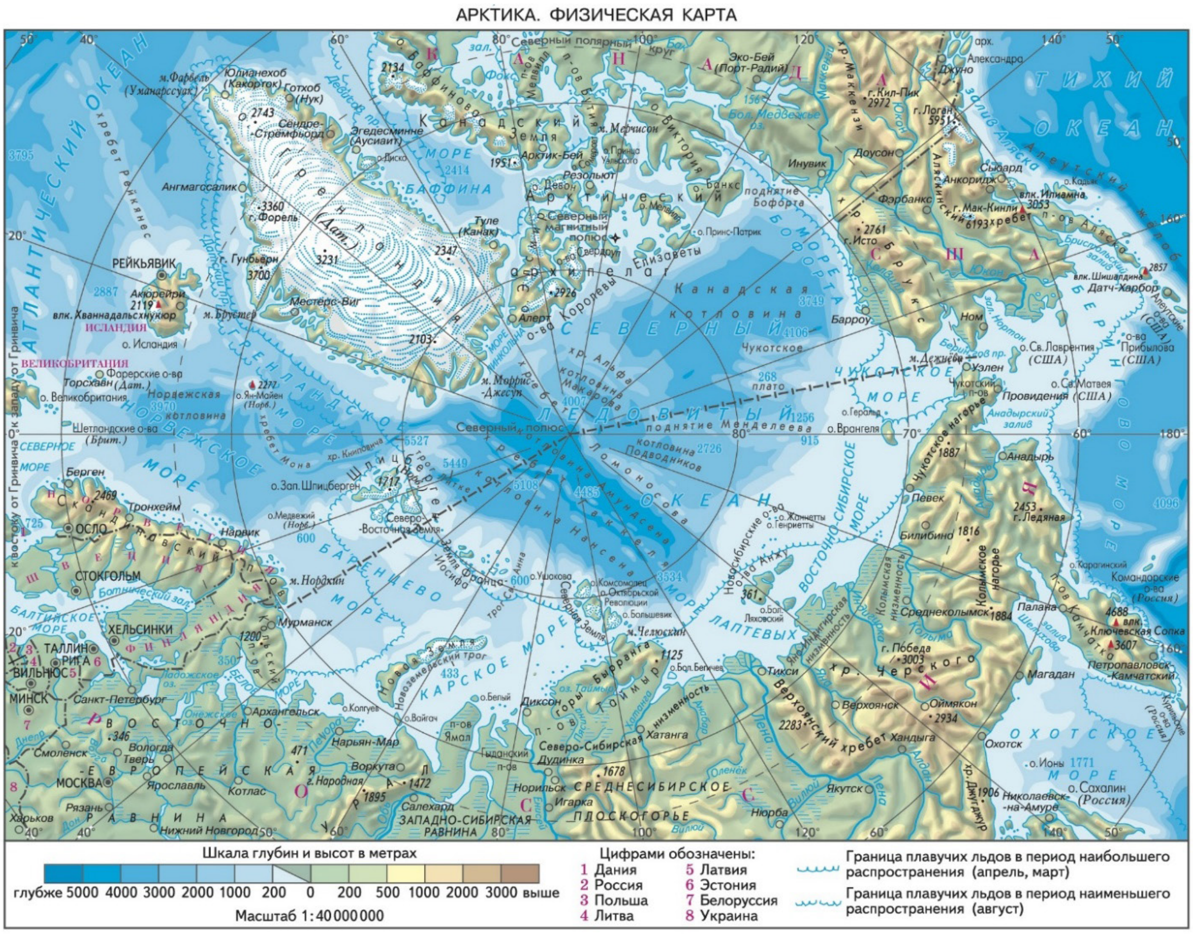

Figure 1. The Arctic
Source: The Great Soviet Encyclopaedia

In the past few decades, the Arctic has become a strategic territory for many countries, chiefly because it contains substantial reserves of hydrocarbons, rare metals and rare earth minerals. Moreover, human impact on nature and global climate change have led to melting ice and permafrost and, consequently, to expanded transport capacity and throughput of the northern seas. Use of Arctic territories plays a crucial role in global powers' military strategic planning.

The research community's interest in the Arctic is another important reason. In the context of global warming, the Arctic is the most vulnerable region of our planet. All these changes bring more than just new opportunities – they also carry major risks and threats. For example, international studies indicate that just the submarine permafrost of the Eastern Arctic seas and the Kara Sea contains enormous reserves of frozen methane in the form of gas hydrates that are hundreds of times greater than the total methane contained in the atmosphere. The methane potential of

these territories is estimated at 1,750 Gt of carbon (1 Gt = 1 billion tonnes), which is 3 orders of magnitude higher than the annual methane emissions caused by Man on the entire planet. So, the methane potential of the Arctic shelf hydrates alone may be viewed as a primary factor that might lead to an exponential increase in the content of atmospheric methane and hard-to-predict climatic consequences of severe intensification of the greenhouse effect.

The Arctic region is shared by five countries: Russia, Norway, Denmark (Greenland), the USA (Alaska) and Canada. Three other countries – Finland, Sweden and Iceland – are also considered Arctic states as the Arctic Circle crosses their territory or territorial waters.

The key transport routes are the Northern Sea Route (NSR) passing through the Arctic seas of the Russian Federation (the RF) and Norway, and the Northwest Passage passing through the waters of Canada's Arctic Archipelago. The NSR is the shortest shipping route between Northern Europe and the Asia-Pacific, offering vast opportunities for access to resources and trade.

The Arctic zone of the Russian Federation (Russian Arctic) lies in the very north of the European and Asian parts of the Russian Federation, along the Arctic Ocean coastline: the Barents, Kara, Laptev, East Siberian and Chukchi Seas. It is Russia's longest maritime border and also includes the inland sea waters adjacent to this coastline, the territorial sea, the exclusive economic zone and the continental shelf of the Russian Federation with the islands in these territories.

The total area of the Russian Arctic is around 9 million km^2 (including 5 million km^2 on shore)[2]. It is home to almost 2.5 million people (just some 1.5% of the country's population) but it yields 10% of Russia's GDP[3], generates 20% of its exports and covers over 70% of all business activity in the region. The Russian Arctic produces 80% of the natural gas, 17% of the oil (Figure 2), 90% of the nickel and cobalt, 60% of the copper, and almost 100% of the diamonds, rare metals and rare earth minerals of the Russian Federation.

2 Arctic Russia. URL - https://arctic-russia.ru/about/ (accessed on: 15.05.2023).

3 "Rosstat: Residents of the Arctic Zone Yield 10% of Russia's GDP". RIA Novosti, 21.05.2020. URL - https://ria.ru/20200521/1571761572.html (accessed on: 15.04.2023).

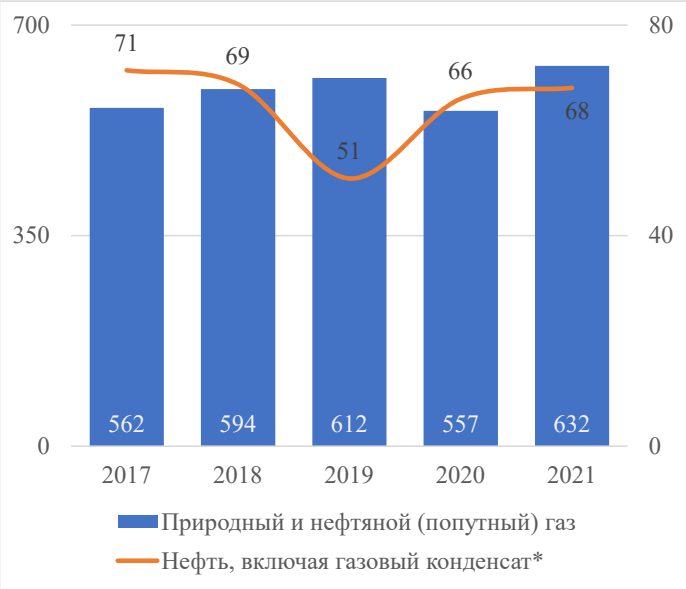

Figure 2. Production of natural gas and oil on the land territory of the Russian Arctic

* Dehydrated, desalted and stabilized; up to 2019 – crude

Source: Rosstat (Russia's Federal State Statistics Service)

The volume of shipping via the Northern Sea Route passing through the territory of the Russian Arctic has increased 3.5-fold in the past five years and more than 8.5-fold since 2014, exceeding 34 million tonnes in 2022 (Figure 3). By 2030, it is expected to exceed 200 million tonnes.[4] All this makes the Arctic zone the country's primary resource base and a critical transport asset.

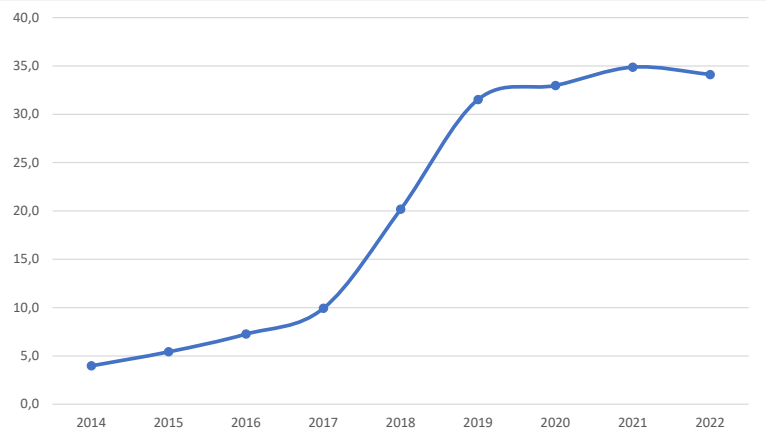

Figure 3. Volume of freight carriage via NSR waters

Source: Federal Agency for Maritime and River Transport

4 "Trutnev Determines the Northern Sea Route Traffic Volume up to 2030". TASS, 13.04.2022. URL - https://tass.ru/ekonomika/14365235 (accessed on: 20.05.2023).

1.2 Overview of the Arctic Council

Overview of general information about the Arctic Council (policy documents, business processes, working groups and their business processes, project approval rules and procedures)

The legal framework of Arctic maritime areas is governed by the rules of international maritime law defining the inland sea waters, territorial sea, exclusive economic zone, continental shelf, etc. The fundamental document is the 1982 UN Convention on the Law of the Sea. Yet, the 1958 UN Convention also remains in effect, this creating additional uncertainties about the rules for delimiting the continental shelf.

Despite this legal conflict, the Arctic Council (AC) was established in Ottawa, Canada in 1996 as a high-level intergovernmental forum of Arctic states for resolving problems of the Arctic, specifically those relating to sustainable development and environmental protection. The AC's founding documents explicitly stipulate that the organization does not deal with any military security issues.

According to the Declaration on the Establishment of the Arctic Council,[5] its members are the eight states with territory crossed by the Arctic Circle: Denmark (Greenland), Iceland, Canada, Norway, the Russian Federation, the United States of America (Alaska Peninsula), Finland and Sweden. The AC makes decisions by consensus. The AC's "permanent participants" are six organizations representing Indigenous peoples of the Arctic, which take part in the decision-making process and shape the AC's policies (Arctic Athabaskan Council, Aleut International Association, Gwich'in Council International, Inuit Circumpolar Council, Saami Council, and Russian Association of Indigenous Peoples of the North). Thirteen non-Arctic states: Great Britain, The Netherlands, Poland, Germany, France, Spain, Italy, China, India, Japan, the Republic of Korea, Singapore and Switzerland, as well as 13 intergovernmental and 12 non-governmental organizations, are observers in the AC.

The AC Secretariat became operational in 2013. It is located in Tromsø, Norway. The AC chairmanship rotates every two years among the member states. Iceland chaired the Arctic Council in 2019–2021. Russia chaired the AC in 2004–2006 and in 2021–2023, replaced by Norway in 2023. Accordingly, the chairing state holds meetings of the Arctic Council once every two years. The latest meetings were held in Reykjavik (Iceland) in May 2021 and in Salekhard (Russia) in May 2023.

The Minister of Foreign Affairs of the chairing state becomes the Chairman of the Arctic Council. At the end of each chairmanship, representatives of the Arctic states meet at ministerial meetings to review the AC's proceedings, adopt a corresponding declaration and give mandate to the new chairman. Between the ministerial meetings, the AC's activities are managed by Senior Arctic Officials (SAOs) appointed by the Arctic States and acting under the guidance of SAO Chairman. The SAOs and permanent participants meet at least twice a year.

5 Ottawa Declaration on the establishment of the Arctic Council, 1996.
URL - https://oaarchive.arctic-council.org/handle/11374/85 (accessed on: 15.04.2023).

The Council's Strategic Plan 2021 to 2030,[6] was adopted in May 2021 to mark the Arctic Council's 25th anniversary. The Plan outlines strategic goals for the forum and its permanent participants. These include to:

- monitor, assess and highlight the impact of climate change in the Arctic in order to encourage compliance with the Paris Agreement and support stronger global measures for reducing greenhouse gases and short-lived climate pollutants, while strengthening circumpolar cooperation on: climate science and observations, reduction of emissions, climate change mitigation, adaptation and resilience, exchange of knowledge and innovative technologies in support of these efforts;
- promote pollution prevention, monitoring, assessment, conservation and protection of Arctic biodiversity, ecosystems and species habitats, based on the best available science, and respecting the importance of sustainable development for all current and future generations of Arctic inhabitants;
- promote conservation and sustainable use of the Arctic marine environment for the benefit of all current and future generations of Arctic inhabitants, encourage safety at sea, prevention of marine pollution and cooperate to improve knowledge of the Arctic marine environment, monitor and assess current and future impact on Arctic marine ecosystems, work together to enhance cooperation on marine issues and promote respect for the rule of law and existing legal frameworks applicable to Arctic waters;
- enhance work aimed at social and cultural inclusion and at improving health, safety, resilience and well-being of all Arctic inhabitants, with a particular focus on Indigenous peoples;
- advance cooperation on sustainable and diverse economic development in the Arctic, promote economic cooperation, knowledge and information sharing on innovative, sustainable and low-emission technologies, for the benefit and increased resilience of all Arctic inhabitants, with a particular focus on Indigenous peoples;
- generate, collect, analyze and communicate science, and traditional knowledge and local knowledge, as appropriate, and enhance understanding of the Arctic within and beyond the region in order to inform policy-shaping and decision-making;
- – strengthen the Arctic Council as the pre-eminent high-level circumpolar forum for effective coordination and cooperation, and enhance its ability to respond effectively to emerging challenges and opportunities in the Arctic.

Each goal has its own action plan for contributing to its achievement. Execution of these action plans was assigned, inter alia, to Working Groups established in 1991–2006 to handle the forum's priority tasks.

6 Arctic Council Strategic Plan 2021 to 2030, the Arctic Council, 20.05.2021.
URL - https://oaarchive.arctic-council.org/bitstream/handle/11374/2601/ac-strategic-plan%20RU.pdf (accessed on: 15.05.2023).

As of today, the Arctic Council has six Working Groups:

- **Arctic Contaminants Action Program (ACAP).** Works to prevent and reduce pollution and environmental risks in the Arctic. Implements projects to raise awareness on how to reduce pollution and harmful emissions, and mitigate associated environmental, human health and socio-economic risks;
- **Conservation of Arctic Flora and Fauna (CAFF).** Works to promote the conservation of Arctic biodiversity, communicates its findings to the Arctic governments and residents, and contributes to finding shared solutions towards the economic development of the region while preserving biodiversity and improving living standards;
- **Protection of the Arctic Marine Environment (PAME).** The AC's coordination centre for the protection and sustainable use of the Arctic marine environment. PAME addresses marine policy measures in response to environmental change caused by both land and sea-based activities. It also develops and coordinates strategic plans, programmes, assessments and guidelines, complementing existing legal arrangements aimed at protection of the Arctic marine environment;
- **Arctic Monitoring and Assessment Programme (AMAP).** Works to monitor and assess pollutants and climate change effects in the Arctic. AMAP carries out independent, knowledge-based and peer-reviewed assessments of the state of pollution and climate change effects to provide expert support for responsible policy-making and effective decisions to the benefit of ecosystems and human health;
- **Emergency Prevention, Preparedness and Response (EPPR).** Within its mandate, the EPPR contributes to prevention of, preparedness for and response to environmental and other emergencies and accidents, and promotes cooperation in search and rescue efforts. While not a prompt response organization, the EPPR implements projects for identifying and filling the gaps in such activities, generating strategies, sharing information, collecting data and collaborating with relevant partners to maximize use of the Arctic's existing opportunities and research potential;
- **Sustainable Development Working Group (SDWG).** Works to protect and improve the environmental, economic and social conditions and wellbeing of Indigenous peoples and Arctic communities. Carries out initiatives delivering practical knowledge and helping build the capacity of Indigenous peoples and Arctic communities to solve problems and secure benefits.

Acting through its Working Groups, the AC carries out comprehensive environmental, ecological and social assessments. Furthermore, the AC became a platform for negotiations on the signing of three critical legally binding agreements between the eight Arctic states:

Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (Nuuk, 2011);[7]

7 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, the Arctic Council. URL - https://oaarchive.arctic-council.org/handle/11374/531 (accessed on: 20.05.2023).

– Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (Kiruna, 2013);[8]
– Agreement on Enhancing International Arctic Scientific Cooperation (Fairbanks, 2017).[9]

The AC may also establish taskforces or expert groups for performing specific tasks. For example, in 2015, foreign ministers of the AC member states adopted the Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions, which established the Expert Group on Black Carbon and Methane (EGBCM). The EGBCM was tasked with generating a 'Progress Report and Recommendations' every two years on the basis of national reports and other relevant information.

The AC cooperates continuously and productively with various international regional organizations: the Arctic Coast Guard Forum (ACGF), Arctic Economic Council (AEC), International Arctic Science Committee (IASC), etc.

Sustainable development of the Arctic is a focal point for the Arctic Council. Pursuant to the guidelines, the Sustainable Development Working Group (SDWG) established in 1998 coordinates activities designated by the AC's programmes and decisions, including the following: reviews the progress of ongoing projects, programmes and other decisions, prepares, reviews and assesses new project proposals to be presented to SAOs and ministers, prepares coordinated reports on meetings and brings their content to the notice of national representatives and interested organizations, takes part in generating twice-yearly reports to SAOs on the progress of SDWG activities, ensures coordination of all events arranged and decisions made with representatives of the AC member states to achieve consensus, translates documents, etc. International meetings and workshops are arranged to address any issues of concern.

The SDWG Secretariat is located in Ottawa, Canada. The SDWG holds the AC's mandate to perform the following functions:

– to formulate measures to be taken by the Arctic states to promote sustainable development in the Arctic, including assessment of all their capabilities in this domain;
– to protect the environment and improve the economy, culture and wellbeing of Indigenous peoples and Arctic communities;
– to promote measures for improving the environmental, economic and social conditions of Arctic communities in general.

Two major expert groups operate under the SDWG: the Arctic Human Health Expert Group and the Social, Economic and Cultural Expert Group. Seeking to expand representation of Russian researchers and experts in the AC, the Ministry for the Development of the Russian Far East (ref. No. AK-08-18/4725, dated 29 April 2020) requested that secretariats of both expert groups be

8 Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, the Arctic Council. URL - https://oaarchive.arctic-council.org/handle/11374/529 (accessed on: 20.05.2023).

9 Agreement on Enhancing International Arctic Scientific Cooperation, the Arctic Council. URL - https://oaarchive.arctic-council.org/handle/11374/1916 (accessed on: 20.05.2023).

established at the National Research University Higher School of Economics, seeing that the Ministry for the Development of the Russian Far East and the Russian Ministry of Foreign Affairs (ref. No. 3489/2ed dated 27 March 2020 to the Ministry for the Development of the Russian Far East) deem it appropriate to establish the above secretariats in the Russian Federation to enable, among other things, proposals on the country's opinion to be presented at scheduled and extraordinary meetings.

The work of these expert groups focuses on resolving socio-economic issues and is crucial in the context of the mission assigned by Russian President Putin to improve the socio-economic conditions in the Russian Arctic and reinforce the ultimate importance of human capital in the Arctic.

Following instructions by ministers and SAOs, the SDWG and its expert groups have consistently integrated traditional and local knowledge into all their projects and activities, where appropriate. The AC's activities in all working groups have become intersectoral and interdisciplinary. In this connection, in addition to its own projects and activities, the SDWG has been contributing to the AC's priority activities carried out by other working groups and subsidiary bodies.

1.3 National policy priorities of the Arctic Council member states and key observers in the Arctic

Analysis of national policy priorities of the Arctic Council member states and key observers in the Arctic.

The national interests of the Arctic States and key observers in the AC are outlined in their own strategic documents and, in recent decades, similar declarations have emerged among non-Arctic states: China, India and others (Table 1). Countries in Latin America and the Persian Gulf are also showing an interest in the region.

It is also worth mentioning that some countries' strategies have undergone significant changes over the last 2–3 years in response to the region's politicization, and the United States and Great Britain have updated the documents since the start of Russia's special military operation in Ukraine and the acute shift in the foreign policy and foreign economic environments.

Table 1. Strategic documents and goals of states in the Arctic

Country	Document	Date	National interests and goals in the Arctic
Arctic states			
USA	The National Strategy for the Arctic Region [10]	07.10.2022	– security – climate change and environmental protection – sustainable economic development – international cooperation and management [11]
Canada	Arctic and Northern Policy Framework [12]	10.09.2019	– improving the living standards and wellbeing of Indigenous peoples of the North – developing infrastructure to bridge the gap between the northern regions and other territories of Canada – developing a sustainable inclusive economy in the northern regions – developing science and education – protecting ecosystems in the northern regions of Canada – establishing global order in the Arctic based on international law – ensuring security of the northern territories and their peoples – supporting connections between representatives of Indigenous peoples and other residents of Canada
Norway	People, Opportunities and Interests of Norway in the Arctic for 2020–2021 [13]	27.11.2020	– international image of the Arctic – relations with neighbors in the Barents Sea – development of the country's northern region – security in the Arctic region

10 The National Strategy for the Arctic Region, 07.10.2022. URL - https://www.whitehouse.gov/wp-content/uploads/2022/10/National-Strategy-for-the-Arctic-Region.pdf (accessed on: 20.04.2023).

11 The United States National Strategy for the Arctic Region, press release, The United States Government, 07.10.2022. URL - https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/07/fact-sheet-the-united-states-national-strategy-for-the-arctic-region (accessed on: 20.04.2023).

12 Arctic and Northern Policy Framework, Government of Canada. URL - https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587 (accessed on: 20.04.2023).

13 Mennesker, muligheter og norske interesser i nord, Meld. St. 9 (2020 – 2021) Melding til Stortinget, URL - https://www.regjeringen.no/contentassets/268c112ec4ad4b1eb6e486b0280ff8a0/no/pdfs/stm202020210009000dddpdfs.pdf (accessed on: 29.04.2023).

Country	Document	Date	National interests and goals in the Arctic
Iceland	Iceland's Policy on Matters Concerning the Arctic Region [14]	05.10.2021	– ensuring development and stability of the Arctic Council as the primary advisory body on Arctic issues – maintaining Iceland's status as an Arctic power with territory located in the Arctic region – designing a policy proceeding from adoption of the UN Convention on the Law of the Sea – promoting cooperation with Greenland and the Faroes – strengthening the rights of Indigenous peoples and supporting their involvement in decision-making related to the Far North – expanding foreign affairs pertaining to Iceland's interests in the Arctic – fighting the human-induced impact on climate change – maintaining sustainable development principles – expanding trade links between Arctic states – supporting scientific work in the context of Arctic research – examining Arctic challenges at the national level – ensuring security of the Arctic and the entire Arctic region
Finland	Finland's Strategy for Arctic Policy [15]	17.06.2021	– mitigating and adjusting to climate change effects – promoting freedom, wellbeing and rights of the Saami as an Indigenous group – knowledge and experience of working in the Arctic focusing on people's livelihoods and cutting-edge research – developing infrastructure and logistics – strengthening the AC's role as the main platform for resolving Arctic problems [16]
Denmark	Kingdom of Denmark Strategy for the Arctic 2011–2020[17,18]	August 2011	– ensuring a peaceful, secure and safe Arctic: applying the rules of international law, strengthening navigation safety and exercising sovereign rights – self-sufficient growth and development: use of standards of excellence in mining, transition to renewable energy sources, sustainable use of bioresources, scientific evidence-based development and vigorous international trade – development with care for the climate and nature of the Arctic: expanding knowledge about climate change effects and protecting the environment and biodiversity – close international cooperation: seeking global solutions to global challenges, expanding regional cooperation and securing national interests on a bilateral basis

14 Iceland's Policy on Matters Concerning the Arctic Region, Parliamentary Resolution 25/151. URL - https://www.government.is/library/01-Ministries/Ministry-for-Foreign-Affairs/PDF-skjol/Arctic%20Policy_WEB.pdf (accessed on: 25.04.2023).

15 Finland's Strategy for Arctic Policy, Finnish Government, 2021. URL - https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163247/VN_2021_55.pdf (accessed on: 20.04.2023).

16 Finland's Arctic Policy, Arctic Finland. URL - https://www.arcticfinland.fi/EN/Policy (accessed on: 20.04.2023).

17 Denmark, Greenland and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic 2011–2020. URL - library.arcticportal.org/1890/1/DENMARK.pdf (accessed on: 20.06.2023).

18 The previous Kingdom of Denmark Strategy for the Arctic 2011–2020 has been technically wrapped up, but the country has not yet presented its new 10-year Arctic strategy for 2021–2030.

Country	Document	Date	National interests and goals in the Arctic
Sweden	Sweden's Strategy for the Arctic Region [19]	29.09.2020	– international cooperation in the Arctic – ensuring security and stability in the region – climate policy and environmental efforts – Arctic research – sustainable economic development – improving the quality of life of Arctic residents
Non-Arctic states			
Great Britain	The United Kingdom's Arctic Policy Framework [20]	08.02.2023	– partnership and cooperation – protecting the climate, people and environment – maintaining security and stability – promoting our common prosperity
China	China's Arctic Policy White Paper [21]	26.01.2018	– research efforts in the Arctic – protecting the environment and combating climate change – lawful and efficient use of Arctic resources – developing Arctic sea routes – exploration and development of oil, gas, mineral and other non-living resources – conservation and use of fish and other living resources – international cooperation in the Arctic – promoting peace and stability in the region – developing tourism, etc.
India	India's Arctic Policy [22]	17.03.2022	– science and research – protecting the climate and environment – economic cooperation and collaboration in human development – transport and communications – management and international cooperation – building national capacity

Source: Governments of the states

19 Sweden's Strategy for the Arctic Region. URL - https://www.government.se/contentassets/85de9103bbbe4373b55eddd7f71608da/swedens-strategy-for-the-arctic-region-2020.pdf (accessed on: 25.04.2023).

20 Looking North: The UK and the Arctic. The United Kingdom's Arctic Policy Framework, 09.02.2023. URL - https://www.gov.uk/government/publications/looking-north-the-uk-and-the-arctic/looking-north-the-uk-and-the-arctic-the-united-kingdoms-arctic-policy-framework (accessed on: 20.04.2023).

21 China's Arctic Policy, The State Council Information Office of the People's Republic of China, 26.01.2018. URL - https://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm (accessed on: 20.05.2023).

22 Ministry of Earth Sciences (MoES), India. India's Arctic Policy: Building a partnership for sustainable development, 17.03.2022. URL - https://www.moes.gov.in/sites/default/files/2022-03/compressed-SINGLE-PAGE-ENGLISH.pdf (accessed on: 18.07.2022).

1.4 Projects of the Arctic Council

Overview of the main priorities and the total number of ongoing projects (including those involving organizations representing the Russian Federation); expert evaluation of AC projects to determine their compliance with the AC's fundamental operating principle, i.e., sustainable development of the Arctic and the role the Russian Federation plays in harmonizing this activity.

Published records show that, as of December 2021, the overall list of Arctic Council projects included 128 initiatives, 30 of which involved authorized representatives of Russian ministries, departments, state-owned companies and research institutions (Figure 4).

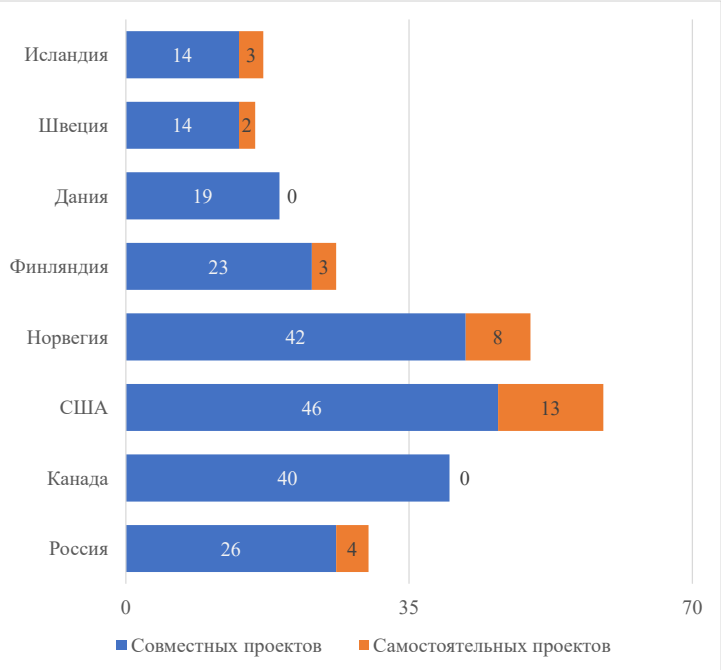

Figure 4. Participation by AC member states in Working Group project activities

* Excluding participation by representatives of associations and unions.

Source: The Arctic Council

Projects with Russia involved focus chiefly on the environment: biodiversity conservation, pollution abatement and waste disposal. These account for more than half the initiatives (Figure 5).

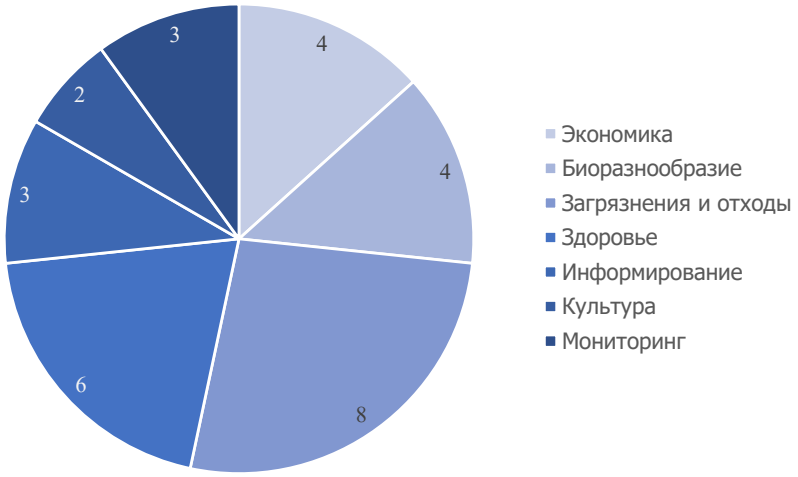

Figure 5. Breakdown of AC Working Group projects with Russian participation by area
Source: AC

A complete list of AC projects with Russian involvement as of November 2021 is provided in Appendix 1.

The breakdown of all projects by Working Group shows that most of the initiatives – 45 independent and 7 joint – came under PAME (Protection of the Arctic Marine Environment). CAFF (Conservation of Arctic Flora and Fauna) came second in the number of projects with 24 and 6 projects, respectively. The SDWG (Sustainable Development Working Group) coordinated 15 projects (Figure 6).

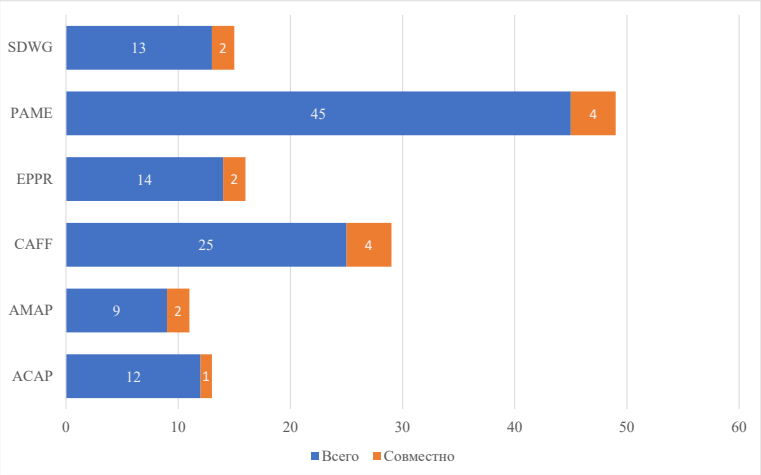

Figure 6. Distribution of AC projects among Working Groups

Note: The graph shows the distribution of 127 projects among Working Groups (joint projects are duplicated). The Expert Group on Black Carbon and Methane (EGBCM) runs one more project.

Source: AC

This distribution indicates a shortage of "economic" initiatives, which, as estimated by the Institute of Ecology of the National Research University Higher School of Economics, accounted for less than 15% of all AC projects as of the last reporting date. Meanwhile, most "economic" projects fall into this category by convention: they are at the intersection of economics and environmental protection, such as the New Low Sulfur Fuels, Fate, and Behavior in Cold Water Conditions project, which is also being conducted jointly by PAME and EPPR working groups.

Of the 15 SDWG projects, only three may be classified as economic:

- Arctic Hydrogen Energy Applications and Demonstrations, AHEAD – Russia and Norway;
- Sustainable Development Goals in the Arctic: The Nexus Between Water, Energy, and Food, WEF – Canada, Finland and Iceland; and
- Arctic Remote Energy Networks Academy II, ARENA II – Canada, Iceland, USA and Russia.

The remaining SDWG projects focus on the challenges of environment, healthcare, demography and social development of the Arctic region as a whole.

This sort of imbalance is typical of all AC projects, this being a long-standing problem.

At the Arctic Council's ministerial meeting in Inari (Finland, 9–10 October 2002), Arctic ministers requested SAOs to "… develop an action plan on sustainable development to realize a Framework Document adopted by the ministers in Barrow, the priorities in the Inari Declaration, latest scientific knowledge and decisions by the Johannesburg WSSD 2002, with the aim of adopting this action plan at the next Arctic Council Ministerial meeting…".

At the April 2003 meeting in Reykjavik, Iceland, the AC SAOs decided that the Sustainable Development Working Group would be responsible for developing this action plan, and Russia would head up this work.

The Arctic Council's Sustainable Development Action Plan (SDAP) was drafted in compliance with the AC's Inari Declaration (2002). It described concerted actions by all AC Member States, its working groups, permanent participants and observers to achieve gradual progress in ensuring sustainable development in the Arctic region subject to the AC's decisions and in line with the takeaways of the 2022 World Summit on Sustainable Development in Johannesburg.

The SDAP pursues the following goals:

- to identify the gaps in the AC's work in light of the stated sustainable development priorities;
- to determine the steps to be taken by the AC to bridge these gaps;
- to have the AC take purposeful actions to ensure gradual progress towards sustainable development in the circumpolar region in consideration of the interests and traditional knowledge of Arctic populations, including indigenous communities.

The SDAP mentioned that the AC's economics-related activities focused mainly on projects of particular interest to Indigenous peoples, such as the study of reindeer herding and drafting of proposals for development of shipping, air transport and information and communication technologies in the Arctic. It is specifically worth noting that, already in the 2002 Inari Declaration,[23] the ministers of AC Member States called on all Arctic states to strengthen economic cooperation and develop specific projects of mutual interest.

The SDAP was adopted by the ministers of the Arctic states during Russia's Chairmanship in the AC in 2004–2006 but was never implemented during the chairmanship of other AC member states. During its new AC chairmanship in 2021–2023, Russia planned to go back to this document and use it to level out the identified imbalances in the combination of all three elements that ensure sustainable development of the Arctic region (economic, social and environmental development).

1.5 Russia's projects during the Chairmanship

Analytical review of project and other initiatives prepared by the Russian Federation for joint implementation by the Arctic Council during the country's Chairmanship in 2021–2023 and in the longer term.

The main Russian project initiatives prepared for joint implementation by the Arctic Council and its Sustainable Development Working Group during Russia's Chairmanship and in the long term include:

23 Adopted at the Arctic Council's Ministerial Meeting in Inari, Finland, in October 2002.

1.5.1 Biosecurity in the Arctic

Pursuant to Clause 15 of the Strategy for Developing the Russian Arctic and Ensuring National Security up to 2035, which was approved by Decree No. 645 of the President of the Russian Federation dated 26 October 2020, primary tasks relating to environmental protection and ensuring environmental safety are performed through "...implementing measures to prevent entry by highly toxic and radioactive substances, as well as dangerous microorganisms, into the Arctic zone from abroad and building a system for prompt notification of government agencies and the public about emergence of or increase in risks of adverse effects of the most dangerous pollutants and microorganisms in connection with emergency situations caused by climate change..."

In tune with the above document, the Biological Security in the Arctic project was developed in coordination with the Ministry for the Development of the Russian Far East and the Russian Ministry of Foreign Affairs. This initiative by the Russian Federation received unanimous support from all the AC members and became Russia's only project officially approved in March 2021 by the designated AC's Sustainable Development Working Group.

One primary goal of this project is to develop an international system for rapid detection of and countermeasures against the threats of transboundary transfer of dangerous infections, toxins and toxic pollutants through biological pathways. Achievement of this goal will contribute to fulfilling the task formulated by the President of the Russian Federation Vladimir Putin in his address to the Federal Assembly of Russian Federation on 21 April 2021: "...we must have a robust and reliable shield in the field of sanitary and biological safety..."

The objectives of the project are to:

1) Combine the efforts of leading experts of interested working groups and permanent participants in formulating joint approaches and methods for assessing biological threats in the Arctic.

2) Produce a peer-reviewed report based on an assessment of existing experience and acquired knowledge, including those of Indigenous peoples, and findings of previous research efforts on specific biological threats in the Arctic that pose a threat to human life and welfare (Biosecurity White Paper).

3) Prepare recommendations for a screening, monitoring and reporting system at the level of Arctic communities to ensure control, prevention and communication of the risks of epidemics and pandemics.

1.5.2 Gas Hydrates: Contribution to Sustainable Development and Climate Transformation of the Arctic

On 22 April 2021, President of the Russian Federation Vladimir Putin highlighted in his speech at the Climate Summit that "...we should consider every single factor that causes global warming. For example, methane accounts for 20% of emissions caused by Man. And each tonne of methane contributes to the greenhouse effect 25–28 times more than a tonne of CO_2..." He proposed "...to initiate broad and effective international cooperation in calculating and monitoring the volume of all types of harmful emission released into the atmosphere..."

International studies published in the world's leading scientific publications indicate that just the submarine permafrost of the Eastern Arctic and Kara Seas contains enormous reserves of frozen methane in the form of gas hydrates that are hundreds of times greater than the total quantity of methane contained in the atmosphere. So, the methane potential of the Arctic shelf hydrates alone may be viewed as a primary factor that might lead to an exponential increase in the content of atmospheric methane and hard-to-predict climatic consequences of severe intensification of the greenhouse effect. The most recent research confirms that the degradation of submarine permafrost has reached a level threatening the stability of gas hydrates, with all that this might imply, within the lifetime of a single generation.

Given this premise, the problem of uncovering gas hydrates in the Arctic was regarded as a priority for Russia's Chairmanship in the AC and the AC Member States acknowledged it as being indubitably important. In consultation with the Ministry for the Development of the Russian Far East and the Russian Ministry of Foreign Affairs, HSE University developed the AC's project called Gas Hydrates: Contribution to Sustainable Development and Climate Transformation of the Arctic. Members of the Sustainable Development Working Group upheld Russia's initiative in 2021 but it did not receive the status of an AC project because the proceedings of the AC and its bodies were suspended for political reasons.

One main goal of the project is to formulate a series of measures for preventing and/or minimizing damage to the Arctic ecosystem (on a local and global scale), as well as to set up an international system for assessing, forecasting, monitoring and communicating the risks of release and massive emissions into the atmosphere of greenhouse gases that come from gas hydrates.

The objectives of the project are to:

1) Identify the nature of the gas hydrate destabilization process in the Arctic seas.

2) Assess the distribution and instability of natural gas hydrates in permafrost and the prospects for developing them industrially.

3) Assess the environmental risks and their demographic consequences arising from the degradation of gas hydrates resulting from climate change in the Arctic.

4) Map the submarine permafrost and identify its year-to-year behaviour patterns in areas of massive discharge of methane bubbles in order to quantify methane emissions from sea-floor sediments into the water and atmosphere.

5) Develop a system for monitoring, forecasting and managing the risks of uncontrolled natural release into the atmosphere of greenhouse gases coming from offshore gas hydrates and other geological reservoirs (pools) of methane, and assess the quantity of their massive emissions.

6) Develop a new generation of models describing the degradation of submarine permafrost and destabilization of offshore hydrates in the context of identifying and assessing the strength of positive feedback in the climate-cryosphere-greenhouse gas emission-climate system.

1.5.3 Snezhinka Arctic Station

A unified action plan for implementing the Basic Principles of State Policy of the Russian Federation in the Arctic up to 2035 and the Strategy for Developing the Russian Arctic and Ensuring National Security up to 2035 calls for an international Arctic station to be established.

In pursuance of the task outlined in the "...unified plan...", the National Research University Moscow Institute of Physics and Technology has developed a project proposal for building a permanent, self-powered, international Snezhinka Arctic Station in the Yamalo-Nenets Autonomous Area and the Murmansk Region, which will serve as a research and educational platform for researchers and developers of new technologies in the severe climate of permafrost in the Arctic. The station should be powered by the wind and solar renewable energy, as well as by hydrogen energy.

According to the Ministry of Industry and Trade of the Russian Federation, a test site will be arranged at Snezhinka station to test hydrogen energy equipment, to include operations with liquefied hydrogen, high-pressure hydrogen, "green" ammonia, high-temperature electrolysis, hydrogen boilers for heating, aerological hydrogen stations, all-terrain vehicles and other Arctic vehicles powered by hydrogen, hydrogen refueling systems, unmanned search and rescue vehicles powered by hydrogen fuel, and portable, small-size, hydrogen batteries for Arctic expeditions.

The project was prepared for execution during Russia's Chairmanship in the AC in 2021–2023 as a research and educational platform for international cooperation between engineers, researchers, scientists and young scholars. According to the Russian Ministry of Industry and Trade, Snezhinka successfully passed a state expert evaluation in March 2023, followed by development of a corresponding cost estimate document. The financing allocated to set up the test site amounts to RUB 1 bln. Financing matters will be considered by the Russian Ministry of Education and Science together with the Single Customer Public Non-Profit Organization in 2023, during drafting of the federal budget for 2024 and the planning period of 2025 and 2026. The Ministry of Industry and Trade is planning to build the station by 2025.

The objectives of the project are to:

1) Supply local communities with heat and electricity generated from renewable sources; control life support mechanisms, climatic conditions and power plants.

2) Carry out research in the areas of hydrogen energy, thermal stabilization of permafrost, carbon footprint reduction technologies, Arctic medicine, high-latitude telecommunications, aero- and hydroponics, and AI-enabled robotic platforms.

3) Set up a federal research centre of universal importance at the station.

1.5.4 Sustainable Arctic Navigation

Global experience shows that intensification of shipping and other types of maritime activity leads to increased competition between these activities for use of ocean space. As the scale and intensity of maritime activities grow, the impact caused by Man on the marine environment increases and environmental threats emerge, causing an increase in risks to sustainable development.

The structural and functional properties of marine ecosystems, fishery conservation zones, seasonal migration routes and habitats of marine wildlife, and areas of maximum vulnerability of the marine biota to human impact are not taken into consideration when determining the navigation regimes along the Northern Sea Route (NSR). The absence of any integrated approach to ensuring safe navigation and environmental safety in territorial waters and the exclusive economic zone gives rise to criticism by unfriendly countries over the national navigation rules for NSR waters and a cautious attitude by non-Arctic states in Southeast Asia toward the prospects for using the NSR.

Seeking to strengthen the tenability of using the NSR as a globally competitive transit route, the Skolkovo Energy Centre of the Moscow School of Management, with the aid of the Russian Ministry of Foreign Affairs and the Ministry for the Development of the Russian Far East (see minutes of the Ministry for the Development of the Russian Far East meeting on drafting the project proposal dated 23 January 2020), has developed a project to investigate the economic, social, environmental and climatic aspects of the development of shipping and related infrastructure in the Arctic in line with the principles of sustainable development and the objectives of ensuring efficient and safe operations, and supporting the economic development and livelihoods of local and indigenous communities. In the context of this project, Russia intends to demonstrate the feasibility of switching maritime transport (including the related transmission of energy supply to populated areas and industrial facilities) from petroleum products to alternative fuels, as well as to acquire extensive evidence proving no harm to the environment, human life or wellbeing, which is an essential prerequisite for business operations and other activities in the Arctic.

The objectives of the project are to:

1) Study the legal instruments of the AC Member States that regulate shipping with a focus on sustainable development.

2) Formulate at least three scenarios for development of Arctic shipping based on the possibility of using different fuel types (LNG, methanol, ammonia, hydrogen, low-carbon energy sources) and the timing of transition to such fuel sources, and conduct a benchmarking study of traffic flow intensity and use of alternative transport routes (including the traditional sea routes from Asia to Europe via the Suez Canal and around Africa).

3) Analyze the effectiveness of the Arctic shipping development scenarios (considering the potential infrastructure costs and probable economic, environmental and social consequences) from the perspective of environmental and climate impacts.

4) Demonstrate the socio-economic effects of realizing various Arctic shipping development scenarios given the involvement of representatives of local and indigenous communities in this process, and conduct a benchmarking study of the impact of Arctic shipping on significant aspects of living conditions in the Arctic in general.

5) Use the findings of analyses and assessments to prepare a methodology and recommendations for a comprehensive assessment of the effectiveness of Arctic shipping development in consideration of economic, social, environmental and climatic aspects and sustainable development requirements.

2. Preparing Russia for the AC Chairmanship

Key decisions: Decree of the President of the Russian Federation on the Chairmanship of the Russian Federation in the AC; establishment of the Organizing Committee to prepare for and support the chairmanship of the Russian Federation in the AC in 2021–2023; approval of the concept, priorities and key action plan for supporting Russia's Chairmanship in the AC in 2021–2023; establishment of secretariats of expert groups of the AC's Sustainable Development Working Group; approval of the plan for Russia's Chairmanship in the AC. Analysis of the impact of the main achievements of and expectations for implementation of AC projects to address the problems outlined in Russia's strategic documents for the Arctic. Assess the potential of projects prepared by the Russian Federation for joint implementation within the AC during the country's Chairmanship in 2021–2023 and in the long term.

2.1 Key decisions

Key decisions: Decree of the President of the Russian Federation on the Chairmanship of the Russian Federation in the AC; establishment of the Organizing Committee to prepare for and support the Chairmanship of the Russian Federation in the AC in 2021–2023; approval of the concept, priorities and key action plan for supporting Russia's Chairmanship in the AC in 2021–2023; establishment of secretariats of expert groups of the AC's Sustainable Development Working Group; approval of the plan for Russia's Chairmanship in the AC.

Russia started preparations for the 2021–2023 AC Chairmanship long before its handover by Iceland. Major legislative and administrative efforts were implemented over several years.

New strategic documents were drafted and approved in 2020 describing the country's main national priorities, goals and objectives in the region: the 'Basic Principles of State Policy of the Russian Federation in the Russian Arctic up to 2035' (Basic Principles 2035)[24] and the 'Strategy for Developing the Russian Arctic and Ensuring National Security up to 2035' (Russian Arctic Development Strategy).[25]

At the beginning of 2021, the Government of the Russian Federation approved the Government Programme 'Socio-Economic Development of the Russian Arctic'[26] with the following goals: increasing the economic contribution of the Arctic to the Russian economy, ensuring sustainable development of the region, attracting new investors by removing infrastructure constraints, offering special conditions for doing business, improving government support instruments, etc. A Unified Action Plan for Implementation of the Basic Principles 2035 and the Russian Arctic Development Strategy

24 Decree No. 164 of the President of the Russian Federation dated 5 March 2020 "On the Basic of State Policy of the Russian Federation in the Arctic up to 2035". URL - http://www.kremlin.ru/acts/bank/45255 (accessed on: 25.06.2023).

25 Decree No. 645 of the President of the Russian Federation dated 26 October 2020 "On the Strategy for Developing the Russian Arctic and Ensuring National Security up to 2035". URL - http://www.kremlin.ru/acts/bank/45972 (accessed on: 10.06.2023).

26 Russian Federation Government Decree No. 484 dated 30 March 2021 "On Approval of the Russian Federation Government Program "Socio-Economic Development of the Russian Arctic" http://static.government.ru/media/files/bIT1JDkAw1JWhBgHy1SAZIkBRlNmT3pG.pdf (accessed on: 15.06.2023).

was also approved,[27] consisting of 268 measures designed to address social problems, create a comfortable living environment, attract new investors, stimulate industrial manufacturing and ensure national security. The support stipulated by the Plan for investment projects implemented on a public-private partnership basis and other benefits for businesses allowed a free economic zone to be established in the Russian Arctic.

In November 2020, the Russian President signed a corresponding Decree[28] on Russia's Chairmanship in the AC and the Organizing Committee for preparation of and support for the Chairmanship was established and its regulations approved. Yury Trutnev, Deputy Prime-Minister of the Russian Federation and Plenipotentiary Representative of the President in the Far Eastern Federal District, was appointed Chairman of the Organizing Committee. Next, the Chairmanship concept[29] and priorities [30] were approved.

Secretariats of two expert groups of the AC's Sustainable Development Working Group were established at the Institute of Ecology of Higher School of Economics in coordination with the Ministry of Foreign Affairs of the Russian Federation (Russian Ministry of Foreign Affairs)[31] and the Ministry for the Development of the Russian Far East and the Arctic of the Russian Federation (Ministry for the Development of the Russian Far East),[32] (1) on health and (2) on social, economic and cultural issues (the Project Office), which worked to support the activities of expert groups supervised by Russian representatives appointed in due course subject to agreement with representatives of the AC Member States. The work of the Project Office was coordinated by the Ministry for the Development of the Russian Far East as per Russian Federation Government Order No. 673-r dated 28 May 2007 "On Distribution of Responsibilities among Federal Executive Agencies and Designated Organizations Related to the Key Areas of Focus of the Arctic Council and its Working Groups" (the duly approved international plan of action for the expert groups is provided in Appendix 2).

The main goals of the Chairmanship concept were to promote balanced development of the Arctic region and strengthen good neighbourly relations with the Arctic states on a bilateral basis and within the framework of multilateral regional cooperation formats. The main focus was responsible

27 Russian Federation Government Order No. 996-r dated 15 April 2021 "On Approval of the Unified Action Plan for Implementation of the Basic Principles of State Policy of the Russian Federation in the Arctic up to 2035 and the Strategy for Developing the Russian Arctic and Ensuring National Security up to 2035". URL - http://static.government.ru/media/files/p8DfCI0Pr1XZnAk08G7J3jUXUuDvswHr.pdf (accessed on: 15.06.2023).

28 Decree No. 740 of the President of the Russian Federation dated 25 November 2020 "On the Organizing Committee for the Preparation and Support of the Chairmanship of the Russian Federation in the Arctic Council in 2021–2023", website of the President of the Russian Federation. URL - http://www.kremlin.ru/acts/bank/46123 (accessed on: 05.04.2023).

29 "Mikhail Mishustin Approves the Concept for Russia's Chairmanship in the Arctic Council in 2021–2023 and the Action Plan," Government of the Russian Federation, 15 May 2021. URL - http://government.ru/news/42186/ (accessed on: 25.06.2023).

30 The country taking over chairmanship for the next two years must announce its vision of the priority areas for AC activities for this period well in advance. Relevant proposals may or may not become the final version of the document and will be incorporated on the agenda for the Ministerial Meeting of AC Member States. They are first distributed to AC partners and permanent participants, who can revise the agenda or suggest additional items to be included. The final version is officially adopted at the ministerial meeting by consensus.

31 Letter No. 3489/2ed dated 27.03.2020

32 Letters No. AK-08-18/4725 dated 29.04.2020 and No. AK-05-18/12062 dated 12.10.2020

management in the interests of sustainable development of the Arctic, in both the socio-economic and environmental domains. The plan focused primarily on improving the welfare, health and quality of life of Arctic residents, including Indigenous peoples, and on promoting research, educational and cultural exchanges, tourism and human interaction. Climate concerns were identified as special priorities, in terms of both risks to the Arctic due to global climate change and opportunities for energy transition to a climate-neutral economy thanks to use of natural resources and cutting-edge technologies.

As part of the 2021–2023 AC Chairmanship, Russia announced development of cooperation with the AC Member States in four priority areas: Arctic communities, including Indigenous peoples of the North, and environmental protection in the Arctic, including issues of climate change, socio-economic development of the region and strengthening of the AC's role as the primary platform for multilateral cooperation.

1) Population of the Arctic, including Indigenous peoples of the North

In this area, the plan was to strengthen the effort to support the resilience and vitality of residents of the Arctic region, their adaptability to climate change, improving the welfare, health, education, availability of services in these areas and the quality of life, introducing telemedicine, improving the urban environment, ensuring sustainable socio-economic development, promoting entrepreneurship and expanding international youth exchange. The intention was to focus specifically on preserving the identity, languages and cultural heritage of the Indigenous peoples of the North.

2) Environmental protection, including climate change concerns

In this area, the intent was to address the problems of mitigating the adverse effects of climate change, improving the adaptation of life sustenance and ensuring resilience in face of the consequences of such adaptation, minimizing the man-made impact on nature, addressing the consequences of emergencies and environmental disasters, preserving and restoring the environment and biodiversity, using natural resources efficiently, preserving the health of Arctic ecosystems, deepening cooperation in hydrometeorology and forecasting of natural phenomena, introducing advanced innovative technologies, etc.

3) Socio-economic development

In this area, the declared agenda of the Russian Chairmanship was to promote further economic cooperation in the region, development of the energy infrastructure, including green energy, transport routes, including maritime shipping (Northern Sea Route) and port infrastructure, telecommunication systems and the food sector, as well as to help set the stage for a better influx of investment, promote innovation, encourage entrepreneurship and finance businesses.

4) Strengthening the AC's role as the main platform for multilateral cooperation

This intent of this area was to secure the AC as a key format for international Arctic

cooperation, improve its work, help expert groups and the secretariat work more effectively, develop mechanisms for financing the AC's activities, including its projects and programmes, promote extensive collaboration between the AC and international regional organizations (ACGF, AEC IASC, etc.), and promote international cooperation.

In addition to the Chairmanship concept, a Plan of Key Actions [33] was approved on 30 April 2021 consisting of 116 events grouped into 11 sections depending on the focus area: formal events, international scientific cooperation, human capital development, Indigenous peoples, culture, youth, economic cooperation, tourism, sustainable shipping infrastructure, climate and ecology, and emergency prevention.

These events were intended for discussing development of economic cooperation (attracting investments, including venture capital financing), environmental concerns (climate change, combating water and soil pollution with microplastic), issues of human capital development, etc. Federal and regional executive agencies, public and educational organizations, and business representatives were designated as the organizers and operators of these events.

2.2 Conformity with national interests

Analysis of the impact of the main achievements of and expectations for implementation of AC projects to address the problems outlined in Russia's strategic documents for the Arctic.

Participation in the AC was beneficial to the Russian Federation to some extent, primarily in the 2000s. This is especially true for the AC's environmental protection programmes, implementation of which in the Russian Arctic enabled the country to raise extra-budgetary financial resources and acquire relevant international experience, which, in a number of cases, was replicated in the Arctic regions of the Russian Federation. For example, the following resources were drawn from outside sources: $490,000 – to stop use of polychlorinated biphenyls (PCBs) in the Russian Federation; $250,000 – to suppress dioxin and furan emissions in the Russian Federation; $270,000 – to dispose of the stockpile of obsolete pesticides in the Russian Federation; and $83,000 – to reduce pollutant emissions at Norilsk Nickel facilities.

The AC's support contributed a lot to ensuring approval of Russia's application to the UN Global Environment Facility for financial support for implementing the National Plan of Action for Protection of the Marine Environment against Anthropogenic Pollution in the Arctic Region of the Russian Federation, making it possible to attract about $20 million to Russia in the form of grants and carry out a large number of activities focusing on environmental protection of the Russian Arctic. This included development of a Strategic Programme of Action for the Environmental Protection of

33 Plan of Key Actions Relating to the 2021–2023 Russian Chairmanship in the Arctic Council – No. 4161p-P2 dated 30 April 2021. URL - https://rulaws.ru/acts/Plan-osnovnyh-meropriyatiy-v-svyazi-s-predsedatelstvom-Rossiyskoy-Federatsii-v-Arkticheskom-sovete-v-20/ (accessed on:05.04.2023).

the Russian Arctic, which was approved by the Maritime Board of the Government of the Russian Federation (meeting minutes No. 2 (11) dated 19 June 2009, section I, paragraph 2).

A trend has emerged in recent years toward a steady decline in the AC Member States' willingness to reach a consensus with regard to support for major economic and environmental projects.

A review of current AC projects (at the beginning of the Russian Chairmanship) showed that they did not fully meet the tasks outlined in the strategic documents of the Russian Federation concerning the Arctic (Table 2). At the same time, expert estimates from the Institute of Ecology of the Higher School of Economics indicate that they have an insignificant cumulative impact on implementation of our country's strategic priorities in the Arctic.

Table 2. Conformity of AC projects with the national goals of state policy of the Russian Federation in the Arctic

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Solid Waste Management in Remote Arctic Communities	Управление твердыми отходами в отдаленных арктических сообществах	USA, Canada, Aleut International Association, Saami Council, Finland, Norway	ACAP SDWG	1, 3
AFFF (Aqueous Film Forming Foam) and other PFAS containing Foam Phase Out in The Arctic	Поэтапный отказ от фторсодержащих пленкообразующих пенообразователей и пенообразователей, содержащих полифторалкильные вещества (ПФАВ) в Арктике	Finland, USA	ACAP	3
ARCRISK - Mercury Risk Evaluation, Risk Management and Risk Reduction Measures in the Arctic	Оценка ртутного риска, управление рисками и меры по снижению рисков в Арктике	Norway	ACAP	3
Arctic Black Carbon Case Studies Platform (SLCP EG)	Платформа тематических исследований арктического черного углерода	USA	ACAP	3
Arctic Green Shipping - SLCP Mitigation	Арктическое зеленое судоходство	Russia	ACAP	1, 2, 3, 5
Circumpolar Local Environmental Observers (CLEO) Network (IPCAP)	Циркумполярная сеть местных наблюдателей за окружающей средой	USA, Finland, Norway, Sweden	ACAP	1, 3
Community-based black carbon and public health assessment (IPCAP)	Общественная оценка черного углерода и общественного здравоохранения	USA, Aleut International Association	ACAP	3
Demonstration of management and destruction of 250 tons of PCB in transformers: Phase III (Hazardous Waste EG)	Демонстрация управления и уничтожения 250 тонн ПХД в трансформаторах: Фаза III	Finland, Russia	ACAP	1, 3, 4
Dudinka Municipal Waste Landfill project	Проект Дудинского полигона коммунальных отходов	Russia	ACAP	1, 3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Inventory of uses of POPs and Mercury and their Emission Sources in Murmansk Region	Инвентаризация видов использования стойких органических загрязнителей (СОЗ) и ртути и источников их выбросов в Мурманской области	Russia, Sweden, Finland	ACAP	1, 3, 4, 5
Kola Waste project	Кольский мусорный проект	Saami Council, Sweden, Norway	ACAP	1, 3, 4
Phase-out of ozone-depleting substances and fluorinated greenhouse gases (HFC) at fish and seafood processing enterprises (SLCP EG)	Поэтапный отказ от озоноразрушающих веществ и фторсодержащих парниковых газов на предприятиях по переработке рыбы и морепродуктов	Russia	ACAP	3, 5
Promotion of decrease of the Barents region pollution by introduction of BAT («BAT in the Arctic»)	Содействие снижению загрязнения Баренцева региона путем внедрения НДТ	Russia, Sweden	ACAP	1, 3
Understanding climate change impacts on Arctic ecosystems and associated climate feedbacks	Понимание воздействия изменения климата на арктические экосистемы и связанных с ним климатических обратных связей	Denmark, Norway	AMAP CAFF	1, 3
Air pollution, with a focus on short-lived climate forcers (SLCFs)	Загрязнение воздуха с упором на факторы кратковременного воздействия на климат	Canada, Finland, Norway, USA	AMAP	1, 3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
AMAP Trends and Effects Programme	Программа АМАР «Тренды и эффекты»	Canada, Finland, Iceland, Denmark, Norway, Russia, Sweden, USA, Arctic Athabaskan Council, Aleut International Association, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, Saami Council	AMAP	1, 3, 4
Arctic marine microplastics and litter	Арктический морской микропластик и мусор	Canada, Norway	AMAP	1, 3, 5
Climate Issues: Cryosphere, meteorology, ecosystem impacts	Проблемы климата: криосфера, метеорология, воздействие на экосистемы	Norway, Sweden, USA	AMAP	1, 3
Contaminant issues: POPs and mercury	Проблемы загрязнения: СОЗ и ртуть	Canada, Denmark, Sweden	AMAP	1, 3
Contaminant issues: Radioactivity	Проблемы загрязнения: радиоактивность	Norway, Russia	AMAP	1, 3, 4
Human Health and combined effects	Здоровье человека и совокупные эффекты	Canada, Denmark	AMAP	1
Sustaining Arctic Observing Networks (SAON)	Поддержка сетей наблюдения за Арктикой	Iceland, Norway, USA, Canada, Finland, Denmark, Russia, Sweden, Inuit Circumpolar Council	AMAP	3, 4
Unmanned Aircraft Systems (UAS)	Беспилотные авиационные системы	Norway, USA	AMAP	3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Invasive species	Инвазивные виды	Sweden, Denmark, Norway	CAFF PAME	3
Actions for Arctic Biodiversity: Implementing the recommendations of the Arctic Biodiversity Assessment	Действия в интересах биоразнообразия Арктики: выполнение рекомендаций Оценки биоразнообразия Арктики	Finland	CAFF	3
Arctic Migratory Birds Initiative (AMBI): Implementation	Инициатива по арктическим мигрирующим птицам: реализация	Canada, Norway, Russia, USA	CAFF	3
Arctic Wildland Fire Ecology Mapping and Monitoring Project (ArcticFIRE)	Проект экологического картирования и мониторинга арктических лесных пожаров	Gwich'in Council International	CAFF	1, 3
CAFF Youth Engagement Strategy 2021-2026	Стратегия привлечения молодежи CAFF на 2021–2026 гг.	USA, Finland	CAFF	1
CBMP Coastal Biodiversity Monitoring Plan: implementation	План мониторинга прибрежного биоразнообразия: реализация	Canada, USA	CAFF	3
CBMP Freshwater Biodiversity Monitoring group: implementation	Группа мониторинга пресноводного биоразнообразия: реализация	Sweden, Canada	CAFF	3
CBMP Marine Biodiversity Monitoring group: implementation	Группа мониторинга морского биоразнообразия: реализация	Iceland, Norway	CAFF	3
CBMP Terrestrial Biodiversity Monitoring group	Группа мониторинга наземного биоразнообразия	Iceland, USA	CAFF	1, 3
Circumpolar Biodiversity Monitoring Program (CBMP) - General	Циркумполярная программа мониторинга биоразнообразия - Общие положения	Denmark, USA	CAFF	3
Climate change impacts on bearded seals	Влияние изменения климата на морских зайцев	Norway, USA	CAFF	3
Community Observation Network for Adaptation and Security (CONAS)	Сеть общественного наблюдения за адаптацией и безопасностью	Aleut International Association	CAFF	1

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Conservation of biodiversity in a changing Russian Arctic	Сохранение биоразнообразия в меняющейся российской Арктике	Russia	CAFF	1, 3
Mainstreaming Arctic Biodiversity	Актуализация арктического биоразнообразия	USA	CAFF	3
Nomadic herders: enhancing resilience of pastoral ecosystems and livelihoods	Повышение жизнестойкости пастбищных экосистем и хозяйственного уклада скотоводов-кочевников	Russia, Saami Council	CAFF	1, 2, 3, 5
Salmon People of the Arctic	Арктические ловцы лосося	Arctic Athabaskan Council, Aleut International Association, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, Saami Council	CAFF	1, 2, 3, 4, 5
Scoping for Resilience and Management of Arctic Wetlands	Оценка устойчивости и управление арктическими водно-болотными угодьями	Sweden	CAFF	3
Seabird program	Программа морских птиц	Finland	CAFF	3
Environmental toxicity and fate of light and intermediate fuel when spilled in cold waters	Экологическая токсичность и судьба легкого и промежуточного топлива при разливе в холодные воды	Norway	EPPR PAME	3
Analysis of Potential Radiological Consequences of Selected Emergencies Relevant for the Arctic Region	Анализ возможных радиологических последствий отдельных аварий, актуальных для Арктического региона	Finland	EPPR	1, 3, 5
Arctic Rescue	Спасение в Арктике	Russia	EPPR	1, 3
Capability Analysis to respond to a Radiological/Nuclear Emergency in the Arctic	Анализ возможностей реагирования на радиологическую/ядерную аварийную ситуацию в Арктике	Canada, Norway	EPPR	1, 3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Circumpolar Fire	Циркумполярный огонь (координация по предотвращению лесных пожаров, обеспечению готовности и реагированию на них)	Gwich'in Council International, USA	EPPR	1, 3
Coordination and practical implementation of the SAR agreement (Search and Rescue Expert Group)	Координация и практическая реализация Соглашения о поисково-спасательных операциях в Арктике	USA, Norway	EPPR	1
Development of Safety Systems in Implementation of Economic and Infrastructure	Создание систем безопасности при реализации экономических и инфраструктурных проектов	Russia	EPPR	1, 2, 3, 5
Follow-up on the Framework Plan on Oil Pollution Prevention	Последующая деятельность по Рамочному плану по предотвращению загрязнения нефтью	Canada, Norway	EPPR	1, 3
International Cooperation on Aerial Surveillance ICAMS	Международное сотрудничество в области аэронаблюдения	Canada, Denmark, Norway, USA	EPPR	3
NEPTUNE	«Нептун» - совместный проект с Ассоциацией круизных операторов арктических экспедиций с целью изучения возможности круизных судов участвовать в ликвидации разливов нефти в Арктике	Norway, USA	EPPR	1, 3
Prevention, Preparedness and Response for Small Commu-nities	Профилактика, готовность и реагирование для малых сообществ	Canada, Denmark, Norway, USA, Aleut International Association	EPPR	1
Risks Project (Radiological/ Nuclear Risk Assessment in the Arctic)	Оценка радиологического/ ядерного риска в Арктике	Norway, Canada	EPPR	1, 3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Marine Invasive Alien Species in Arctic Waters	Морские инвазивные чужеродные виды в арктических водах	Canada, Denmark, Norway	PAME CAFF	3
New Low Sulphur Fuels, Fate, and Behaviour in Cold Water Conditions	Новые виды топлива с низким содержанием серы, судьба и поведение в условиях холодной воды	Norway	PAME EPPR	1, 3
Arctic Arrangement for Regional Reception Facilities	Арктическое расположение региональных приемных сооружений	USA, Russia	PAME	
Arctic Coastal Cleanup	Очистка побережья Арктики	Norway	PAME	1, 3
Arctic Marine Tourism: Development in the Arctic and enabling real change	Морской туризм в Арктике: развитие и обеспечение реальных изменений	Iceland, Canada	PAME	1
Arctic Port Reception Facilities Inventory	Инвентаризация приемных сооружений арктических портов	USA	PAME	n/a
Arctic Ship Traffic Data (ASTD) System	Система данных о движении судов в Арктике	USA, Norway	PAME	5
Black Carbon emissions from shipping activity in the Arctic and technology developments for their reduction	Выбросы черной сажи от судоходства в Арктике и разработка технологий для их сокращения	Finland, Iceland	PAME	1, 3, 5
Collect and summarize information on Arctic State safe and low-impact marine corridor initiatives	Сбор и обобщение данных об инициативах арктических государств в отношении безопасных и экологически безопасных морских коридоров	Canada, Iceland, Aleut International Association	PAME	1, 3, 5
Collect, report and/or review information about on-shore use by Indigenous peoples and local communities of HFO	Сбор и анализ об использовании мазута коренными народами и местными сообществами на суше	USA, Aleut International Association	PAME	1, 3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Continue the project on Modelling Arctic Oceanographic Connectivity, with the inclusion of the Central Arctic Ocean, to further develop PAME's Marine Protected Areas Toolbox	Продолжение проекта по моделированию арктической океанографической связности, включая центральную часть Северного Ледовитого океана, для дальнейшего развития набора инструментов для морских охраняемых районов	Sweden	PAME	3
Develop an Implementation Plan for the Regional Action Plan on Marine Litter in the Arctic (ML-RAP)	Разработка плана реализации Регионального плана действий по морскому мусору в Арктике	Finland, Denmark, Norway, USA	PAME	1, 3
Existing Waste Management Practices and Pollution Control for Marine and Coastal	Существующие методы обращения с отходами и контроля загрязнения морских и прибрежных	Denmark, Canada	PAME	1, 3
Fishing Practice & Gear Inventory: Enhancing Understanding of Abandoned Lost or otherwise Discarded Fishing Gear (ALDFG)	Практика инвентаризации рыболовных снастей	Norway, USA	PAME	1, 3
Integrated Ecosystem Assessment (IEA) of the Central Arctic Ocean (WGICA)	Комплексная оценка экосистем центральной части Северного Ледовитого океана	Norway, USA	PAME	3
Interpretation of the Polar Code	Толкование Полярного кодекса	Norway	PAME	4
Management of Arctic Marine Oil and Gas Associated Noise	Борьба с шумом, связанным с морской добычей нефти и газа в Арктике	USA	PAME	1, 3
Underwater Noise in the Arctic – Phase I	Подводный шум в Арктике – Фаза I	Canada, USA	PAME	3
Underwater Noise in the Arctic: Understanding Impacts and Defining Management Solutions - Phase II	Подводный шум в Арктике: анализ воздействия и система управления, Фаза II	Canada, USA	PAME	3

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Update the Arctic Offshore Oil and Gas Regulatory Resource (AOOGRR)	Обновление Ресурса по регулированию морской нефти и газа в Арктике	USA	PAME	5
Wastewater Discharges from Vessels in the Arctic - A Survey of Current Practices	Сбросы сточных вод с судов в Арктике: обзор современной практики	Iceland	PAME	3, 5
Biosecurity in the Arctic	Биобезопасность в Арктике	Russia, Finland, Canada	SDWG AMAP	1, 3, 5
Advancing Arctic Resilience: Exploring Aspects of Arctic Resilience connected to the impacts of permafrost thaw	Повышение устойчивости Арктики: изучение аспектов устойчивости, связанных с последствиями таяния вечной мерзлоты	Russia, Iceland, USA, Finland, Arctic Athabaskan Council	SDWG	1, 2, 3, 5
Arctic Community Perspectives on Covid-19 and Public Health: A Multi-site Case Study	Взгляд арктического сообщества на Covid-19 и общественное здравоохранение: тематическое исследование на нескольких объектах	Canada, Finland, Norway, USA, Russia	SDWG	1, 5
Arctic Demography Index	Демографический индекс Арктики	Russia, Canada, Norway	SDWG	1, 5
Arctic Food Innovation Cluster (AFIC)	Арктический кластер пищевых инноваций	Canada, Finland, Iceland, Aleut International Association, Gwich'in Council International, Russia	SDWG	1, 3
Arctic Hydrogen Energy Applications and Demonstrations (AHEAD)	Применение и демонстрации водородной энергетики в Арктике	Russia, Norway	SDWG	1, 2, 3, 5
Arctic Indigenous Youth, Climate Change and Food Culture (EALLU) II	Молодежь коренных народов Арктики, изменение климата и культура питания	Canada, Norway, Aleut International Association, Saami Council, Russia	SDWG	1, 5
Arctic Remote Energy Networks Academy (ARENA) II	Арктическая академия удаленных энергетических сетей II	Canada, Iceland, USA, Gwich'in Council International, Russia	SDWG	2, 5

Projects	Unofficial translation	Leading states	Working Group	Conformity with the goals of Russia's national policy in the Arctic
Numbering of the goals of Russia's state policy in the Arctic: 1 - improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples of the Russian Arctic 2 - increasing the contribution made by the Russian Arctic to the country's economic growth 3 - environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples 4 - mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic on the basis of international law 5 - protection of Russia's national interests in the Arctic, including economic interests				
Digitalization of Linguistic and Cultural Heritage of Indigenous Peoples of the Arctic	Цифровизация языкового и культурного наследия коренных народов Арктики	Russia, Norway, Russian Association of Indigenous Peoples of the North	SDWG	1, 5
Local 2 Global: Circumpolar collaboration for suicide prevention and mental wellness	Циркумполярное сотрудничество для предотвращения самоубийств и психического здоровья	Canada, Finland, Denmark, Sweden, Inuit Circumpolar Council, Iceland, Gwich'in Council International	SDWG	n/a
One Arctic, One Health	Одна Арктика, одно здоровье	USA, Canada, Finland, Denmark, Norway	SDWG	1
Preserving ARCtic ARChitectural Heritage (PrARCHeritage)	Сохранение арктического архитектурного наследия	Russia, Norway	SDWG	1
Sustainable Development Goals in the Arctic: The Nexus Between Water, Energy, and Food (WEF)	Цели устойчивого развития в Арктике: связь между водой, энергией и продовольствием	Canada, Iceland, Finland	SDWG	1, 3

Note: As of December 2021, initiatives demonstrating no signs of project activity (forums, reports, etc.) were excluded from the 128 AC projects.

The developed and adopted action plan crucial for performance of work in the priority areas was also supposed to help improve the handling of the tasks outlined in the strategic documents of the Russian Federation for the Arctic.

Seeking to synchronize the Chairmanship programme with the national interests, goals and objectives of Russia's state policy in the Arctic (Table 3) and in the interests of fulfilling the AC Chair's mission at a high level, a rather extensive Chairmanship programme was developed and approved to address almost all the domains ensuring sustainable development of the Arctic region: from economic cooperation and adaptation to climate change to preserving the identity of Indigenous peoples of the North and improving the quality of life of local communities. The original detailed plan of action for Russia's AC Chairmanship is provided in Appendix 3.

Table 3. Comparison of the goals and objectives outlined in the Basic Principles 2035 with the focus areas and subjects of activity within the framework of Russia's Chairmanship in the Arctic Council

National interests	Goals	Objectives	Focus areas of Russia's AC Chairmanship	Subject of activity	2021	2022	2023	TOTAL
Ensuring the sovereignty and territorial integrity of the Russian Federation	Protecting the national interests of the Russian Federation in the Arctic, including economic interests	Ensuring Russian presence on the Svalbard archipelago on terms of equal and mutually beneficial cooperation with Norway and other countries party to the Svalbard Treaty of 9 February 1920						
		Maintaining liaisons with the Arctic states with regard to delimitation of the continental shelf in the Arctic Ocean in line with the national interests of the Russian Federation and relying on the rules of international law and existing agreements						

National interests	Goals	Objectives	Focus areas of Russia's AC Chairmanship	Subject of activity	2021	2022	2023	TOTAL
Preserving the Arctic as a territory of peace, stable and mutually beneficial partnership	Cooperating on mutually beneficial terms and resolving all disputes in the Arctic in a peaceful manner on the basis of international law	Securing the AC's role as a key regional association coordinating international activities in the region	Strengthening the AC's role as the main platform for multilateral cooperation	Formal events	7	4	7	18
		Boosting the efforts of the Arctic states to set up a common regional system for search and rescue operations and man-made disaster prevention and relief activities, as well as to coordinate the work of rescue elements		International scientific cooperation	2	4	2	8
Environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples living in the Russian Arctic	Environmental protection in the Arctic, protection of the traditional habitat and way of life of Indigenous peoples	Strengthening bilateral relations with foreign countries within the framework of relevant multilateral organizations and mechanisms; enhancing international economic, scientific, technological, cultural and cross-border cooperation in due consideration of the national interests of the Russian Federation in the Arctic, as well as broadening collaboration in the research into climate change and environmental protection and effective use of natural resources in the interests of sustainable development of the Arctic	Environmental protection, including climate change concerns	Climate and environment	1	7	3	11
				Emergency prevention	3	2	2	7
Ensuring a high quality of life and welfare for residents of the Russian Arctic	Improving the quality of life of Russian Arctic residents, including representatives of Indigenous peoples	Assisting Indigenous peoples in cross-border cooperation, cultural contacts and business liaisons with related peoples and ethnic groups living outside Russia, as well as promoting engagement of Indigenous peoples in international cooperation	Population of the Arctic, including Indigenous peoples of the North	Human capital development	4	5	-	9
				Indigenous peoples	5	8	3	16
				Culture	7	4	5	16
				Youth	3	7	3	13

National interests	Goals	Objectives	Focus areas of Russia's AC Chairmanship	Subject of activity	2021	2022	2023	TOTAL
Developing the Russian Arctic as a strategic resource base and using it efficiently with a view to boosting economic growth	Accelerating the economic development of Russian Arctic territories and increasing their contribution to the country's economic growth	Actively engaging Arctic and non-regional states in mutually beneficial economic cooperation in the Russian Arctic	Socio-economic development	Economic cooperation	2	4	1	7
				Tourism	2	3	2	7
Developing the NSR as a national transport route competitive on the global market				Sustainable shipping infrastructure	2	2	-	4
		Informing the international community at large about the results of Russia's activities in the Arctic**						
TOTAL					**38**	**50**	**28**	**116**

* As per the Basic Principles 2035.

** Applies to the goals and objectives of Russia's state policy in the Arctic, the programme for Russia's Chairmanship in the AC and the Chairmanship Action Plan.

2.3 Potential of Russia's projects

Assess the potential of projects prepared by the Russian Federation for joint implementation within the AC during the country's Chairmanship in 2021–2023 and in the long term.

All the projects and other initiatives prepared by the Russian Federation and implemented during Russia's Chairmanship in the AC were designed to address objectives contributing to sustainable development of the Arctic region. Meanwhile, the expected results were stated very pragmatically and were in full conformity with Russia's national priorities in the Arctic, for example:

- seeking to realize the Russian President's proposal "...to establish broad and effective international cooperation in calculating and monitoring the volume of all types of harmful emission into the atmosphere...", the issue of greenhouse gas emissions (chiefly methane) caused by degradation of the permafrost in the Arctic has become a priority for the Russian Chairmanship in the AC, supported by the Russian Ministry of Foreign Affairs and the Ministry for the Development of the Russian Far East. The corresponding project proposal (Gas Hydrates: Contribution to Sustainable Development and Climate Transformation of the Arctic) was supported by authorized representatives of the AC Member States at a meeting of the Sustainable Development Working Group;
- pursuant to Clause 15 of the Strategy for Developing the Russian Arctic and Ensuring National Security up to 2035, execution of primary tasks relating to environmental protection and ensuring environmental safety is carried out through "...implementing measures to prevent entry by highly toxic and radioactive substances, as well as dangerous microorganisms, into the Arctic zone from abroad and building a system for prompt notification of government agencies and the public about emergence of or an increase in risks of adverse effects of the most dangerous pollutants and microorganisms in connection with emergency situations caused by climate change...» In tune with the above document, the Higher School of Economics developed the Biological Security in the Arctic project in coordination with the Ministry for the Development of the Russian Far East and the Russian Ministry of Foreign Affairs. Russia's initiative received unanimous support from all AC members and became our country's only project officially approved in March 2021 by the designated AC's Sustainable Development Working Group;
- the task of developing hydrogen energy in Russia is enshrined in the key sectoral strategic planning document – the updated Energy Strategy of the Russian Federation up to 2035. Russian Federation Government Order No. 2162-r dated 5 August 2021 approved the Concept of Hydrogen Energy Development in the Russian Federation, calling for implementation of pilot projects (clause 33) and development of international cooperation in the field of hydrogen energy (clause 42) to enable production, export and use of hydrogen and hydrogen-based energy mixtures on the domestic market of the Russian Federation);

Given these considerations, the priority efforts during Russia's Chairmanship in the AC included further promotion of economic cooperation in the region through development of a reliable energy infrastructure and facilitation of introduction of advanced innovative technologies in the region's energy sector, including broader use of renewable energy sources for improving the quality of life of the Arctic communities.

– current Russian laws consider the NSR as a historically developed national transport route and defines the NSR water area as the waters adjacent to the northern coast of the Russian Federation all the way to the outer perimeter of the exclusive economic zone. On these grounds, the Government of the Russian Federation instituted the Rules of Navigation in the Northern Sea Route Water Area to ensure safe navigation in the ice-covered areas of the sea.

Control by the Russian Federation over shipping in coastal Arctic waters is required by the ice-bound conditions in the straits and in adjacent waters for most of the year. This makes the case for maintaining the permit-based navigation procedure with icebreaker support in NSR waters. Current changes in the ice situation call for extra measures to be developed and research efforts to be undertaken to defend Russia's well-argued position regarding the need to restrict freedom of navigation in the waters of the Northern Sea Route in order to ensure sustainable development of the Arctic.

With this in mind, aspects of further promotion of economic cooperation in the region through development of sustainable transport routes, including marine navigation and introduction of advanced innovative technologies in the transport sector, were listed among the priority efforts during Russia's Chairmanship in the AC.

3. Russia's actions amid changing circumstances

The demarche of the Arctic Council's member states intended to block Russia's activities at this international high-level forum; analysis of any possible negative impact this decision by the AC's member states could have on Russia promoting its national interests in the Arctic and on Russia's steps intended to counteract possible consequences. Assessing the international significance of the AC's activities undertaken without involving Russia with a view to resolving topical cross-border issues in the circumpolar region; analysis of non-Arctic states' interests and steps aimed at developing cooperation with Russia in the Arctic, with special emphasis on the most promising areas and/or specific projects for such cooperation.

3.1 Chairmanship and partners' demarche

The demarche of the Arctic Council's member states intended to block Russia's activities at this international high-level forum; analysis of any possible negative impact this decision by the AC's member states could have on Russia promoting its national interests in the Arctic and on Russia's steps intended to counteract possible consequences.

Having assumed the AC's Chairmanship in May 2021, Russia embarked on holding planned events.

The year 2021 saw 32 events held as part of Russia's chairmanship. 'The Development of Human Capital in the Arctic' direction included holding an international conference on recruiting personnel for the Arctic (15–16 November, Arkhangelsk) to discuss the specifics of 'Northern recruiting', training a new generation of Arctic researchers and other unique aspects of finding professionals in various Arctic regions; "Implementation of the 'Children of the Arctic' international project" round-table (21 October, Naryan-Mar), and 'The Russian North', the VII Forum of Small-Numbered Indigenous Peoples of the North, Siberia and Russia's Far East (6–9 December, Salekhard). Additionally, events included the first AC Young Leaders forum and 'Explore Yamal', the first international volunteer expedition to the Yamal tundra.

The international conference on bioremediation of aquatic and terrestrial ecosystems of the Arctic coast (25–26 October 2021, Moscow) and Green Energy in the Arctic Conference (14 October, Moscow) zoomed in on protecting the environment against increasing technogenic pollution, on "green" technologies, and on the potential of renewable energy sources. Event participants held a lively discussion of international cooperation as a way toward resolving the high-cost problem of "green" projects.

The International Exhibition and Conference for oil and gas resource development of the Russian Arctic and continental shelf RAO/CIS Offshore 2021 (21–24 September, St. Petersburg), an

international seminar on development of small aircraft in the Arctic (2–3 December, Moscow) and the 3rd Northern Sustainable Development Forum (27–30 September, Yakutsk) focused on sustainable socioeconomic development of the Arctic.

The cultural programme featured the Teriberka Festival, the 5th Golden Raven International Arctic Film Festival, a gastronomic festival of northern cuisine, the Barents Bird culture festival, etc.

In addition to conferences, forums and workshops, Salekhard hosted a Senior Arctic Officials' plenary meeting and an AC plenary meeting in December 2021. Besides current issues and the overall strategic plan, the discussion embraced current and new projects of the six working groups and the expert group on black carbon and methane. Special attention was focused on the problem of wildfires, on the effect climate change is having on the Arctic ecosystems, on adapting to the new living conditions, on ensuring sustainable socioeconomic development, and on the impact the COVID pandemic had on the health of Indigenous peoples and other residents of the Arctic.

Plans for 2022 had envisioned 50 events but, in March, a few days after Russia launched its special military operation in Ukraine, seven AC member states published a joint statement on suspending their activities involving Russia. They announced that they would not be taking part in any event either chaired by or held in Russia.

On 8 June, they updated their stance, stating they would resume their activities in the AC but without Russia. This unprecedented decision broke the rules enshrined in the Forum's regulatory documents, primarily by violating the consensus principle and thus making any decisions adopted by the AC without Russia null and void.

Despite the demarche by the AC member states intended to block Russia's involvement in this high-level international forum, Russia did not abnegate its AC Chairmanship. The decision was made to hold all events (save for official meetings of the AC and its auxiliary bodies) as per the approved schedule. Some amendments were made and the Chairmanship programme was re-orientated toward achieving the national goals of sustainable development of the northern territories. Events were held in the absence of Arctic states' representatives but international participants included large numbers of officials and business people from extra-regional states interested in sustainable development of the Arctic region.

Ultimately, Russia's 2022 AC Chairmanship saw another 43 events in all key areas envisaged by the programme.

The 4th Northern Sustainable Development Forum held in Yakutsk (28 November – 1 December) was one of the programme's highlights. Its topics included quality of life in the Arctic and possible ways of improving it without harming the environment; attracting investment and developing technologies, supporting Indigenous peoples and the younger generation, etc. All the topics of the main events were subsumed under the 'Energy of the Arctic: New challenges – new solutions and technologies' heading. Ten countries, primarily from Asia Pacific, officially attended the Forum.

The conference on human health preservation in the Arctic (1–3 June, Arkhangelsk) and the 5th International scientific and practical conference 'Arctic telemedicine' (24–25 November, Naryan-Mar) concentrated on developing healthcare and handling medical and biological issues in the Arctic regions, on legal regulations in the area, on working with medical data, on introducing information systems, innovative solutions, and on remote monitoring of public health. Special attention was focused on socially significant communicable diseases such as HIV, tuberculosis, etc.

The Arctic Indigenous Peoples' Summit (2 November, Moscow) considered topical approaches to preserving languages and cultural heritage, issues of traditional economy, modernization of essential services, cross-border cooperation, and government regulation of the activities of indigenous communities of the North.

The 'Arctic: territory of development' conference on ensuring a comfortable urban environment (22–25 May, Yakutsk) was devoted to practical aspects of improving the quality of life in the Far North.

The Northern (Arctic) Federal University in Arkhangelsk organized an International Youth Model of the Arctic Council for Russian university students. Held on 14–18 November, it featured experimental educational discussion venues modelling the activities of member states, permanent members, and observers of the intergovernmental forum.

The 'Raising Submerged and Dangerous Objects in the Seas of the Arctic Ocean' conference (25–26 July, Murmansk) held as part of the Russian AC Chairmanship's environmental block focused on methods for eliminating submerged sources of radiation. In addition to the business programme, this conference featured a scientific and educational expedition to the place in Kola Bay where the B-159 submarine sank. Possible options for raising submerged vessels were demonstrated.

The conference on waste and the problem of microplastics in the Arctic (20 July, Arkhangelsk) was dedicated to one of the world's gravest environmental problems – destruction of entire ecosystems owing to accumulation of microplastics in water bodies – and to ineffective management of industrial and consumer waste.

At the conference on adapting to climate change in the Arctic (7–8 July, St. Petersburg), experts concentrated on climate change in the Arctic, on permafrost and its influence on the region's development, and determined specific steps to be taken for improving ice cover monitoring, protecting nature against technogenic impact and developing international cooperation in research.

The 'Public-private partnerships in sustainable development of Indigenous peoples' international forum held on 9–12 October 2022 in Murmansk was another important event. Its participants considered typical strategies and forms for involving businesses in ensuring the Arctic's sustainable development via corporate programmes, agreements with executive authorities and Indigenous people associations, and approaches to government regulations in this area.

Problems of the Arctic were discussion topics as part of both Russia's AC Chairmanship and the business programmes of Russia's biggest forums, the St. Petersburg International Economic Forum (SPIEF) held on 15–18 June in St. Petersburg and the Eastern Economic Forum (EEF) held on 5–8 September in Vladivostok. Specialized sections in St. Petersburg concentrated on modernizing the existing fleet for use at northern latitudes, on developing telecommunications and on digitalization in the Arctic. Vladivostok Forum attendees directed their attention to improving investment appeal and developing trade in the northern latitudes, to healthcare, the economy and creative industries. SPIEF 2022 featured, for the first time, an Arctic: Territory of Dialogue stand, while the EEF inaugurated an Indigenous Peoples' House.

The Conference on Development of Telecommunications and Digitalization in the Arctic in St. Petersburg emphasized, in addition to introducing digital technologies, the current situation with Russian companies' Arctic region projects and use of telemedicine and driverless transportation. The International Cooperation for Sustainable Development of the Arctic session of the Think Arctic project highlighted implementing joint Arctic projects in different areas and maintaining multilateral collaboration. The Human resources as a factor in Arctic development: How to develop and retain human resources panel discussion focused on attracting personnel to and retaining them in the AZRF.

Investment and Trade in the Arctic, a business breakfast conference (6 September), was a key event of EEF 2022. Its participants discussed the operations of Far Eastern preferential regimes (ASEZ and FPV) and the AZRF regime specifically designed for the Far North. The Creating a Healthy Society in the Far East and the Arctic conference (5 September) concentrated on children's and family health, on improving Russia's demographic situation and on the possibilities for altering peoples' destructive behavioral patterns that result in greater numbers of deaths among people of working age. The event's participants also discussed the role of women in advancing public projects promoting a healthy lifestyle in remote areas.

The events of the Sociocultural Development of the Northern Regions creative business forum (5–8 September) were another important part of the Arctic agenda at EEF 2022. The Forum's business programme was primarily dedicated to sociocultural development of the northern regions and to the promising areas for developing the region's creative industries, such as urban development in the north, Arctic industrial design, small-numbered peoples' traditions and tourism. Forum attendees also discussed the effect technologies have on life in the North, on the regional film and animation industry, and on ethnic cuisine. Social aspects, in turn, were the principal subjects at sessions on supporting the younger generation and Indigenous small-numbered peoples.

Key events of the cultural programme of Russia's AC chairmanship in 2022 included such notable ones as the Teriberka Arctic Festival and the Northern Character film festival in the Murmansk Region, the Sociocultural Development of the Northern Regions creative business forum in St. Petersburg and Vladivostok, the Bering Strait international festival in the Chukotka Autonomous District, the Northern Professions Skills championship in Murmansk, the 'Arctic. Breaking the Ice'

Russian Forum and Festival of Volunteers in Usinsk, the 'Sociocultural Initiatives and the Best Commercial Projects in Creative Entrepreneurship' track in Kogalym, and the Youth Creativity Festival in Arkhangelsk.

Since early 2023, amid Russia's continued isolation from AC activities, several other events envisaged in the Chairmanship's plan were held.

The Arctic Northern Cultural Forum was held in Salekhard in February. March saw 'The Arctic and the Antarctic in the changing world' roundtable and the Innovations and Technologies in the Arctic Forum in St. Petersburg, the Research and Training Conference on Climate Change and Permafrost Thawing in Yakutsk, the first International traditional reindeer herding championship in Neryungri and the village of Iengre, the Polar Bear Universe conference in Moscow and Anadyr. As part of their business programmes, the Golden Raven film festival in Murmansk and the Spirit of Fire film festival in Khanty-Mansiysk featured discussions on developing the filmmaking industry in the Arctic, while the Arctic stage of the Cape Chelyuskin – Cape Piai international expedition kicked off in Yakutsk.

April saw another series of events, including the 4th Ministerial meeting on international scientific cooperation in the Arctic (ASM4) in St. Petersburg, the International forum of associations and consortia of northern territories in Tomsk, experimental research exercise of the forces and means of the Unified State System of Prevention and Response to Emergencies in the Arctic Zone of the Russian Federation (Safe Arctic 2023) in nine regions of the Arctic zone, and Arctic tourism week in Norilsk. The first ArcTech Arctic technology competition opened as part of the ArcTech: Science and Technology for Arctic Development' Research and Training Forum; the competition aims to transform scientific and technological projects into digital and engineering solutions that would promote development of comfortable living conditions in the Arctic.

On 11 May 2023, at the 13th AC session in Salekhard, Russia devolved the next two years' Chairmanship onto the next country in line, Norway. No partner delegations were present. Yet, since Russia's Chairmanship was initially supposed to continue until August 2023, events dedicated to the socioeconomic development, conservation, sustainable development and scientific study of the Arctic went on.

After Russia devolved the AC chairmanship, another 20 events were held, including the International Conference on Biodiversity in the Arctic and the International Forum on Protected Arctic Areas held as part of SPIEF 2023, the second 'The Arctic. Breaking the Ice' Russian Forum and Festival of Volunteers, the Teriberka Arctic Festival, the Bering Strait Festival and International Maritime Arctic Educational and Scientific Expeditions 'Training-through-Research'.

The prospects for Russia's further involvement in AC activities (and the expediency of such involvement) are not yet clear since the fate of the AC itself has not been decided. While Russia continued to implement the approved Chairmanship programme, western Arctic states discussed

whether to retain the AC in its original form or to establish a new venue for cooperation in the Arctic that would not include Russia. So far, no final decision has been made. It is not yet known whether Russia will assume Chairmanship of the Barents Euro-Arctic Council as scheduled for October 2023. Clearly, however, any decision isolating Russia from decision-making on the Arctic is doomed to fail owing to the spatial, geopolitical, economic, transport and environmental role of the Russian Federation's Arctic Zone.

Back during its AC Chairmanship, Russia took several steps to adapt to the new circumstances and the destructive politicization of Arctic states' relations prompted by the Arctic countries' demarche against Russia.

First of all, 'The Basic Principles of the Policy of the Russian Federation in the Arctic Through to 2035' were amended: amendments adopted in February 2023 elaborated and detailed previously envisaged provisions and also added new ones. The changes applied primarily to international cooperation. The Basic Principles no longer mentioned the Barents / Euro-Arctic Council but the AC, its status and regional significance remained unchanged. "Arctic" states were replaced with "foreign" states thereby significantly expanding the geographic reach of potential partnerships.

These changes fully reflect the stance held by Russian President Vladimir Putin. He voiced this back in April 2022 at the meeting on Arctic zone development when he said that, today, the so-called extra-regional states and associations should be more actively engaged in cooperation in the Arctic: "There will be enough work for everyone. We will offer cooperation to all those that, like Russia, are interested in sustainable development of this unique region. We view the Arctic as a territory of dialogue, stability and constructive cooperation rather than a zone of geopolitical intrigue."

Additionally, in December 2022, the Russian President signed the amended Federal Law "On inland sea waters, territorial sea, and adjacent areas of the Russian Federation". The amendments enshrined new rules for foreign naval vessels and other government ships used for non-commercial purposes entering inland sea waters in the NSR basin. As of now, such entry requires that permission to travel through the Kara, Bering and Vilkitsky Straits be obtained at least 90 days prior to the intended transit date.

3.2 The AC's prospects without Russia

Assessing the international significance of the AC's activities undertaken without involving Russia with a view to resolving topical cross-border issues in the circumpolar region

The uncertain fate of the AC and possible launch of a similar association without Russia might have unforeseen consequences. Yet, the prospects for such a decision are clear:

1. Russia has the longest coastline in the Arctic and Russia's Arctic territories are home to 45% of the region's population (Figure 7). Russia's exclusion means refusing to handle jointly the problems of nearly half the Polar region's population, including Indigenous peoples.

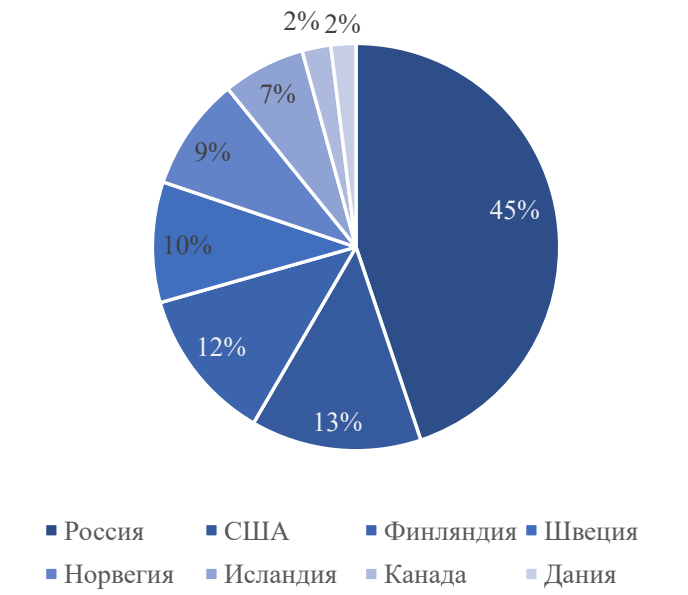

Figure 7. Arctic countries' population share in the overall Arctic population in 2019
Sources: Arctic states' statistics agencies, UN, Arctic Council

2. Russia possesses the greater part of undiscovered deposits of natural resources in the Arctic. US Geological Survey (USGS)[34] experts estimate the Arctic to have about 13% (90 bn barrels) of the world's undiscovered oil and about 30% (approximately 47.3 trillion cubic meters[35]) of the natural gas. Almost all gas deposits are located along Russia's coast. Lack of cutting-edge technologies for geological exploration and production of extractable resources is an obstacle that can be easily overcome with participation by friendly states.
3. The NSR, a crucial route of global significance, the shortest route between Northern Europe and Asia Pacific (Figure 8), passes through Russia's Arctic seas. Access to resources and trade is of strategic significance for all states, primarily Arctic ones.

34 "Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle," U.S. Geological Survey (USGS), 2008. URL - http://library.arcticportal.org/1554/1/usgs.pdf (accessed on: 20.06.2023).
35 The original speaks of 1,669 trillion cubic feet

Figure 8. The Arctic Zone of the Russian Federation and the Northern Sea Route
Source: Ministry for the Development of the Russian Far East and the Arctic

4. The Arctic countries set as a top priority ensuring security in the Arctic (see clause 1.2), yet this is a goal that cannot be achieved and a promise that cannot be kept without engagement of half the coast of the Arctic Ocean, so the number of potential points of conflict will inevitably rise.
5. Russia's isolation will also affect collaboration between rescue services from different countries. In an emergency, it might result in major economic losses, environmental disasters and greater numbers of human casualties.
6. Solution of climate problems, for both the Arctic and the entire world, also depends on joint coordinated actions, on technology exchange and on efficient scientific cooperation, particularly given that the planet is warming up faster than forecast and this warming might result in a global disaster. Over the last 40 years, temperatures in the Arctic have risen by 1° a decade,[36] while temperatures in the Barents Sea went up by 1.5°. The US National Aeronautics and Space Administration (NASA) estimates that, owing to global warming, the ice cover shrank by 12.6% a decade[37] (Figure 9).

36 "New study warns: We have underestimated the pace at which the Arctic is melting," University of Copenhagen, Science Daily, 26.08.2020. URL - https://www.sciencedaily.com/releases/2020/08/200826104056.htm (accessed on: 05.04.2023).
37 Arctic Sea Ice Minimum Extent, NASA Global climate change, 2022. URL - https://climate.nasa.gov/vital-signs/arctic-sea-ice/ (accessed on: 05.06.2023).

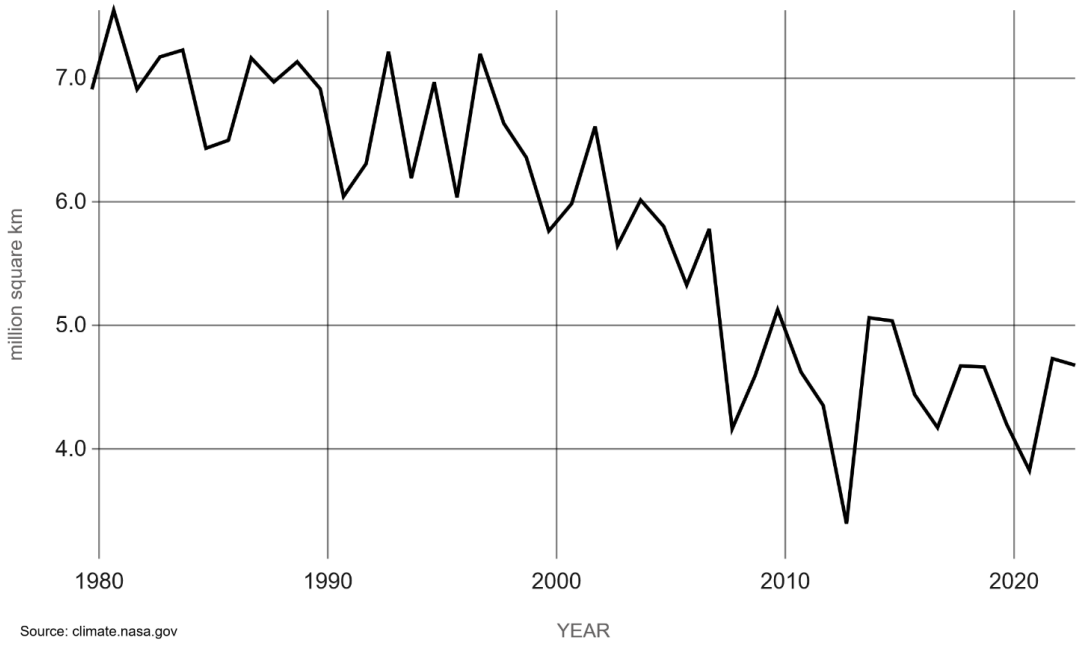

Figure 9. Minimal September sea ice area in the Arctic
Source: NSIDC/NASA

7. Given how under-researched the Arctic is, the consequences of its rapid warming are fraught with major risks and threats. For instance, the submarine permafrost of Russian seas in the East Arctic and the Kara Sea is estimated to contain gigantic amounts of frozen methane gas hydrates, 1,750 Gt of carbon (1 Gt = 1 bn tonnes), which is three orders of magnitude greater than the anthropogenic methane emissions of the entire planet. So, the methane potential of the Arctic shelf hydrates alone can be seen as a crucial factor that could generate a manifold increase in methane content in the atmosphere and produce unpredictable climatic consequences owing to an acute spike in the greenhouse effect.

Additionally, the following consequences will need to be taken into account if Russia is, indeed, isolated and eliminated from joint projects and programmes:

- it will totally destroy the authority of the AC, which has been functioning for over a quarter of a century and has established itself as a venue for stability and constructive dialogue;
- the vacuum left by former partners will be rapidly filled and other states will benefit from international cooperation in the Arctic. This is all the more relevant since Russia has already taken several steps in that direction.

7.1 Potential partnership

Analysis of non-Arctic states' interests and steps aimed at developing cooperation with Russia in the Arctic with special emphasis on the most promising areas and/or specific projects for such cooperation

Russia's isolation by the Arctic Council and other countries of the 'Arctic Eight' essentially ignoring Russia's Chairmanship served to bolster the trend toward fragmentation of the multilateral cooperation system and also cast uncertainty on the future shape of the region's governance architecture. Russia's exclusion from the regional governance process was followed by a significant drop in the role and operability of traditional Arctic institutions, including the Arctic Council, which had previously been looking to be transformed into a fully-fledged international organization. Russia has now brought to the fore the search for new partners and building of alternative and more flexible venues for collaboration in the Arctic.

Non-Arctic states' strategic interest in the Arctic stems from the region's major deposits of hydrocarbons, rare and rare earth metals, from northern seas expanding their transport and transit capacities, from climatic features, and from the Arctic's tremendous research potential.

Previously, Russia had already been engaged in active Arctic cooperation with extra-regional countries. For instance, China has been Russia's biggest trading partner and an AC observer since 2013, and it is already involved in Arctic energy projects, including Novatek's Yamal LNG and Arctic LNG 2. Chinese investors control about 30% of Yamal LNG[38] and 20% of Arctic LNG 2.[39] China is also in talks about developing the large Pizhma deposit of titanium and quartz in the Komi Republic. [40]

In 2022, with the consent of Russia's Ministry of Science and Higher Education,[41] the Higher School of Economics National Research University and leading research organizations subordinated to China's Ministry of Natural Resources signed an agreement on scientific and technical cooperation in the Arctic and on establishing an international system for assessing, forecasting and raising awareness of risks stemming from emissions of methane from gas hydrates that are kept stable by the submarine permafrost, and for assessing the possibility of using methane from gas hydrates as an energy source.

India's interest in taking part in developing the Arctic's mineral resources was confirmed in the joint Russia-India statement made after Russian President Vladimir Putin's visit to India back on 11 December 2014 This statement recognized the importance of the Arctic region for both states and announced readiness to boost scientific cooperation in the Arctic by, among other things, developing technologies for processing rare earth metals.

38 "Novatek asked for preferences to be introduced for Chinese investors in Yamal LNG" (in Russian) Forbes.ru, 07.06.2023. URL - https://www.forbes.ru/milliardery/490505-novatek-poprosil-vvesti-l-goty-dla-kitajskih-investorov-amala-spg (accessed on: 20.06.2023).

39 "China will receive 20% of Arctic LNG," (in Russian) Kommersant 25.04.2019. URL - https://www.kommersant.ru/doc/3955128 (accessed on: 15.06.2023).

40 URL - https://www.janes.com/defence-news/news-detail/china-to-assist-russia-with-titanium-mining-in-the-arctic (accessed on: 20.04.2023).

41 Letter No. MH-12/з-5995 dated 25.08.2022

In 2017, Russia and India agreed on joint exploration of Russia's Arctic shelf. In an interview with The Times of India on 15 January 2020, Russia's Minister of Foreign Affairs Sergey Lavrov emphasized that the two countries were setting up "…cooperation in geological exploration, joint development of oil and gas deposits in the two states, including shelf projects, and that would allow India in the future to become the first non-Arctic state to extract resources in the Arctic…"

In the near future, Russia and India might potentially engage in jointly implementing the 'Biosecurity in the Arctic' project that was officially submitted by the Russian representative of the Sustainable Development Working Group as a priority for Russia's AC Chairmanship.

India's interest in fully-fledged involvement in this project stems from the fact that dangerous infections and pollutants are mostly spread through the migrations to the Arctic of over 600 species of wildfowl, fish and animals travelling north to south and back. For many of them, particularly for wildfowl, India is their permanent habitat.

The crucial factors exacerbating the problems considered as part of the project are:

- climate change that significantly alters migration routes and geography, seasonal patterns, and the breeding range of wildfowl, fish, insects and animals;
- millions of tonnes of dangerous chemicals and toxic waste, including pesticides, are washed annually into the Pacific Ocean from Southeast Asian states alone, and these can build up in food chains and travel thousands of kilometers along biological channels owing to natural disasters (tsunami, typhoons, etc.).

Both Russia and India lack effective systems for counteracting these threats and these are not only risks of uncontrollable natural spread of dangerous infections and highly toxic pollutants (following natural disasters, for instance), but also risks of premeditated actions.

Following the demarche by the AC member states, the number of joint projects with non-Arctic states might increase by an order of magnitude, especially since the requisite preconditions are already in place (see clause 3.1).

Under the 2035 Basic Principles, Russia has two international cooperation goals: protecting its national interests in the Arctic, including economic ones, and mutually advantageous cooperation and peaceful resolution of all disputes in the Arctic in accordance with international law. The two goals should serve as benchmarks for choosing partners. It is also important that other priorities coincide, as well.

The views of two key Arctic Council observers, China and India, on regional development align significantly with Russia's interests (Table 4).

Table 4. Comparison of Russia, China and India's national interests in the Arctic

Russia	China	India
Ensuring Russia's sovereignty and territorial integrity		
Preserving the Arctic as a territory of peace, stable and mutually advantageous partnership	International cooperation and research in the Arctic	Promoting peace and stability in the region, science and research, governance and international cooperation
Ensuring a good quality of life and prosperity for the population in the AZRF		
Developing the AZRF as a strategic resource base and its sustainable use with a view to accelerating Russia's economic growth	Prospecting for and producing oil, gas, mineral and other nonliving resources, conserving and using fish and other living resources, using Arctic resources in a legitimate and sustainable manner	Cooperation in economic, human and tourism development, etc.
Developing the NSR as Russia's globally competitive national transport route	Developing Arctic Sea routes	Transport and communications
Environmental protection in the Arctic, protecting the indigenous environment and traditional way of life of small-numbered Indigenous peoples living in the AZRF	Environmental protection, countering climate change	Climate and environmental protection
		Building up national potential

Sources: Basic Principles 2025, China's White Paper on Arctic policy; India's Arctic policy

In addition to China and India, two more BRICS[42] states, Brazil and South Africa, might potentially become partners for Russia in the Arctic, especially since BRICS is today a key international venue. One of the BRICS principles for multilateral cooperation is advancing sustainable development, balanced and inclusive growth. BRICS countries already cooperate in science, technology, protecting aquatic resources and the environment and countering climate change, and they conduct joint Arctic studies, the number of which could increase.

Brazil and South Africa's polar policies are mostly geared toward the South Pole, yet major groundwork laid down in Antarctic research might come in very handy in studying the Arctic. Additionally, Brazil has tremendous experience in shelf oil production, which is highly relevant for Arctic projects. Addendum 4 describes key Arctic projects and initiatives already being implemented by Russia, China, India and Brazil.

The following areas and projects stand out among sustainable development initiatives implemented by BRICS states:

Environmental protection and countering climate change

- A memorandum of understanding on environmental cooperation was signed between BRICS countries in 2018. It envisioned bolstering BRICS countries' cooperation and advancing joint efforts in protecting the environment and biodiversity;
- The BRICS environmentally sound technology (BEST) platform (2019): environmentally sound technology exchange as a new international mechanism for public-private partnership;
- Activities of BRICS' New Development Bank: financing "green" projects.

Science, education, technology

- Memorandum of understanding on cooperation in science, technology, and innovation (2015): joint research into climate change and minimizing the consequences of natural disasters, managing water resources and neutralizing pollution, polar and ocean research;
- BRICS Network University exchange programmes (2015): student exchange programmes;
- BRICS STI Framework Programme (2015): stimulating BRICS states' joint research, financial support for multilateral fundamental, applied and innovative projects;
- BRICS research and innovation networking platform (2015): research into preventing and mitigating natural disasters, geospatial technologies, renewable energy sources and energy efficiency, astronomy and water resources.

42 An international association of the Federative Republic of Brazil, the Russian Federation, the Republic of India, the People's Republic of China and the Republic of South Africa established in June 2006.

Polar research

- BRICS Working Group on Ocean and Polar Science and Technology (2018): developing state-of-the-art technologies for observing and forecasting ocean and climate changes, marine ecosystem vitality, polar research, including remote sensing of the Antarctic surface topography, outer space observations from polar regions.

New cooperation formats in no way diminish the importance of existing regional governance venues, especially the Arctic Council. In the short term, however, the prospect of Russia and the bloc of western states resuming fully-fledged dialogue on implementing a comprehensive sustainable development agenda appears infeasible owing to foreign political limitations and sanctions. Nonetheless, as geopolitical tensions lessen, existing communications channels are likely to reopen and cooperation is likely to be built around the Arctic's most urgent problems, such as environmental protection, climate change and support for small-numbered Indigenous peoples. Scientific dialogue might serve as a basis for further implementation of the accumulated capital in the Arctic.

The following areas could potentially serve as elements of the sustainable development agenda in the Arctic: science and education, environmental protection, developing Arctic resources, green energy, support for Indigenous peoples, transport and logistics, sustainable tourism.

Environmental protection and countering climate change

- Bolstering close cooperation within BRICS and advancing joint efforts on matters of air and water quality, biodiversity, climate change and waste management;
- Launching a joint platform for coordinating efforts to combat climate change and effect an energy transition in consideration of BRICS states' socioeconomic features and capabilities.

Science, education and technologies

- Exchanging environmentally sound technologies as an international public-private partnership mechanism;
- Launching the Interpolis programme to integrate BRICS states' research at three poles: the Arctic, the Antarctic, and the Himalayas;
- Financing "green" projects through the BRICS New Development Bank;
- Holding international conferences and workshops on sustainable development of the Arctic;
- Implementing student exchange, MA and PhD programmes, joint research in such priority areas as energy, informatics and information security, environmental protection and climate change, water resources and decontamination, and the economy;
- Holding competitions for sustainable development project funding (as part of BRICS STI);
- Developing state-of-the-art technologies for observing and forecasting ocean and climate changes, marine ecosystem vitality, polar research, including remote sensing of the Antarctic surface topography, and outer space observations from polar regions.

Developing Arctic resources

- Using Chinese, Indian, Brazilian and South African investment in the Vostok Oil Arctic project;
- Expanding the investment project portfolio in manufacturing liquefied natural gas at Arctic LNG 2 and Yamal LNG;
- Jointly developing new oil and gas deposits in the Arctic using innovative equipment to minimize damage to the environment.

Green energy

- Joint projects using hydrogen technologies used increasingly actively in BRICS states;
- Projects for constructing wind farms and using tidal energy;
- Using the experience of Brazil, South Africa, China and India in manufacturing solar panels and developing solar energy storage technologies.

Transport and logistics

- Developing the Northern Sea Route as the key transport artery in the Arctic;
- Partnership in shipbuilding and expanding the icebreaker fleet. Attracting investment by Russia's BRICS partners in the Zvezda shipbuilding complex;
- Establishing a "green navigation" corridor in the Arctic, introducing measures for reducing emissions of pollutants and GHG by using alternative LNG- and hydrogen-based fuels;
- Developing an energy efficiency index for Arctic-class vessels;
- Ensuring maritime security by organizing joint rescue missions along the Northern Sea Route;
- Using joint satellite technologies for improving navigation along the Northern Sea Route;
- Developing the Vladivostok–Chennai and North–South international transport corridors.

Supporting Indigenous small-numbered peoples of the North

- Ensuring the population's food security by developing sustainable agriculture, drawing on China's experience in building vertical farms;
- Launching a separate venue for discussing the problems and protecting the interests of Indigenous peoples;
- Holding events and forums dedicated to the cultures of the Indigenous peoples of the Arctic.

Sustainable tourism

- Launching an Arctic information portal with tourist routes in the national languages of BRICS states;
- Developing a single BRICS payment system based on a basket of national currencies.

Even though the future of the Arctic governance architecture is quite vague and it is not yet

clear whether the Arctic Council will continue to exist in its present form and what role it will play, we can state that the development of multilateral cooperation in the Arctic in the medium term will be determined by propensity toward conflict in international relations and by the pace of the global economic rebound. These four factors allow four development scenarios to be outlined for cooperation in the region, broken down by four key signs that account for the latest trends in the regional governance architecture (Figure 10). Addendum 5 details international cooperation development scenarios for the Arctic.

Figure 10. International cooperation development in the Arctic: Scenario Matrix

Source: Compiled from data contained in the HSE University's report 'Russian Economy and Social Sphere: Development Scenarios Amid Geopolitical Turbulence'

Key attributes:

1. International institutions' functioning in the Arctic is marked by intensive cooperation activities conducted in different formats via establishing new working groups, implementing medium- and long-term projects, signing multilateral agreements, and via all countries of the 'Arctic Eight', including Russia as a key regional actor, being involved in traditional Arctic governance institutions.
2. The degree of non-Arctic states' involvement in Arctic multilateral cooperation institutions includes non-Arctic states' progressively more visible presence in the Arctic and the possibility of new participants appearing at the key international cooperation venues. This sign takes into account probable change in non-Arctic states' status in organizations, in particular, states and NGOs gaining observer status.
3. The degree of fragmentation of the multilateral cooperation institutions system reflects the divergent interests of the key members of the regional system of cooperation institutions and the possibility of alternative blocs emerging in the Arctic, of new formats being launched engaging a limited number of actors with specific regional interests.
4. International cooperation priorities in the Arctic reflect the range of states' joint regional activities that are either limited to basic areas such as ensuring environmental safety and supporting Indigenous peoples or expanding project portfolios in different areas.

Despite Russia's efforts during its AC chairmanship and despite non-Arctic states' concerns over the collapse of Arctic governance institutions, events follow the second scenario that entails Russia's isolation from traditional cooperation formats in the Arctic and new prerequisites for regional governance system's fragmentation. It will highly likely manifest in putting Arctic development matters on the agenda on non-Arctic venues and forums such as, in particular, BRICS.

4. Additional steps

4.1 Expanding alternative international partnerships

Further steps. Expanding alternative international partnerships with non-Arctic states with a view to advancing the Arctic's sustainable development; assessing expected results of successfully implemented projects involving non-Arctic states and the AC's observers, including projects designed and/or adopted during Russia's chairmanship in the AC.

Crucial projects include the following ones: building Utrenny liquefied natural gas and gas condensate terminal in the Sabetta sea port on the Yamal Peninsula (Arctic LNG 2 project);[43] building Northern Bay oil loading terminal in the vicinity of the Dikson urban-type settlement in the north of the Krasnoyarsk Territory as part Vostok Oil's (Rosneft) large-scale project; building the Yenisey coal terminal in the Dikson port for shipping out coal from the Syradasay deposit; building coastal engineering installations and waterworks for the Baim deposit in the Bilibino sub-district of the Chukotka Autonomous District. Additionally, the Kamchatka Territory and Murmansk Region will build maritime LNG transshipping facilities, and Vladivostok will build a port to serve as a transit shipping hub. Plans also involve building a transportation and logistics hub in the Korsakov port on Sakhalin, building bunkering and maintenance facilities in the ports of Тиксi and Dikson, and developing transportation hubs in Murmansk and Arkhangelsk (Figure 11).

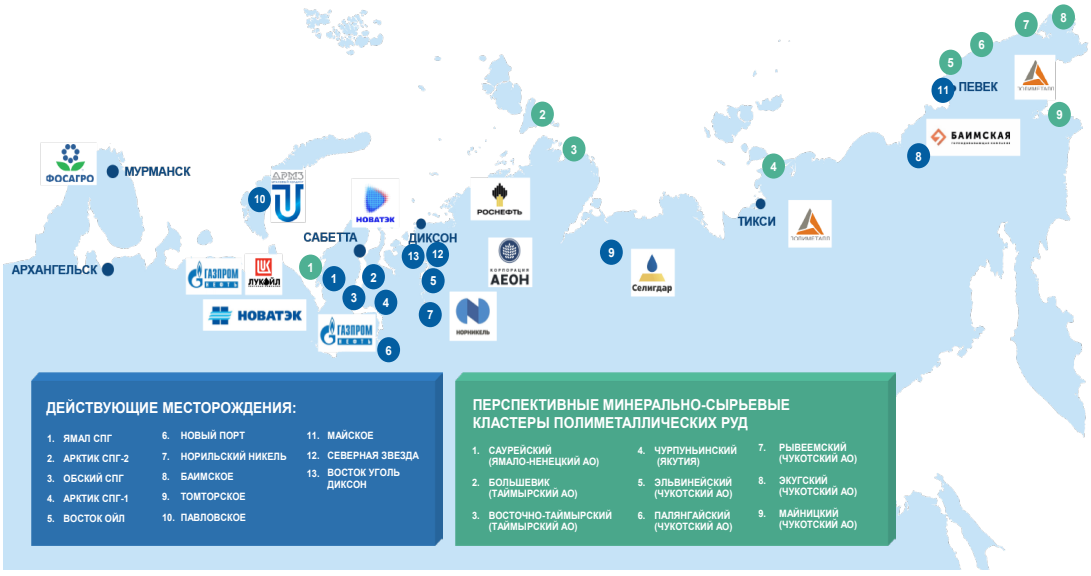

Figure 11. Map of existing deposits and prospective raw materials and mineral polymetallic ores clusters in the AZRF

Source: Rosatom

43 Utrenny terminal, Arctic LNG 2. URL - https://arcticspg.ru/proekt/terminal-utrenniy/ (accessed on: 20.06.2023).

When choosing potential partners from among friendly states with a view to ramping up project activity in the Arctic, the criteria should include coinciding national interests in the Arctic (see clause 3.3); the following projects are preferable:

- projects that would promote solutions for strategic tasks set forth in the 2035 Basic Principles and achieving objectives outlined in that document;
- project that align with the goals of the Arctic's sustainable development;
- projects for which Russia has laid significant groundwork;
- projects that will result in localizing inaccessible technologies.

Priority projects connected with developing the Arctic and protecting Russia's national interests in the region are set forth in the Development Strategy for the AZRF, in the NSR Development Plan, and in the Unified Development Plan for the AZRF[44] that lists 268 events intended to solve social problems, create a comfortable living environment, attract new investors, stimulate industrial manufacturing, and ensure national security. However, the list of such projects can be expanded by including additional important initiatives accounting for proposed additional steps ensuring Russia's national interests in the Arctic listed in clause 3.3 and 4.2 of the present report.

Bilateral international cooperation based on aligning national interests and with Russia in the lead could prove to be far more secure than the AC's consensus decision-making on launching important projects and also to be far more efficient and economically advantageous.

4.2 Protection of national interests

Additional steps protecting Russia's national interests in the Arctic developed with account for the political demarche of AC member states and for the overall transformation of international relations.

Given AC member states' demarche, the importance of developing the AZRF demands that additional measures be taken to protect Russia's national interests in the Arctic.

Clause 8 of the 2035 Basic Principles lists the following principal challenges in ensuring national security in the Arctic:

- attempts by several foreign states to revise the basic provisions of international treaties that regulate economic and other activities in the Arctic, to create national legal regulations systems without account for such treaties and regional cooperation formats;
- incomplete international legal demarcation of maritime spaces in the Arctic;
- foreign states and/or international organizations hindering Russia's conducting its legitimate

44 Unified Action Plan for Implementing "The Basic Principles of the Policy of the Russian Federation in the Arctic Through to 2035" and the "Development Strategy for the Arctic Zone of the Russian Federation" approved by Order of the Government of the Russian Federation Np. 996-r of April 15, 2021 (in Russian) http://static.government.ru/media/files/p8DfCI0Pr1XZnAk08G7J3jUXUuDvswHr.pdf (accessed on: 25.06.2023).

economic and other activities in the Arctic;
- foreign states building up their military presence in the Arctic and exacerbating conflict potential in the region;
- discrediting Russia's activities in the Arctic.

Given the principal threats and challenges listed in the 2035 Basic Principles, given instructions and other decisions of the President of the Russian Federation and the Government of the Russian Federation, it is expedient to consider additional steps that would protect Russia's national interests in the Arctic with account for the political demarche of AC member states and for the overall transformation of international relations. When determining the list of such steps and projects, preferences should be given to those that can be implemented with Russia in the lead. They may include the following ones:

1) developing proposals on designing a joint BRICS platform for handling the Arctic's environmental problems and building up climate research engaging the resources of international financial institutions.

Topicality:

Developing new strategic partnerships with friendly states capable of mustering additional funding for developing renewable energy sources, improving energy efficiency, and implementing environmental projects. It would be expedient, as the first priority step, to develop an agenda on improving organizational, legal, financial, and economic mechanisms that increase the efficiency of preparing and implementing projects in this area and to spearhead the discussion of this agenda within BRICS.

Prerequisites:

- no access to financial resources of international organizations (primarily the Global Environment Facility that has indefinitely "frozen" all Russia's projects, including those that had been previously approved in accordance with the established procedure);
- BRICS' environment ministers' decision on the expediency of launching a joint BRICS public-private partnership platform for exchanging best available practices and promoting "green technologies".

2) Assessing Russia's risks stemming from parallel legal regimes for prospecting and tapping seabed mineral resources beyond the limits of national jurisdiction in the Arctic Ocean; developing proposals on reducing such risks.

Topicality:

The 1982 UN Convention on the Law of the Sea (hereinafter the 1982 Convention) and the 1994 Agreement relating to the implementation of Part XI thereof (hereinafter the 1984 Agreement) define seabed areas beyond the limits of national jurisdiction in the Arctic Ocean as international seabed and legally classify them as "the common heritage of mankind".

Before the 1982 Convention went into force, the 1958 Convention on the High Seas (that was adopted at the First UN Conference on the Law of the Sea in 1958 and is still in effect) qualified this area, including the area in the Arctic Ocean, as the "bed of the high seas" and, accordingly, freedoms of the high seas extended to it as well.

At the moment, the US and about two dozens of other states are not parties to the 1982 Convention and the 1994 Agreement. The US Senate documents specifically state that Part XI of the 1982 Convention (the Area) is not an international custom and, therefore, is not binding on those states that are not parties to the 1982 Convention. This stance of one of the world's strongest economic and military powers posits a certain risk for conducting economic activities in the Area.

This risk requires a comprehensive assessment and developing appropriate recommendations to be used in Russia's practical activities on geological exploration, prospecting, and preparing for tapping the mineral resources beyond the limits of national jurisdiction in the Arctic Ocean.

3) Identifying, analyzing, and systematizing modern international law that would allow for expanding the seabed space where developing mineral resources does not require payments to the International Seabed Authority.

For reference. Under Part XI of the 1982 Convention, states tapping nonliving resources of the continental shelf beyond their 200-mile exclusive economic zone should make payments to the International Seabed Authority.

Topicality:

By compliance with international law, coastal states significantly expand water areas and respective seabed areas under their sovereignty which results in "pushing" the 200-mile exclusive economic zone away from the coastline.

Handling this issue is of crucial practical significance for Russia from the point of view of geostrategic and economic interests (primarily in the Arctic) and also for planning prospective geological surveying, prospecting, and preparations for tapping mineral resources since:

- it will allow, pursuant to applicable international law and other states' practices, for expanding Russia's maritime water areas (internal waters) by thousands of square kilometers;
- it will result in pushing the exclusive economic zone away from the coastline and will significantly expand the NSR's water area "protected" by the status of Russia's internal waters;
- it will expand the seabed area where mineral resources can be tapped without making payments to the International Seabed Authority.

4) Determining additional measures enshrining the NSR's status as a historically established national transportation artery in the Arctic and improving its competitive edge.

This is a topical issue since:

- non-friendly Arctic states and the International Maritime Organization have assumed an active stance trying to subjugate the NSR to international navigation rules since the NSR's water area extends beyond Russia's territorial sea in some Arctic seas' areas;
- the US has officially proclaimed that its national priorities include ensuring access to all areas of the Arctic Ocean and ensuring free international navigation along the Northern Sea Route (most other states have assumed the same stance);
- conflict situations similar to the tensions between the US and Canada over the status of the straits in the Canadian Arctic Archipelago may arise;
- Asia Pacific states are interested in using the NSR, but they see risks for international navigation;
- climate change and shrinking ice cover may significantly bolster the standing of both competitor countries and partner states that insist on applying the free navigation regime to the NSR's water area, on "internationalizing" the NSR (as China calls it).

5) Developing early detection of and countering threats stemming from transboundary pollutant transport into the AZRF of highly toxic substances and dangerous infections via biological channels.

Topicality:

Russia's system of counteracting the spread of deadly infections and chemical and radioactive pollution does not envisage effective monitoring of the biological channels of their transboundary transport such as seasonal migrations of birds, fishes, and marine mammals that are the principal carriers of bird flu, avian tuberculosis, listeriosis, and several other mass diseases.

It means that there are risks stemming both from uncontrollable natural spread of dangerous infections and pollutions (for instance, following natural disasters) and from premeditated terror attacks that would use regular biological channels to "deliver" highly toxic substances and infections to specific spawning and breeding areas.

Over the last few years, greater incidence of increasingly more destructive natural disasters (tsunamis, typhoons, etc.) results in no fewer than 10 million tons of dangerous chemicals and toxic waste being washed into the Pacific from Southeast Asian states alone; these chemicals and waste can accumulate in food chains and move along biological channels into Russia.

For instance, there is reliable information that Indigenous peoples of the Chukotka Autonomous District have dangerous blood levels of highly toxic chloro-organic compounds that cause, in particular, reproductive health problems and malignant tumors, and weaken the immune system. There are also high concentrations of chemicals that were never produced and used in these areas such as mirex, toxaphene, chlorobenzene, etc.

Their high blood levels in people mostly stem from extensive and ubiquitous consumption of migratory birds wintering in Southeast Asia, China, and Japan, and of consumption of Salmonidae

and whales whose feeding areas are located within oceanic currents in the same regions.

6) Establishing a national consortium for studying climate and environmental consequences of permafrost degradation that manifest particularly starkly on the Arctic shelf and catch basins of the great Siberian rivers (hereinafter the Consortium).

Topicality:

International research findings published in the world's leading scientific journals show that the submarine permafrost of the East Arctic and Kara Sea (hereinafter the EAS) contain gigantic volumes of frozen methane gas hydrates; they are hundreds of times greater than air methane contents and over 20,000 times greater than the anthropogenic methane emissions of the US, the global industrial leader.

Latest research confirms that submarine permafrost degradation has reached the levels that endanger the stability of gas hydrates with all attendant consequences materializing during the lifespan of a single generation (unlike the ground permafrost that thaws off only in summer and at shallow depths). Leading Russian and international experts estimate that emissions of even a small volume (1–5%) of the methane potential of the EAS alone could cause damages starting at USD 80 bn. a year and contribute to a sharp upsurge in the greenhouse effect and accelerated climate changes throughout the world.

The level of a scientific consortium of national laboratories the US launched to identify and assess processes causing rapid climate change testifies to the global significance of the problem. The strategic concept of the Investigation of the Magnitudes and Probabilities of Abrupt Climate Transitions (IMPACTS) research programme demonstrates that two out of four key types of rapid climate change are connected to the terrestrial and shelf permafrost degradation with a particular focus on the destabilization of methane hydrates of the Arctic Ocean.

Currently, Russia is a leader in studying and forecasting processes that influence climate change owing to increasing GHG emissions stemming from permafrost degradation. However, the level of international scientific cooperation required for conducting global research into these processes is non-existent.

The world-class scientific center implementing the Gas Hydrates in the Global Environment: Potential for Sustainable Development of Society and Impact on Climate Transformation could serve as the platform for launching a Consortium engaging scientists from friendly states. A solid scientific foundation for building up Russia's leading role in international cooperation intended to resolve these problems has already been laid.

Russia's unique contribution to revising current estimates of atmospheric methane balance will be one of the results to be produced by the proposed Consortium. The present estimates do not account for the volumes of methane coming from the EAS short-term, and it might shift the focus of international efforts aimed at adapting to climate change.

5. Results of Russia's Chairmanship in the Arctic Council in 2021–2023 and recommendations made

A summary of the results of Russia's Chairmanship in the AC in 2021–2023 and recommendations based on analysis of performance of the Ministry for the Development of the Russian Far East and Arctic (Minvostokrazvitiya) and other stakeholders in implementing the approved priorities of Russia's Chairmanship in the AC in 2021–2023; conclusions and suggestions formulated at forums, conferences and other events held by Russia under the approved programme (in as far as Minvostokrazvitiya is involved); progress and effectiveness of AC projects and preparation of official reports on specific issues (as part of the AC Sustainable Development Working Group) involving entities representing Russia; operating efficiency of AC Sustainable Development Working Group expert group secretariats established on the basis of a relevant Russian authority; outlook for project proposals officially presented by Russia to the Sustainable Development Working Group for joint implementation together with all stakeholders within Russia's Chairmanship in the AC; and the unprecedented démarche on the part of AC Member States aiming to block Russia's participation in AC activities on political grounds.

5.1 Results of Russia's Chairmanship in the Arctic Council

5.1.1 General results

Despite the difficulties that arose during Russia's Chairmanship in the AC, Russia performed all its obligations in full. Over 100 events were held over the two-year period. including forums, conferences, roundtables, festivals, etc. They were held in 24 of the country's cities and population centres, including all nine regions in the Arctic Zone of the Russian Federation (AZRF). The events were organized within 11 theme modules covering all important development areas of northern territories. Some of the most discussed topics included medical services for people of the Russian Far North, trends in ESG, foundations of public-private partnership for the betterment of the people, professional development and scientific support.

In 2022, a stand dedicated to the Arctic and Russia's Chairmanship in the AC was set up for the first time at the St. Petersburg International Economic Forum and a House of Indigenous Peoples at the Eastern Economic Forum was particularly popular with representatives of these peoples and guests from friendly nations alike (see clause 3.1).

The following topics were first discussed during this time on Russia's initiative:

- protection of intellectual property rights of Indigenous peoples;
- social responsibility of businesses;
- public-private partnership in sustainable development of northern ethnicities.

Initiatives proposed by Russia notably included digitization of the cultural and language legacy of Indigenous peoples of the Arctic and ensuring biosecurity in the region, which were approved and promoted to the status of AC projects.

The project Think Arctic – Think Global was implemented jointly by the Roscongress Foundation and HSE University's Centre for Comprehensive European and International Studies to support Russia's Chairmanship. The project aimed to advance Russia's sustainable development agenda, strengthen constructive international dialogue and suggest new consensus points in Russia's collaboration with Arctic Council Member States and observers, as well as non-Arctic states.

Ten international events were organized under the auspices of Think Arctic – Think Global, featuring experts, scientists, government and business representatives from Russia, Finland, Canada, Norway, Iceland, the UK, China, India, Japan and Brazil. A complete list of the experts is provided in Appendix 6. Interim results of the project were presented at special sessions of the St. Petersburg International Economic Forum and the Eastern Economic Forum in 2022 and 2023. Importantly, the project strengthened scientific dialogue between research centres and universities in Russia and elsewhere (Figure 12). The countries involved are listed in full in Appendix 7.

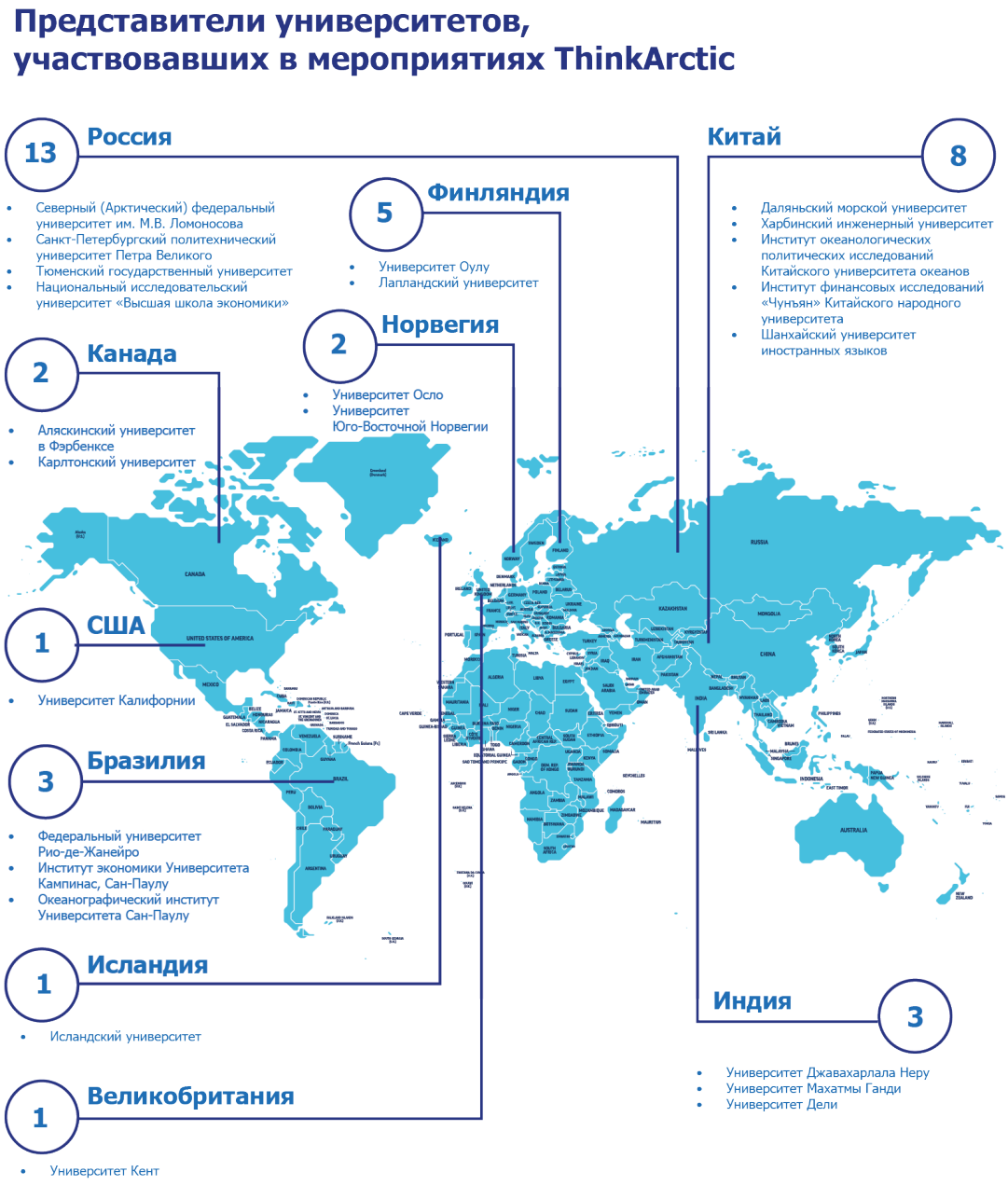

Figure 12. Universities participating in Think Arctic – Think Global events

5.1.2 Results of project and expert group work

Despite suspension of cooperation with AC countries and freezing of almost all Working Group projects, some initiatives are still being implemented, albeit far behind schedule, thanks to the actions of Russian participants.

1) Implementation of the project Phase-out of Ozone Depleting Substances and Fluorinated Greenhouse Gases at Fish and Seafood Processing Enterprises of the Murmansk Region, Phase 2 could continue under the auspices of the Arctic Contaminants Action Programme. This project had been authorized by the Arctic Council Project Support Instrument Committee and is jointly funded by stakeholder enterprises of the Murmansk Region.

According to Minprirody of Russia, in 2023,[45] seafood processing enterprises of the Murmansk Region continue to receive deliveries of equipment meeting current environmental standards. Procurement of this equipment is co-financed by AC Project Support Instrument funds managed by the Nordic Environment Finance Corporation (NEFCO), which previously announced its intention to complete the project in Russia.

2) V.G. Bulgakov, Deputy General Director of Typhoon Research and Production Association and Director of the Institute of Environmental Monitoring, was elected co-chair of the AMAP Working Group from Q2 2021, and the Typhoon RPA team took an active part in preparing the group's technical report evaluating radioactivity in the Arctic as part of the WG activities. A total of nine meetings dedicated to this issue were held in 2021 and up to February 2022. A decision was made to continue joint work on this technical report in 2023.

Heads of AMAP delegations held 14 videoconferencing meetings in 2021 and two in 2022.

Additionally, five review documents (in English) were prepared and made available on the official website in 2021 as part of the activities of the AMAP working group. Typhoon RPA launched an initiative to present these documents in Russia, which was supported at the group's meeting, and the texts translated by Typhoon RPA staff members were made available on the AMAP website in 2022.

3) V.A. Ginzburg, Deputy Director of the Yu. A. Izrael Institute of Global Climate and Ecology, was appointed co-chair of the Black Carbon and Methane Expert Group for the duration of Russia's Chairmanship in the AC. In addition to group meetings, which discussed organizational and technical matters related to the tasks described in the group's mandate, key results were to include presentation of a report on black carbon and methane based on national reports submitted by AC Member States.

According to the Federal Service for Hydrometeorology and Environmental Monitoring (Rosgidromet),[46] Russia's national report on black carbon and methane was prepared, approved by the relevant federal executive authorities and presented to the AC Secretariat in 2022. The report

45 Letter No. 20-32/26970 dated 24.07.2023
46 Letter No. 31-06767/23i dated 01.08.2023

gives details on black carbon and methane emissions and on national emission reduction actions. It is Russia's first National Report prepared in accordance with the reporting guidelines proposed within the AC Framework for Action to reduce black carbon and methane emissions. No information is available on National Reports presented by other AC Member States.

Note that Rosgidromet has been implementing the programme 'Support for Russia's Participation in activities of the Arctic Council Black Carbon and Methane Group' at the national level since 2022, which involved performing the following activities on a regular basis:

- collection of annual materials for the biennial National Report of the Russian Federation for the Arctic Council with information on black carbon and methane emissions in Russia and on measures to reduce the emissions relevant to the Arctic region;
- development of the black carbon monitoring network in Russia;
- evaluation of black carbon effects on the radiation balance, climate and pollution of the AZRF.

4) Russia's project proposal Biosecurity in the Arctic was reviewed under the auspices of the Human Health Expert Group, and a comprehensive evaluation of this proposal by representatives of all interested Member States and permanent participants produced a report recommending that the Sustainable Development Working Group accept the proposal and implement it as a project of the Arctic Council. Owing to the high social significance of the Biosecurity in the Arctic project, it was later highly appraised by the Vice-Chairman of Russia's Security Council Dmitry Medvedev,[47] the Russian Ministry of Foreign Affairs[48] and Minvostokrazvitiya,[49] in addition to being approved by senior officials of the AC and entering the implementation phase as an AC project.

The work of secretariats of the two expert groups of the Sustainable Development Working Group, the Human Health Expert Group and Social, Economic, and Cultural Expert Group, which were convened in 2021–2023 upon agreement with the Ministry for the Development of the Russian Far East and Arctic and Russia's Ministry of Foreign Affairs at HSE University, focused on maintaining business contacts and ensuring that the chairmen of these expert groups could perform their functions despite the highly turbulent international relations. This contributed to maintaining good neighbourly relations and building trust between Russia and AC Member States, permanent participants and observers, including India and China. In 2022, secretariat members of the Human Health Expert Group made sure that representatives of the AC Member States were informed in a timely fashion about all events carried out under Russia's Chairmanship. Over seven scientific reports on the Group's activities, significant projects and their results were prepared and presented at plenary and section meetings of international and Russian forums, as well as research to practice conferences, such as the international forum 'The Arctic: Present and Future' and international conferences, including 'Arctic: Sustainable Development' and 'The Arctic: History and Modernity'.

47 Speech dated 13 October 2020
48 Letter No. 5208/2ed dated 09.06.2020
49 Letter No. AK-05-18/7385 dated 07.07.2020

'AMAP assessment 2021: human health in the Arctic', an international monograph co-authored by members of the Secretariat, was released to international acclaim in 2021 under the auspices of the Arctic Council.

Six scientific papers, including ones dealing with ensuring the viability of enterprises during the COVID-19 pandemic in the Arctic, were published in 2022 in leading Russian science journals.

In order to boost the anticipated impact of the previously mentioned Biosecurity in the Arctic project, it was supplemented with a new section – 'Development of efficient screening principles for antibiotic-producing bacterial strains in land ecosystems of the Arctic and Antarctic'. Additionally, the Institute of Ecology of HSE University prepared and performed the following actions involving the secretariat of the Human Health Expert Group:

1) Proposals for supplementing the national plan of action in response to migration of highly toxic and radioactive substances or dangerous microorganisms into the AZRF from abroad (hereinafter the Plan).[50]

2) Proposals for developing a government system of global and interregional monitoring of high-priority types of hazardous chemical and biological agent transferred by commercially important species of birds, fish and other migratory animals traditionally harvested in the AZRF made on the initiative of the Ministry for Economic Development of the Russian Federation (item 1 of the Plan).[51]

3) Proposals on joint implementation of individual provisions of the Biosecurity in the Arctic project with African countries for inclusion in the programme of the Second Russia–Africa Summit, which was successfully held on 26–29 July 2023 in St. Petersburg.

4) Activities of the Human Health Expert Group secretariat and its chairman were highly appreciated at the federal level (commendation of the Minister for the Development of the Russian Far East and Arctic, decree No. 38-kd dated 28.06.2023).

5) Progress under the Russian application for the 'Sustainable Arctic Finance' (SAF) project was discussed as part of the Social, Economic, and Cultural Expert Group activities. This initiative was backed by India, an Observer State at the AC. This allowed the project to be added to the BRICS Business Council agenda.

In November 2021, secretariat members of this expert group developed the GreenTech Concept Note and submitted it for review by the AC Sustainable Development Working Group. Additionally, consultations were held on initiating a new application for the 'Sustainable Arctic Transport' (SDATS) project. The Project discussion participants included ROSATOM, representatives of the Arctic Monitoring and Assessment Programme and the AC Protection of the Arctic Marine Environment Working Group.

Five scientific reports on the activities of this expert group were presented in 2022. The most

50 Approved by Decree No. 2468-r of the Government of the Russian Federation dated 29.08.2022
51 Letter to the Ministry of Natural Resources and the Environment No. 39222-IT/D05i dated 14.10.2022

significant projects and their results were presented at plenary and section meetings of international and Russian forums and research into practice conferences, such as the international forum 'The Arctic: Present and Future' and international conferences, including 'Arctic: Sustainable Development' and 'The Arctic: History and Modernity'. The monograph 'Sustainable Finance in the Arctic' and the scientific report 'Consequences and effects of the COVID-19 pandemic on the population of the Arctic' were published.

Secretariat members of these two expert groups took an active part in seminars and discussions of the Sustainable Development Working Group, including:

- SDWG's Gender Equality in the Arctic Project, Workshop on Mainstreaming Gender within the SDWG Arctic Resilience Indicators and Monitoring Project Meeting;
- AHHEG-SECEG meeting, an initial discussion was held with Heather Exner-Pirot, Managing Editor of the Arctic Yearbook, and they are interested in continuing a discussion about hosting a special issue on COVID-19 in the Arctic;
- Four working meetings of the IG-ACPF&PSI (Informal Group on the AC Project Funding and PSI).

The accomplishments and achievements of the Social, Economic, and Cultural Expert Group Secretariat were acknowledged by a decree awarding its chairman the Badge of Merit for Development of the Arctic of the Minister for the Development of the Russian Far East and Arctic.

5.2 Recommendations

Evaluation of the key achievements of Russia's Chairmanship in the AC in 2021–2023 within this work and the challenges facing Russia allow the following recommendations to be made:

1. To submit proposals to the Government of Russia on additional measures for protecting Russia's national interests in the Arctic taking into account the démarche on the part of AC Member States and transformation of international relations in general (see clause 4.2).
2. To review existing capacities ensuring world-class scientific research and projects in all areas described by Foundations 2035 and other strategic documents on AZRF development, which were highly appraised by the international community, including the AC. On the basis of the findings, to submit to the Government of Russia a list of possible international projects and initiatives that could be implemented under Russia's leadership and present well-grounded proposals on government support measures that are necessary and sufficient for successful implementation of the given projects.
3. In order to develop cooperation with out-of-region States, in addition to developing and implementing a plan of action for attracting foreign investors to participate in implementing economic (investment) projects, to establish an analysis team involving representatives of the professional community to seek and evaluate the most promising projects and areas

of cooperation in order to include bilateral implementation with out-of-region partners on the agenda for intergovernmental working groups.[52]

4. To take additional action to make the global professional community and general public aware more efficiently that problems of the Arctic cannot be resolved without the Russian Federation, to raise awareness of the ensuing risks and threats to the format of the accepted system of relations, key measures being implemented or planned, and results of Russia's project activities ensuring stable development of the Arctic.

52 Included in the Unified Action Plan for implementing the "Foundations of the Russian Federation State Policy in the Arctic for the Period up to 2035" and "Strategy for development of the Arctic Zone of the Russian Federation and provision for national security for the period up to 2035" approved by Decree of the Government of the Russian Federation No. 996-r on 15 April 2021 http://static.government.ru/media/files/p8DfCI0Pr1XZnAk08G7J3jUXUuDvswHr.pdf (accessed on 25.06.2023).

Appendix No. 1

AC projects involving Russia and their status as of the end of 2021

Initiative	Russian name	Leading states	Status	Start	End
Arctic Green Shipping – SLCP Mitigation	Арктическое зеленое судоходство – смягчение последствий воздействия короткоживущих климатических загрязнителей[53]	Russia	On schedule	2017	Ongoing
Demonstration of management and destruction of 250 tons of PCB in transformers: Phase III (Hazardous Waste EG)	Демонстрация управления и уничтожения 250 т полихлорированных дифенилов (ПХД) в трансформаторах: Фаза III (Опасные отходы EG)	Finland, Russia	Delayed	2001	2023
Dudinka Municipal Waste Land-fill project	Проект Дудинского полигона коммунальных отходов	Russia	On schedule	2017	2023
Inventory of uses of POPs and Mercury and their	Инвентаризация видов использования СОЗ[54] и ртути и	Russia, Sweden, Finland	On schedule	2019	2023
Emission Sources in the Murmansk Region	источников их выбросов в Мурманской области				
Phase-out of ozone-depleting substances and fluorinated greenhouse gases (HFC) at fish and seafood processing enterprises (SLCP EG)	Поэтапный отказ от озоноразрушающих веществ и фторсодержащих парниковых газов (Ф-газов) на предприятиях по переработке рыбы и морепродуктов (SLCP EG[55])	Russia	On schedule	2017	Ongoing
Promotion of a reduction in Barents Region pollution by introducing BAT ('BAT in the Arctic')	Содействие снижению загрязнения Баренцева региона путем внедрения НДТ («НДТ в Арктике»)	Russia, Sweden	On schedule	2017	2023
AMAP Trends and Effects Programme	Программа АМАР «Тренды и эффекты»	Canada, Finland, Iceland, Denmark, Norway, Russia, Sweden, USA, Arctic Athabaskan Council, Aleut International Association, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, Saami Council	On schedule	Before 2000	Ongoing

53 Short-lived arctic pollutants include substances such as black carbon, hydrofluorocarbons (HFCs), methane and tropospheric (ground-level) ozone.
54 Persistent organic pollutants
55 Short-lived Climate Pollutants Expert Group, an expert group attached to the AMAP working group.

Initiative	Russian name	Leading states	Status	Start	End
Contaminant issues: Radioactivity	Проблемы загрязнения: радиоактивность	Norway, Russia	On schedule	2015	Ongoing
Sustaining Arctic Observing Networks (SAON)	Поддержка сетей наблюдения за Арктикой	Iceland, Norway, USA, Canada, Finland, Denmark, Russia, Sweden, Inuit Circumpolar Council	On schedule	2012	Ongoing
Arctic Migratory Birds Initiative (AMBI): Implementation	Инициатива по арктическим мигрирующим птицам: реализация	Canada, Norway, Russia, USA	On schedule	2013	Ongoing
Conservation of biodiversity in the changing Russian Arctic	Сохранение биоразнообразия в меняющейся российской Арктике	Russia	Paused	2011	Ongoing
Nomadic herders: enhancing resilience of pastoral ecosystems and livelihoods	Кочевые скотоводы: повышение устойчивости пастбищных экосистем и средств к существованию	Russia, Saami Council	On schedule	2012	Ongoing
Third Arctic Biodiversity Congress	Третий конгресс по арктическому биоразнообразию	Russia, Finland	TBD		
Arctic Rescue	Спасение в Арктике	Russia	On schedule		Ongoing
Development of Safety Systems in Implementing Economic and Infrastructure Projects	Развитие систем безопасности при реализации экономических и инфраструктурных проектов	Russia	On schedule		Ongoing
AMSP Implementation Status Report 2019–2021	Отчет о ходе реализации Арктического морского стратегического плана за 2019–2021 гг.	Canada, Finland, Iceland, Denmark, Norway, Russia, Sweden, USA	On schedule	2019	2021
Arctic Location for Regional Reception Facilities	Арктическое расположение региональных приемных сооружений	USA, Russia	On schedule		
Arctic Shipping Best Practice Information Forum	Информационный форум по передовой практике арктического судоходства	Canada, USA, Russia	On schedule	2017	2023
Arctic Shipping Best Practice Information Forum	Информационный форум по передовому опыту судоходства в Арктике	Russia, Canada, USA	On schedule		Ongoing
Biosecurity in the Arctic	Биобезопасность в Арктике	Russia, Finland, Canada	On schedule	2021	2023
Advancing Arctic Resilience: Exploring Aspects of Arctic Resilience connected to the impact of permafrost thaw	«Повышение устойчивости Арктики: изучение аспектов устойчивости Арктики, связанных с последствиями таяния вечной мерзлоты»	Russia, Iceland, USA, Finland, Arctic Athabaskan Council	On schedule	2021	2023
Arctic Community Perspectives on COVID-19 and Public Health: A Multi-site Case Study	Взгляд арктического сообщества на COVID-19 и общественное здравоохранение: тематическое исследование на нескольких объектах	Canada, Finland, Norway, USA, Russia	On schedule	2021	2023

Initiative	Russian name	Leading states	Status	Start	End
Arctic Demography Index	Демографический индекс Арктики	Russia, Canada, Norway	On schedule	2020	2023
Arctic Food Innovation Cluster (AFIC)	Арктический кластер пищевых инноваций	Canada, Finland, Iceland, Aleut International Association, Gwich'in Council International, Russia	On schedule	2019	2023
Arctic Hydrogen Energy Applications and Demonstrations (AHEAD)	Применение и демонстрации водородной энергетики в Арктике	Russia, Norway	On schedule	2020	2024
Arctic Indigenous Youth, Climate Change and Food Culture (EALLU[56]) II	Молодежь коренных народов Арктики, изменение климата и культура питания II	Canada, Norway, Aleut International Association, Saami Council, Russia	On schedule	2019	2023
Arctic Remote Energy Networks Academy (ARENA) II	Арктическая академия удаленных энергетических сетей II	Canada, Iceland, Gwich'in Council International, Russia	On schedule	2019	2023
COVID-19 in the Arctic Assessment Report	COVID-19 в Докладе об оценке Арктики	Russia, Iceland, Gwich'in Council International	On schedule	2021	2023
Digitalization of Linguistic and Cultural Heritage of Indigenous Peoples of the Arctic	Цифровизация языкового и культурного наследия коренных народов Арктики	Russia, Norway, Russian Association of Indigenous Peoples of the North	On schedule	2020	2024
Preserving ARCtic ARChitectural Heritage (PrARCHeritage)	Сохранение арктического архитектурного наследия	Russia, Norway	On schedule	2021	2023

Source: Arctic Council

56 Indigenous Youth, Food Knowledge and Arctic Change

Appendix No. 2

Unofficial translation

Sustainable Development Working Group

WORK PLAN FOR THE SUSTAINABLE DEVELOPMENT WORKING GROUP FOR 2021–2023

(PRELIMINARY VERSION AS OF 7 JULY 2021)

Contents

1. Introduction

Communications and dissemination of information. This document describes and provides justification for projects and measures that the Sustainable Development Working Group (SDWG) plans to implement in 2021–2023. The SDWG work plan for this period is flexible and can be altered upon agreement with heads of SDWG delegations in line with new opportunities and as per Appendix A to the Strategic Framework of the Working Group: Procedures for Submitting, Endorsing and Managing SDWG Projects. The SDWG Mandate and associated projects and measures constitute an integral part of the success of Russia's priorities during its Chairmanship in the Arctic Council.

The SDWG 2021–2023 Work Plan was developed in line with:

- Stipulations contained in ministers' declarations, including the Reykjavik Declaration (2021);
- Arctic Council Strategic Plan (2021 to 2030);
- SDWG Strategic Framework (2017–2030);
- SDWG 2021–2023 Work Plan (SDWG section of the Senior Officials' Report to Ministers);
- Priorities and recommendations determined in reports generated by auxiliary bodies of the Arctic Council or agreed on the basis of such reports, which are approved by SAOS and Arctic ministers;
- Implementation of recommendations for Arctic Council projects.

The 2021–2023 Work Plan supports implementation of the SDWG strategic vision, including its three components: social justice, economic development and environmental protection. This plan also clearly states how the SDWG will contribute to achieving the strategic goals of the Arctic Council Strategic Plan 2021 and its overarching topics related to environmental protection, sustainable social and economic development, and strengthening the Arctic Council. The Work Plan is structured to emphasize the clear link between the Arctic Council's strategic coals and the SDWG Mandate. In particular, the plan involves implementing twelve priorities in the SDWG Strategic Framework by converting them into concrete actions. Additionally, the SDWG took into account recommendations by its Human Health Expert Group and Social, Economic, and Cultural Expert Group to supplement these documents with recommendations on how the Council should promote the human dimension of its work over the coming decade.

Moreover, the SDWG defined priority areas to guide work during Russia's Chairmanship in the Arctic Council. Integration of these areas into all SDWG activities, including the work of its expert groups, will be a priority in 2021–2023. These areas include:

Arctic Council activities associated with human health and COVID-19

- Modification of SDWG projects in consideration of the circumstances associated with COVID-19 and, if necessary, integration of related measures;
- Implementation of / support for projects related to human health and COVID-19;
- Solicitation of advice and input from other working groups of the Arctic Council and SDWG expert groups; and
- Evaluation of and reporting on SDWG work related to COVID-19 in the Arctic.

UN Sustainable Development Goals in the Arctic

- To carry out and/or support projects and measures that contribute to achieving the United Nations Sustainable Development Goals (SDG) related to the SDWG mandate and to the Arctic region.

International Decade of Indigenous Languages (2022–2032)

- To support indigenous efforts to preserve and strengthen them; and
- To implement and/or support projects and events related to indigenous languages.

SDWG Management

- To establish a permanent SDWG secretariat;
- To continue to strengthen the roles and links to the Arctic Human Health Expert Group (AHHEG) and Social, Economic, and Cultural Expert Group (SECEG) in the activities of our working group; and
- To continue coordinating SDWG work and project planning with the SDWG Strategic Framework for 2017 and ongoing efforts by senior officials to promote the SDWG Mandate through strategic planning.

Key events related to SDWG and mentioned in the Reykjavik Declaration for 2021–2023, include:

- supporting the resilience of the Arctic community in order to resolve possible future global health problems;
- including gender analysis in the work of the Arctic Council;
- conducting further work to prevent suicide and promote mental well-being;
- promoting youth engagement initiatives;

- undertaking measures that broaden opportunities for indigenous Arctic language speakers, support and strengthen their languages;
- supporting the pan-Arctic approach to food safety;
- conducting further work on innovative, environmentally friendly and renewable energy sources and building the relevant capacity;
- undertaking comprehensive studies aimed at achieving the United Nations Sustainable Development Goals in the Arctic;
- building capacity in environmentally safe handling of solid waste in the Arctic.

2. Projects and activities

In order to achieve the strategic goal of sustainable social development as stipulated in the Arctic Council Strategic Plan, the SDWG is boosting work aimed at sociocultural integration and improvements in the health, safety, resilience and welfare of all Arctic inhabitants, with a special emphasis on Indigenous peoples. In this respect and as per the SDWG Strategic Framework Implementation Plan, the Working Group will focus on improving physical, mental and emotional health, improving understanding of socioeconomic conditions, protecting and promoting cultures and the building capacity of Indigenous peoples and other inhabitants of the Arctic, especially young people.

Projects and activities corresponding to this strategic goal are carried out as part of the following thematic areas: **Societies & Cultures** and **Health & Well-being.** Even though many efforts overlap with multiple themes, the work performed under **Societies & Cultures** directly concerns the thematic priorities of the SDWG: community resilience; Heritage and culture of Arctic communities; Educational opportunities; and Reduction/elimination of inequality. The **Health & Well-being** area covers work that directly affects human health as a priority of the SDWG.

SOCIETIES AND CULTURES

The relevant goals within the SDWG Strategic Framework priorities and project areas are: to promote links between environmental protection and societal resilience and adaptability; to provide the tools required for a constructive solution to demographic problems; to deepen global understanding between peoples of the region, cultures, the traditional way of life, languages and values; to develop circumpolar educational networks and use novel technologies for knowledge building; to strengthen and encourage reasonable policies aiming to eliminate gender inequality.

Approved projects

Project/type of activity: **Indigenous youth, food knowledge & Arctic change (EALLU) II**

Description: The project's goal is to maintain and further develop sustainable and resilient reindeer husbandry in the Arctic in face of climate change and globalization, working towards a vision of creating a better life for circumpolar reindeer herders. The project aims to build awareness of Arctic change in northern indigenous youth societies, through youth involvement and engagement. This increases the focus and understanding of Arctic indigenous food cultures and value added by disseminating and giving a voice to the Traditional Knowledge and food cultures of Arctic Indigenous peoples. It also stimulates, in appropriate ways, knowledge development for innovation, business development and local value added in Arctic Indigenous peoples' societies and areas, working at the intersection between academia and business, between science and traditional knowledge, and between "modernity" and tradition.

Manager/co-managers: Norway, Canada, Russian Federation, Aleut International Association (AIA), Saami Council, Association of World Reindeer Herders (WRH)

References in the Reykjavik Declaration: Understanding of the important role of indigenous businesses and traditional subsistence-based livelihoods in the Arctic economy; support for local food production and food safety in the Arctic; amplification of the Arctic region's role in sustainable, global food production.

Relevant thematic priorities of the SDWG: community resilience; educational opportunities, heritage and culture of Arctic communities, science and research in the interests of sustainable development, adaptive capacity and resilience, sustainable business involvement and development.

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages (2022–2032)

Main activities: 1. To document, systematize, use and respect features of the food culture of Indigenous peoples / reindeer herders, including initial cyclical aspects of their traditional economy; 2. To work on knowledge development and experience sharing within and between local communities of Indigenous peoples / reindeer herders in the Arctic, focusing particularly on youth food culture; 3. To share information and experience through ReindeerPortal.org and ArcticPortal.org; 4. To hold local seminars and workshops for local capacity building and winter/summer schools, to build connections and create project results in cooperation with the young people themselves.

Project/type of activity: **Arctic Demography Index**

Description: This project focuses on presenting data and the latest trends in Arctic demographics by developing the Arctic Demography Index, which combines natural (natural increase and decrease) and mechanical (education, labour, snowbird and sunshine migration) demographic parameters across five Arctic countries (Russian Federation, Finland, Norway, Sweden and Canada). This project will also carry out thematic investigations into tensions between indigenous populations and businesses in these countries, as well as ways to counter these tensions.

Manager/co-managers: Russian Federation, Canada, Norway

References in the Reykjavik Declaration: Support for responsible Arctic businesses and respect for indigenous rights.

Relevant thematic priorities of the SDWG: community resilience; science and research in the interests of sustainable development.

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. To evaluate best practices in two natural and mechanical demographic parameters (natural decrease, natural increase, four types of migratory flow across five countries of the Arctic Council (Russian Federation, Finland, Norway, Sweden and Canada); 2. To evaluate best practices in Arctic migration: collect statistical data on four types of migration (educational, labour (circular + initial), snowbird migration and sunshine migration) and visualize them through infographics; 3. To establish information sharing with stakeholders on a regular basis to spread best practices in demographics within the Arctic Council Member States. 4. To calculate the Arctic Demography Index for 19 Arctic territories and five countries of the Arctic Council from the standpoint of natural and mechanical demographic parameters; 5. To collect cases from five Arctic Council countries in order to develop knowledge and better understand conflicts of interest between indigenous inhabitants.

Project/type of activity: **Digitalization of Linguistic and Cultural Heritage of Indigenous Peoples of the Arctic**

Description: This project focuses on preserving and developing Indigenous languages, the traditional knowledge and cultures of the Arctic Indigenous peoples, including food heritage. The project envisages wide use of modern digital technologies, creation of a GIS map and Arctic Indigenous peoples' knowledge database on a uniform multilingual portal, www.arctic-megapedia.com. The Project will provide access to a wide range of information on ways to preserve and develop linguistic and cultural heritage, as well as the traditional lifestyles of Indigenous peoples. This will promote better understanding and sustainable development, and facilitate adaptation to Arctic changes.

Manager/co-managers: Russian Federation, Norway, Russian Association of Indigenous Peoples of the North (RAIPON)

References in the Reykjavik Declaration: Encouragement of measures that broaden opportunities for indigenous Arctic language users, support and strengthen their languages under the project 'Digitalization of Linguistic and Cultural Heritage of Indigenous Peoples of the Arctic'.

Relevant thematic priorities of the SDWG: community resilience; educational opportunities, heritage and culture of Arctic communities, science and research in the interests of sustainable development.

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages (2022–2032).

Main activities: 1. To build an international team of participants from Arctic countries; 2. To study best practices for preserving the linguistic and cultural heritage of Indigenous peoples of the Arctic; 3. To hold a seminar on intellectual property rights of Indigenous peoples; 4. To interview and register native speakers of indigenous languages and bearers of traditional indigenous cultures; 5. To collect materials on linguistic, cultural and historical heritage, and food products from public and private archives; 6. To involve indigenous young people in research activities aiming to preserve linguistic and cultural heritage; 7. To make information on Indigenous peoples available through a multilingual Arctic web portal and build a structured database for preserving and developing languages, cultures and traditional lifestyles; 8. To develop GIS maps of indigenous languages; 9. To hold a seminar on establishing an open-source development infrastructure for language technologies.

Draft proposals in the developmental stage

Project/activity: **Children of the Arctic: Preschool and School Education**

Description: (in developmental stage)

Manager/co-managers: Russian Federation, Canada, Finland

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages (2022–2032).

Main activities:

Project/type of activity: **Gender Equality in the Arctic IV**

Description: (in developmental stage)

Manager/co-managers: Iceland, TBD

References in the Reykjavik Declaration: Encourage the mainstreaming of gender-based analysis in the work of the Arctic Council and call for further action to advance gender equality in the Arctic.

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic

Main activities:

Project/type of activity: **Survey of Living Conditions in the Arctic (SLiCA) II**

Description: (in developmental stage)

Manager/co-managers: Inuit Circumpolar Council – Alaska

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages (2022–2032).

Main activities:

Project/type of activity: **Arctic Resilience Forum 2021–2023**

Description: (in developmental stage)

Manager/co-managers: Russian Federation, TBD

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages (2022–2032).

Main activities:

Project/type of activity: **Indigenous People and Sustainable Development in the Arctic (SECEG)**

Description: In 2015, the United Nations presented the document 'Transforming Our World: The 2030 Agenda for Sustainable Development'. The cornerstones of the agenda are 17 Sustainable Development Goals (SDGs), which provide benchmarks for achieving equality, prosperity, and environmental sustainability. While the 2030 Agenda has been heralded as a platform for protecting the environment for current and future generations, it has also been criticized for promoting the idea that sustainable development is a universal concept regardless of social, political, or cultural differences. Led by SECEG members (Natcher, Canada; Mack, USA), a special issue of Sustainability magazine examines trends in the sustainable development of Indigenous peoples in Arctic and sub-Arctic regions. The materials of the special issue collectively demonstrate that the sustainable development of the Arctic requires mindful consideration of cultural sustainability and the recognition of the collective rights of Indigenous peoples to land, healthcare, and education.

Manager/co-managers: SECEG

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic

Main activities: Special issue of **Sustainability** magazine: (https://www.mdpi.com/journal/sustainability/special_issues/Indigenous_Peoples)

HEALTH AND WELL-BEING

The relevant goals in terms of the priorities and projects of the SDWG Strategic Framework are to exchange information, assessments, and innovations that could support public healthcare systems and health service delivery (including clean energy sources/systems) with a special emphasis on projects that reduce mortality and disability from environmental risk factors, suicide, and dangerous infectious and chronic diseases.

Approved projects

Project/type of activity: **One Arctic, One Health**

Description: This project aims to develop the One Arctic – One Health joint network of stakeholders (the relationship between human, animal, and environmental health). The end goal is to establish independent and self-sufficient One Health Points of Contact (PoC) in each Arctic

Council Member State and Permanent Participant that can quickly receive and process requests for collaboration from other centres on an ongoing basis and continue to promote the One Health network throughout the circumpolar northern region. The project is based on iterative collaboration among an ever-expanding range of project partners.

Manager/co-managers: USA, Canada, Denmark, Finland

References in the Reykjavik Declaration: Recognize the intrinsic link between human health, animals, and the environment, as demonstrated by the emergence of deadly diseases such as COVID-19, [and] welcome continued progress in establishing circumpolar networks of Arctic health experts through the One Arctic, One Health project.

Relevant thematic priorities of the SDWG: community vitality, heritage and culture of Arctic communities, human health, and science and research for sustainable development.

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic;

Main activities: 1. Create the One Arctic – One Health joint network of stakeholders (the relationship between human, animal, and environmental health) through: sharing knowledge; the relevant exercises; and collaborative research into One Health phenomena, such as disease outbreaks and natural disasters; 2. Organize, host, and participate in conferences and webinars dedicated to studying and discussing problems related to One Health in healthcare; and 3. Hold various events in the Arctic region roughly two to three times a year to minimize participants' travel expenses and save them time.

Project/type of activity: **From the Local to Global Level**

Description: This project aims to promote international collaboration and establish connections among circumpolar communities that work to prevent suicide and support the mental well-being of all Arctic young people and communities, including the Indigenous Peoples of the Arctic, who have the highest suicide rates in the Arctic. The project takes a holistic approach based on the guiding principles of cooperation between the SDWG, specific achievements, and inclusive participation and activities.

Manager/co-managers: USA, Canada, Denmark, Finland, Sweden, Iceland, Inuit Circumpolar Council, Saami Council

References in the Reykjavik Declaration: multiple declarations of support for mental well-being and suicide prevention in the Arctic.

Relevant thematic priorities of the SDWG: community vitality, heritage and culture of Arctic communities, human health, and reducing and eliminating inequality.

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages (2022–2032).

Main activities: 1. Seminars on the digital awareness of the population; 2. Study tour to share knowledge; 3. Circumpolar forum on the protection of children, relevant experience, and research initiative; and 4. 'From the Local to Global Level' Circumpolar Forum.

Project/type of activity: **Biosecurity in the Arctic (in collaboration with AMAP and CAFF)**

Description: This project will help support public healthcare systems and government agencies to rapidly respond to existing and future biological threats associated with the uncontrolled spread of highly virulent pathogens, parasites, biotoxins, and other biological hazards throughout the Arctic.

Manager/co-managers: Russian Federation, Finland

References in the Reykjavik Declaration: Encourage further work to support the ability of Arctic communities to meet future global health challenges.

Relevant thematic priorities of the SDWG: community vitality, human health, and science and research for sustainable development

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. Bring together relevant experts from AMAP, CAFF, SDWG, and permanent members of the Arctic Council to finalize the specific objectives, deliverables and timeframes for the project's implementation; 2. Prepare a case study-based expert report using Indigenous knowledge related to specific biological hazards in the Arctic that may pose a risk to human life and health. (White Paper); and 3. Prepare recommendations for screening, monitoring, and an information system for infectious disease control, prevention, and risk communication at the community level.

Project/type of activity: **Public Health Effects of COVID-19 in Arctic Communities: Analysis of Multi-Site Case Studies**

Description: This project aims to conduct a three-phase, multi-site case study to assess the positive and negative social effects of the COVID-19 pandemic in Arctic communities. In particular, an assessment will be conducted on the impact of pandemic-related public health measures. This work will help to identify community-driven models and promising evidence-based practices and

recommendations to support pan-Arctic collaboration and public health decision-making during global emergencies. The research sites will include one community from each Member State.

Manager/co-managers: Canada, Finland, TBD

References in the Reykjavik Declaration: Note with concern the effects of the COVID-19 pandemic on Arctic communities, welcome the work undertaken by the Arctic Council to assess the implications of the pandemic in the Arctic and the responses made, and encourage further work to support the ability of Arctic communities to meet future global health challenges.

Relevant thematic priorities of the SDWG: community vitality, heritage and culture of Arctic communities, and human health.

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic.

Main activities: Phase I will identify public health policies and measures taken in response to COVID-19 and how these processes have impacted behaviour at the community level, as well as what Indigenous and local beliefs and practices have been adopted to adapt to pandemics. Phase II will involve a case study on each Arctic state highlighting the strengths, challenges, and adaptation of COVID-19 public health directives and measures, as well as the lessons that have been learned, in order to create community-based models that provide examples of how diverse Arctic communities have shown resilience and adapted to the current conditions. Phase III will combine the community models developed in Phase II in order to develop recommendations and strategies that the Arctic Council can consider to prepare consistent and coordinated public health responses and protocols related to future public health emergencies in the Arctic.

Draft proposals in the developmental stage

Project/type of activity: **COVID-19 in the Arctic Assessment Report**

Description: (in developmental stage)

Manager/co-managers: Russian Federation, Iceland, GCI, IASSA, WWF, AHHEG, SECEG, TBD

References in the Reykjavik Declaration: Note with concern the effects of the COVID-19 pandemic on Arctic communities, welcome the work undertaken by the Arctic Council to assess the implications of the pandemic in the Arctic and the responses made, and encourage further work to support the ability of Arctic communities to meet future global health challenges.

Relevant thematic priorities of the SDWG: (TBD)

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic.

Main activities: This project will produce a report that details broadly reviewed topics and issues related to the effects of COVID-19 in the Arctic, including recommendations for policymakers based on the report's findings. These topics and issues will be explored as part of work to highlight various examples, experiences, and practices related to the effect of COVID-19 in the Arctic. Once the report is completed, it will be disseminated to the relevant Arctic officials and policymakers to be used as a knowledge base for future policy development and planning efforts. This will be followed by efforts to convey the report's findings to the public to educate people about the unique effects of COVID-19 in the Arctic. The dissemination and communication process will include various measures, such as: a) Preparation of policy briefs to facilitate the communication of key report findings to Arctic officials and policymakers; b) A virtual knowledge exchange in collaboration with the 'Arctic Community's Prospects in Terms of COVID-19 and Public Health' project to convey the lessons learned from the projects and further highlight the common ground between the two projects; c) Collaboration with leaders of various Arctic communities to convey the report's findings to members of the public through presentations and other locally organized events.

Sustainable economic development

To achieve the strategic goal of sustainable economic development contained in the Arctic Council's Strategic Plan, the SDWG will intensify cooperation for the sustainable and diverse economic development of the Arctic, while promoting economic cooperation, knowledge and information exchanges on innovative, sustainable, and low-emission technologies for the benefit of and to increase the resilience of all Arctic people, with a special focus on Indigenous peoples. In accordance with the SDWG's Strategic Framework Implementation Plan, the working group will focus on building capacity, diversifying the economic base, and creating greater prosperity for Indigenous peoples and other Arctic residents. The working group will work inclusively with a broad level of participation to promote the development of a sustainable Arctic economy that benefits the lives of people in the Arctic in order to create self-sufficient, vibrant, and healthy Arctic communities for current and future generations, while preserving traditional ways of life.

All projects and measures that aim to meet this strategic goal are carried out within the categories of business, economics, and related infrastructure. While many of the efforts overlap with multiple themes, the work performed as part of the Business and Economics programme directly addresses the SDWG's thematic priorities: Sustainable Business Engagement and Development, and Economic Assessments. The conducive infrastructure category encompasses work directly related to infrastructure; science and research for sustainable development; and sustainable energy, water supply, and sanitation as thematic priorities of the SDWG.

BUSINESS AND ECONOMICS

The relevant goals as part of the priorities and project focuses of the SDWG Strategic Framework are to explore new and emerging economic sectors, assess potential benefits, and highlight their implications for sustainable development; create new structures and provide the necessary support to all stakeholders in solving the problems and utilizing the opportunities that arise from the expansion and diversification of business presence in the region; bolster the analysis and joint monitoring of economic trends and activities in the Arctic; and promote sustainable and diverse economic development, investment, and policy.

Approved projects

Project/type of activity: **Arctic Innovative Food Production Cluster (AIFPC)**

Description: This project aims to bring together key stakeholders in the Arctic food value chain in order to apply a cluster approach to food production and regional economic development. For the purposes of this project, food production includes the traditional, artisanal, and industrial production of natural resources to produce food for personal, national, and international consumption, while food innovation includes new production methods and consumption patterns. This cluster approach to food innovation brings together Arctic food producers with the governments and Indigenous communities of the Arctic, universities, research centres, vocational training providers, industry associations, and young people. The overall aim of the project is to address the numerous complex challenges that are inherent in creating sustainable food systems in the Arctic.

Manager/co-managers: Canada, Russian Federation, Finland, Iceland, Aleut International Association (AIA), Arctic Athabaskan Council (AAC), Gwich'in Council International (GCI), Inuit Circumpolar Council (ICC)

References in the Reykjavik Declaration: Welcome the work on the Arctic Food Innovation Cluster, support local food production, and underscore the importance of food security in the Arctic, amplifying the Arctic region's role in sustainable, global food production.

Relevant thematic priorities of the SDWG: Economic assessments; community vitality; reducing and eliminating inequality; and the heritage and culture of Arctic communities.

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. Preparation of an action plan that will provide evidence-based knowledge for development policies and measures that promote economic development through sustainable food security; 2. Involvement of the Arctic Economic Council in the promotion of a network-based approach to Arctic food production that can connect Arctic food producers with the governments

and Indigenous communities of the Arctic, universities, research centres, vocational training organizations, industry associations, and investors. This concerted focus on food production and sustainable development in the Arctic would prove its ability to respond to global challenges and define the Arctic's role in sustainable development locally and globally.

Project/type of activity: **Renewable Resource Economy in the Arctic: State of Knowledge Report (SECEG)**

Description: This Pan-Arctic event studies the challenges and unique opportunities for renewable energy economies in the Arctic regions. This book offers different perspectives on a renewable economy in the Arctic and how these forms of economy are supported scientifically, economically, socially, and politically. This volume aims to provide the reader with an understanding of the current state of the Arctic economy and the contribution of renewable resources to it, and provide a foundation of knowledge on which policy, practice, and future research can be built.

Manager/co-managers: SECEG (Social, Economic, and Cultural Expert Group)

References in the Reykjavik Declaration: Acknowledge the role of responsible resource management and sustainable economic development for livelihoods in the region.

Relevant thematic priorities of the SDWG: TBD

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic; United Nations Decade of Indigenous Languages; SDWG Office.

Main activities: Completion and release of a report/open access publication in the Routledge Polar Research series.

Draft proposals in the developmental stage

Project/type of activity: **Sustainable Financing for the Arctic**

Description: (in developmental stage)

Manager/co-managers: Russian Federation

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic; SDWG Office

Main activities:

Project/type of activity: **Gas Hydrates: Environmental and Economic Impacts on Sustainable Development and Climate Change in the Arctic**

Description: (in developmental stage)

Manager/co-managers: Russian Federation

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic; SDWG Office

Main activities:

Project/type of activity: Sustainable Shipping in the Arctic

Description: (in developmental stage)

Manager/co-managers: Russian Federation

References in the Reykjavik Declaration: Encourage meaningful efforts, in cooperation with relevant stakeholders, to promote safe and sustainable shipping across the circumpolar Arctic.

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic.

Main activities:

SUPPORTING INFRASTRUCTURE

The relevant goals as part of the priorities and project focuses of the SDWG Strategic Framework are: to ensure responsible and sustainable long-term investment in all forms of Arctic infrastructure, taking into account the needs of communities and the changing environment; promote the effective use of research institutes in the Arctic region and extensive intellectual resources for the sake of sustainable development; promote responsible and sustainable management, the usage and development of energy and resources, as well as innovative approaches that encourage the use of renewable energy sources even in the most remote Arctic communities; and strengthen the local community's involvement in improving sustainable water, sanitation, and waste management, taking into account the unique engineering challenges and environmental risks inherent in the Arctic.

Approved projects

Project/type of activity: **Sustainable Development Goals in the Arctic: Water, Energy, and Food Nexus (WEF)**

Description: This project examines the relationship between SDG 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture); SDG 6 (Ensure availability and sustainable management of water and sanitation for all); and SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all). This will be the first WEF study conducted in the Arctic and aims not only to generate knowledge, but also to develop specific tools. It will include collaboration between representatives of the Social, Economic, and Cultural Expert Group (SECEG) and their networks, other Arctic Council working groups, organizations of permanent Indigenous peoples (permanent members), academic institutions, Arctic Council observers, and other relevant circumpolar organizations. This project will promote integrated thinking that reflects the interconnectedness of WEF systems in a manner that contributes to the achievement of the UN SDGs in the Arctic.

Manager/co-managers: Canada, Finland, Iceland, Arctic Human Health Expert Group (AHHEG), Social, Economic, and Cultural Expert Group (SECEG).

References in the Reykjavik Declaration: Reaffirming the importance of the United Nations Sustainable Development Goals and the need for their effective implementation by 2030.

Relevant thematic priorities of the SDWG: community vitality, heritage and culture of Arctic communities, human health, infrastructure, science and research for sustainable development, sustainable energy.

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. Assemble national research groups; 2. National and international project meetings; 3. Regional and subregional data collection/analysis; 4. Step-by-step analysis; 5. Analysis of interdepartmental gaps; 6. Online decision-making support tool; 7. Final report; and 8. Consensus thinking at the Arctic Conference.

Project/type of activity: **Arctic Remote Energy Networks Academy II (ARENA II)**

Description: This project helps to build capacity through sharing knowledge and creating professional networks related to the transition from diesel systems to hybrid and renewable energy sources. It provides participants with the necessary knowledge, skills, and collaborative networks to develop clean energy projects in their own communities or regions in order to effectively balance economic viability, energy security, and environmental and public health issues in the circumpolar Arctic.

Manager/co-managers: Canada, Iceland, Russian Federation, USA, Gwich'in Council International (GCI)

References in the Reykjavik Declaration: Recognize that a clean and secure energy future is essential for the resilience of Arctic communities, emphasize the need to continue the work of the Arctic Remote Energy Networks Academy II, underscore the importance of promoting the use of sustainable, affordable, reliable, and clean energy sources in Arctic communities, and encourage further work on innovative and renewable energy solutions and related capacity building in the Arctic aimed at combating climate change.

Relevant thematic priorities of the SDWG: community vitality, educational opportunities, infrastructure, science and research for sustainable development, sustainable energy, reducing/eliminating inequality.

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. Building on the successful ARENA I model, organize off-site and virtual planning training opportunities to provide the knowledge, skills, and tools that facilitate the integration of clean energy technologies in the Arctic region in order to help develop energy solutions for communities; 2. Combine community visits, participant knowledge, and exchanges of views with presentations and laboratory demonstrations; and 3. Introduce current and aspiring energy professionals to hands-on learning experiences, mentors, and project development managers from all over the North.

Project/type of activity: **Arctic Hydrogen Energy Applications and Demonstrations (AHEAD)**

Description: This project involves the design, construction, and development of a year-round International Arctic Station (IAS) powered by fully autonomous hydrogen energy in order to refine, test, and promote solutions in future eco-friendly life sustaining technologies. It also serves as a testing ground for other technologies that could improve living conditions in remote areas of the Arctic, such as medicine, biotechnology, eco-friendly agricultural technologies, telecommunications, robotics, the Internet of Things, smart homes/villages, new materials, and construction technologies, among other things. The IAS will also provide a platform to support collaborative research on climate change, ecology, and environmental pollution, including oceans. As a 'living laboratory', the IAS will provide the technological and economic foundation to scale up newly developed solutions for widespread use.

Manager/co-managers: Russian Federation, Norway

References in the Reykjavik Declaration: Underscore the importance of promoting

the use of sustainable, affordable, reliable, and clean energy sources in Arctic communities and encourage further work on innovative and renewable energy solutions and related capacity building in the Arctic aimed at combating climate change.

Relevant thematic priorities of the SDWG: community vitality, educational opportunities, infrastructure, science and research for sustainable development, sustainable energy.

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. Creation and preparation of the IAS for launch; 2. Test operation of the IAS; 3. Launch of technological and educational projects at the IAS, transition of the station to scheduled operation, and the development of new joint international programmes.

Project/type of activity: **Solid Waste Management in Small Arctic Communities (in collaboration with the Arctic Contaminants Action Program (ACAP))**

Description: This project involves collaboration between local, regional, and national governments, community leaders, and solid waste management experts to leverage available resources and disseminate best practices that promote resilient and healthy Arctic communities. This project aims to provide a range of in-person and online resources to address the unique needs of Arctic communities, from planning to introducing solid waste management practices. Improving infrastructure and on-site maintenance training for these improvements are a top priority. Coordination with local solid waste management authorities is critical to maintaining a strong and visible presence in local communities throughout the project.

Manager/co-managers: Aleut International Association (AIA), Canada, Finland, USA, Saami Council

References in the Reykjavik Declaration: Welcome the cooperation and efforts aimed at strengthening capacity for environmentally sound management of solid waste and marine litter in the Arctic.

Relevant thematic priorities of the SDWG: community vitality, human health, infrastructure, water supply and sanitation services.

Relevant priority focuses of the SDWG for 2021–2023: Arctic Council's work related to human health and COVID-19; the United Nations Sustainable Development Goals in the Arctic.

Main activities: 1. Identify and work with three to five remote Arctic communities in need of improved solid waste/marine debris management. A pre-project analysis identified candidate communities in the USA, Canada, and the Russian Federation; 2. Plan and conduct landfill site assessments in collaboration with community leaders in the selected communities; 3. Develop

detailed community pilot plans to introduce and achieve Arctic Community Standards, including the goal of achieving key local solid waste management improvements that best reflect the community's needs; 4. Conduct joint meetings/training/seminars with community leaders and the responsible environmental authorities and operators to ensure there is a shared understanding of action and management plans and to exchange best practices among pilot communities; 5. Provide assistance in each community to focus on capacity building tools; 6. Collect, stage, or transport hazardous or general waste/marine debris from pilot communities, as appropriate; 7. Share lessons learned from the trust-based relationships built at each stage of the project; 8. Continue to develop and update the online exchange network for solid waste/marine debris resources; and 9. Prepare short videos from each pilot community illustrating the challenges and highlighting the results of the community project, which may include new behaviour patterns during COVID-19.

Draft proposals in the developmental stage

Project/type of activity: **Arctic Energy Summit 2021–2023**

Description: (in developmental stage)

Manager/co-managers: Russian Federation (TBD)

Relevant thematic priorities of the SDWG:

Relevant priority focuses of the SDWG for 2021–2023: United Nations Sustainable Development Goals in the Arctic.

Main activities:

Environmental protection

The SDWG will also work to support the strategic goals contained in the Arctic Council Strategic Plan (2021) directly related to environmental protection, including: Arctic climate; healthy and sustainable Arctic ecosystems; and a healthy Arctic marine environment. Taking into account the human dimension and the relevant priority areas of cooperation with other Arctic Council working groups as part of the SDWG Strategic Framework, the WG will focus on providing reliable and sufficient information about the status of the peoples of the Arctic and the threats to them, providing consultations on the actions that need to be taken to ensure that the air, lands, and waters of the circumpolar region are able to support future generations of Indigenous peoples and other Arctic inhabitants.The projects and measures that are aligned with these strategic goals primarily have a cross-cutting nature and are being implemented in cooperation with Arctic Council's working groups and other subsidiary bodies with broader environmental responsibilities. Working on this goal directly

addresses areas of cross-cutting interest as part of the SDWG Strategic Framework: climate change; the protection and sustainable use of the Arctic marine environment; monitoring and assessment of the environment in the Arctic; and the protection of Arctic flora and fauna.

CLIMATE CHANGE

No proposals or contributions to Arctic Council-wide initiatives are currently being developed.

PROTECTION AND SUSTAINABLE USE OF THE ARCTIC MARINE ENVIRONMENT

Contribution to Arctic Council-wide initiatives

Project/type of activity: **Reporting on the Activities of the SDWG that Contributes to the Senior Arctic Officials' Marine Mechanism**

Description: (in developmental stage)

Manager/co-managers: SDWG Secretariat

References in the Reykjavik Declaration: Welcome the first SAO Marine Mechanism dialogue of the Senior Arctic Officials and professionals on marine related issues, following up on the recommendations of the Task Force on Arctic Marine Cooperation II (2019), and look forward to continued dialogue of this kind under future Chairmanships.

Main activities:

Contribution to the activities of other subsidiary bodies of the Arctic Council

Project/type of activity: **Planning of a Third Seminar on Values and Valuation Based on the Ecosystem Approach (in collaboration with PAME)**

Description: (in developmental stage)

Manager/co-managers: SDWG Secretariat

References in the Reykjavik Declaration: Reiterate the importance of the ecosystem approach to management for the Arctic marine environment.

Main activities:

Project/type of activity: **Reporting on the SDWG's Activities that Contribute to the Arctic Marine Strategic Plan.**

Description: (in developmental stage)

Manager/co-managers: SDWG Secretariat

Main activities:

CONSERVATION OF ARCTIC FLORA AND FAUNA

Contribution to the activities of other subsidiary bodies of the Arctic Council

Project/type of activity: **Planning for the Third Arctic Biodiversity Congress (in collaboration with CAFF)**

Description: (in developmental stage)

Manager/co-managers: SDWG Secretariat

Main activities:

Strengthening the Arctic Council

The SDWG will work to support the strategic goals contained in the Arctic Council Strategic Plan (2021) directly related to environmental protection, including: knowledge and communications; and strengthening the Arctic Council accordingly. Moreover, the working group will follow the instructions of the Senior Arctic Officials (SAO) when generating, collecting, analysing, and disseminating scientific evidence, traditional knowledge, and local knowledge, as appropriate, and enhancing the understanding of the Arctic within the region and beyond to provide information for policymaking and decision-making. The SDWG will also contribute at the working group level to supporting the SAO's efforts to strengthen the Arctic Council as the preeminent high-level circumpolar forum for effective coordination and cooperation and enhancing its ability to respond effectively to emerging challenges and opportunities in the Arctic.

MANAGEMENT AND ADMINISTRATION

In 2021–2023, the SDWG will devote significant attention to activities that aim to bolster the management of the Arctic Council and the SDWG, as well as the working group's communication and outreach efforts. These activities will include the following:

Management of the Arctic Council

Implementation of the Arctic Council Strategic Plan

Description: Respond to the instructions from the SAO to align work plans and activities between working groups and other subsidiary bodies with the Arctic Council Strategic Plan (2021).

Manager: SDWG Subcommittee on Work Planning, SDWG Secretariat, heads of SDWG delegations

References in the Reykjavik Declaration: Decide to adopt a strategic plan to guide the Council's work through the next decade and instruct the Senior Arctic Officials to take the necessary actions to implement the plan.

Main activities: Revise and align the SDWG Strategic Framework (2017) and other relevant documents with the Arctic Council Strategic Plan (2021).

Youth Engagement

Description: Encourage constructive engagement with young people across the Arctic in a manner that both supports and informs them about the Council's work and empowers young people in the Arctic

Manager: SDWG Secretariat, heads of SDWG delegations

References in the Reykjavik Declaration: Recognize the importance of engaging Arctic youth in international cooperation, welcome youth engagement initiatives by the Council's subsidiary bodies, and encourage Senior Arctic Officials to continue to seek practical and innovative ways to support youth cooperation across borders as well as interest in Arctic affairs.

Main activities: SDWG-IASSA-IASC scholarship, ICC-Canada Youth Initiative

Observer Engagement

Description: Strengthen constructive, balanced, and meaningful interaction between observers and encourage their active participation in the relevant Council activities.

Manager: SDWG Secretariat, heads of SDWG delegations

References in the Reykjavik Declaration: Recognize the important role that Observers play in the work of the Arctic Council [and] note the continuous efforts by the Senior Arctic Officials and the subsidiary bodies to enhance their meaningful engagement.

Main activities:

SDWG Office

Implementation Plan of the SDWG Secretariat

Description (in developmental stage)

Managers: Canada, heads of SDWG delegations

Main activities:

Strengthening ties with SDWG expert groups

Description: Ongoing efforts to strengthen the role of both expert groups and ties with them in the activities of the working groups.

Managers: Russian Federation, heads of SDWG delegations, SDWG Secretariat, Arctic Human Health Expert Group (AHHEG), Social, Economic, and Cultural Expert Group (SECEG).

Main activities: Provide secretariat support to the Arctic Human Health Expert Group (AHHEG) and the Social, Economic, and Cultural Expert Group (SECEG) for the period covering 2021–2023.

Continuation of the Strategic Planning Process to Achieve the SDGs

Description:

Manager: SDWG Secretariat, heads of SDWG delegations

Main activities:

Review/revision of SDWG Procedures and Templates

Description:

Manager: SDWG Secretariat, heads of SDWG delegations

Main activities:

Communication and Information Activities

Communication and Information Activities of the SDWG

Description: In accordance with the SDWG Communications Plan (2017) and in conjunction with the 2017 SDWG Strategic Framework, the working group will continue to maintain a broad social media presence and work closely with the Arctic Council Secretariat (ACS) to promote and share information about SDWG projects through articles, interviews, newsletters, and videos.

Manager: SDWG Secretariat, heads of SDWG delegations

References in the Reykjavik Declaration: Welcome the update of the Arctic Council's Communications Strategy (2020) [and] reiterate the importance of harmonized communications from the Arctic Council and all its subsidiary bodies.

Main activities: The public relations work plan for 2021–2023 was approved by the SDWG and its Communications Subcommittee and will include further efforts to promote and share information about the SDWG's activities, presentations at working meetings, seminars, conferences, and other events, and responses to press inquiries.

Archiving and Management of SDWG Documents

Description:

Manager: SDWG Secretariat

Main activities:

SDWG Orientation Materials

Description:

Manager: SDWG Secretariat

Main activities:

Participation in Relevant Arctic Conferences and Events

Description:

Manager: SDWG Chairman, SDWG Secretariat, heads of SDWG delegations

Main activities:

3. Monitoring and Evaluating Progress

The Sustainable Development Working Group (SDWG) shall periodically review its 2017 Strategic Framework and all related strategic documents, as appropriate, to ensure they are practical and relevant to achieving the Arctic Council's long-term strategic goals and sustainable development policies as a whole. The SDWG Strategic Work Plan will be used as a tool to summarize the working group's stated thematic priorities, key focus areas, and related activities in order to identify potential gaps in work at the outset and throughout the biennium. Additional events for 2021–2023 will/could include:

Follow-Up Matrix on SDWG Recommendations

Description: In 2021–2023, the Working Group will also continue to use the SDWG recommendations implementation matrix (Appendix C to the 2017 Strategic Framework), which tracks the implementation of SDWG recommendations by thematic priority focus at the global, regional, and national levels.

Manager: SDWG Secretariat

Main activities: Continue to use the SDWG recommendations implementation matrix for 2021–2023.

SDWG Activity Tracking Tool

Description: (in developmental stage)

Manager: SDWG Work Planning Subcommittee, SDWG Secretariat

Main activities:

Appendix No. 3

Arctic Council Projects with Russian Participation

No.	Event	Responsible agencies/organizations	Year
	1. OFFICIAL BLOCK		
1.	12th Ministerial Session of the Arctic Council and transfer of chairmanship to Russia	Russian Ministry of Foreign Affairs Iceland is hosting the event	19–20 May 2021
2.	Meeting of the Senior Arctic Officials Committee (SAOC) with restricted attendance	Russian Ministry of Foreign Affairs	June 2021 (3 days)
3.	Meeting of the SAOC and plenary meeting of the AC	Russian Ministry of Foreign Affairs	October 2021 (3 days)
4.	Meeting of the SAOC and plenary meeting of the AC	Russian Ministry of Foreign Affairs	March 2022 (3 days)
5.	Meeting of the SAOC and plenary meeting of the AC	Russian Ministry of Foreign Affairs	October 2022 (3 days)
6.	Meeting of the SAOC and plenary meeting of the AC	Russian Ministry of Foreign Affairs	March 2023 (3 days)
7.	Meeting of the SAOC with restricted attendance	Russian Ministry of Foreign Affairs	April 2023 (3 days)
8.	Meetings of the AC working and expert groups: SDWG, PAME, EPPR, CAFF, AMAP, and ACAP	Responsible federal executive authorities, authorized organizations	Twice a year for each working group
9.	Meetings of the Arctic Economic Council (AEC)	Ministry for the Development of the Russian Far East, relevant federal executive authorities, relevant organizations	Annually
10.	13th Ministerial Session of the Arctic Council and transfer of chairmanship to Norway	Russian Ministry of Foreign Affairs	20–21 April 2023
	2. ECONOMIC COOPERATION		
1.	Conference of Regional Chambers of Commerce and Industry	Russian Chamber of Commerce and Industry and regions of the Russian Federation	2021
2.	Conference on the Development of the Arctic Ocean Shelf	Russian Ministry of Energy, Ministry for the Development of the Russian Far East, relevant federal executive authorities, relevant organizations	2022
3.	Conference on Technologies and Venture Funding in the Arctic	Relevant federal executive authorities, relevant organizations	2022
4.	Conference on Investment and Trade in the Arctic	Relevant federal executive authorities, relevant organizations	2022
5.	International Seminar on Shipbuilding and Ship Repair in the Arctic	Relevant federal executive authorities, relevant organizations	2022
6.	International Seminar on Cross-Border Cooperation in the Arctic	Relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2022

No.	Event	Responsible agencies/organizations	Year
7.	International Seminar on the Development of Aquaculture in the Arctic	Relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2023
3. CLIMATE CHANGE AND ARCTIC ECOLOGY			
1.	Arctic Meteorological Summit	Russian Federal Service for Hydrometeorology and Environmental Monitoring, relevant organizations	2021
2.	Conference on Adapting to Climate Change in the Arctic	Russian Ministry of Natural Resources and Environment, Russian Federal Service for Hydrometeorology and Environmental Monitoring, relevant federal executive authorities, relevant organizations	2021
3.	Conference on Oil Spill Prevention and Response in the Arctic	Russian Ministry of Natural Resources and Environment, Ministry for the Development of the Russian Far East, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2022
4.	Conference 'Raising Submerged Radioactive and Dangerous Objects in the Seas of the Arctic Ocean' Conference'	Ministry for the Development of the Russian Far East, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2022
5.	3rd Arctic Biodiversity Congress	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, relevant organizations	2022
6.	Conference on Waste and the Problem of Microplastics in the Arctic	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, relevant organizations	2022
7.	Conference on Bioresources and Fisheries in the Arctic	Russian Federal Agency for Fishery, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2023
8.	Conference on the Negative Impact of Waters in the Arctic	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, relevant organizations	2023
9.	International Forum on Specially Protected Natural Areas in the Arctic	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, relevant organizations	2023
10.	Meeting of Environmental Protection Ministers	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, regions of the Russian Federation	2023
11.	Seminar on the Problem of Microplastics	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, regions of the Russian Federation	2023
12.	Conference on the Bioremediation of the Arctic Coast	Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, relevant organizations	2023
4. DEVELOPMENT OF HUMAN CAPITAL IN THE ARCTIC			
1.	Conference on Human Health Preservation in the Arctic	Russian Ministry of Health, relevant federal executive authorities, relevant organizations	2021

No.	Event	Responsible agencies/organizations	Year
2.	Conference on Access to Education in the Arctic	Russian Ministry of Education and Science, relevant federal executive authorities, relevant organizations	2021
3.	Conference on recruiting personnel for the Arctic	Relevant federal executive authorities, relevant organizations	2021
4.	Conference on Ensuring a Comfortable Urban Environment in the Arctic	Relevant federal executive authorities, relevant organizations	2022
5.	5th International Scientific and Practical Conference 'Arctic Telemedicine'	Nenets Autonomous District, Russian Ministry of Health, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2022
6.	International Northern Professions Skills Championship	Russian Ministry of Enlightenment, Russian Federal Agency for Ethnic Affairs, representatives of Indigenous peoples, relevant organizations	2023
5. INDIGENOUS PEOPLES OF THE ARCTIC			
1.	Summit of Arctic Indigenous Peoples	Russian Federal Agency for Ethnic Affairs, Russian Association of Indigenous Peoples of the North, representatives of Indigenous peoples, relevant organizations	2021
2.	International Seminar on the Preservation and Promotion of the Languages of the Indigenous Peoples of the Arctic	Russian Federal Agency for Ethnic Affairs, Foundation for the Preservation and Study of Native Languages of the Peoples of the Russian Federation, Krasnoyarsk Territory, representatives of Indigenous peoples, relevant organizations	2022
3.	Roundtable on the Implementation of the 'Children of the Arctic' International Project	Russian Federal Agency for Ethnic Affairs, regions of the Russian Federation, representatives of Indigenous peoples, relevant organizations	2023
4.	International Seminar on State Support for the Economic Activities of Indigenous Peoples of the Arctic	Relevant federal executive authorities, Krasnoyarsk Territory, regions of the Russian Federation, relevant organizations	2023
5.	All-Russian Arctic Games	Republic of Komi, relevant federal executive authorities, relevant organizations, regions of the Russian Federation	Annually
6.	International Festival of Indigenous Youth of the Arctic Region	Russian Federal Agency for Youth Affairs, Yamalo-Nenets Autonomous District, relevant organizations, regions of the Russian Federation	2022
7.	International Exhibition and Fair of Achievements in the Culture and Traditional Economic Activities of the Indigenous Peoples of the North	Murmansk Region, relevant organizations, representatives of Indigenous peoples	November 2022
8.	7th World Congress of the Association of World Reindeer Herders	Khanty-Mansi Autonomous District, Russian Federal Agency for Ethnic Affairs, relevant organizations	2021
6. DEVELOPMENT OF INFRASTRUCTURE AND SUSTAINABLE SHIPPING IN THE ARCTIC			

No.	Event	Responsible agencies/organizations	Year
1.	Green Energy in the Arctic Conference	Russian Ministry of Energy, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2021
2.	Conference on the Development of the Northern Sea Route and Sustainable Shipping in the Arctic	Ministry for the Development of the Russian Far East, Russian Ministry of Transport, Russian Federal Service for Hydrometeorology and Environmental Monitoring, Sovcomflot, Rosatom State Corporation, relevant organizations	2022
3.	Conference on the Development of Telecommunications and Digitalization in the Arctic	Ministry for the Development of the Russian Far East, relevant federal executive authorities, Krasnoyarsk Territory, regions of the Russian Federation, relevant organizations	2022
4.	International Seminar on the Development of Small Aircraft in the Arctic	Russian Ministry of Transport, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2023
7. CULTURAL PROGRAMME			
1.	4th Northern Cultural Forum	Republic of Komi, regions of the Russian Federation, relevant organizations	25–26 February 2021
2.	Teriberka Arctic Festival	Regions of the Russian Federation, relevant organizations	2022
3.	Northern Character Film Festival	Regions of the Russian Federation, relevant organizations	2022
4.	Barents Bird Cultural Festival	Regions of the Russian Federation, relevant organizations	2022
5.	Gastronomic Festival of Northern Cuisine	Regions of the Russian Federation, relevant organizations	2023
6.	5th Arctic Cultural Forum	Yamalo-Nenets Autonomous District, relevant organizations, regions of the Russian Federation	2023
7.	5th Golden Raven International Film Festival	Chukotka Autonomous District, relevant organizations	Annually
8.	'Northern Character: Green Screen' International Festival of Social and Environmental Cinema	Murmansk Region, relevant organizations	Annually
8. INTERNATIONAL SCIENTIFIC COOPERATION IN THE ARCTIC			
1.	Conference of Ministers of Science	Russian Ministry of Education and Science	2021
2.	International Scientific and Practical Conference on Cooperation in Fighting Forest Fires in the Arctic	Russian Federal Forestry Agency, Russian Federal Service for Hydrometeorology and Environmental Monitoring, relevant federal executive authorities, regions of the Russian Federation	2022
3.	1st International Conference on Communication Mechanisms of Peoples in the Arctic Zone	Russian Ministry of Education and Science, relevant federal executive authorities, relevant organizations	2021
4.	UArctic Congress	Russian Ministry of Education and Science, Lomonosov Moscow State University	2022

No.	Event	Responsible agencies/organizations	Year
5.	International Conference 'Gas Hydrates: New Opportunities for Energy Conservation'	Russian Ministry of Energy, PAH, Ministry for the Development of the Russian Far East, Russian Ministry of Foreign Affairs, relevant federal executive authorities, relevant organizations	2022
6.	Euro-Arctic International Scientific and Practical Conference	Nenets Autonomous District, Russian Ministry of Natural Resources and Environment, relevant federal executive authorities, regions of the Russian Federation	2023
7.	'Universe of the Polar Bear' International Scientific and Practical Conference	Chukotka Autonomous District, relevant federal executive authorities, relevant organizations	2021
8.	4th 'Northern Forum on Sustainable Development' Scientific and Practical Conference	Russian Ministry of Education and Science, Ministry for the Development of the Russian Far East, relevant federal executive authorities, Republic of Sakha (Yakutia), relevant organizations	2021, 2022
9. ARCTIC YOUTH			
1.	World Skills Arctic Professional Skills Championship	Murmansk Region, relevant federal executive authorities, regions of the Russian Federation, relevant organizations	2021
2.	'Problems of the Arctic Region' International Scientific Conference of Undergraduate and Graduate Students	Russian Ministry of Education and Science, regions of the Russian Federation, relevant organizations	2022
3.	Arctic Council Youth Creativity Festival	Russian Ministry of Education and Science, regions of the Russian Federation, relevant organizations	2022
4.	Student Summit on the Conservation and Support of Ecology in the Arctic Region	Russian Ministry of Education and Science, regions of the Russian Federation, relevant organizations	2022
5.	2nd 'Russia in the Arctic Dialogue: Local and Global Context' International School for Postgraduate Students	Russian Ministry of Education and Science, regions of the Russian Federation, relevant organizations	2023
6.	'Innovations and Technologies in the Arctic' Youth Forum	Russian Ministry of Emergency Situations, relevant federal executive authorities, relevant organizations	2023
7.	International Model Arctic Council	Russian Ministry of Foreign Affairs, relevant federal executive authorities, relevant organizations	2022
8.	International Youth Volunteer Programmes in the Arctic	Yamalo-Nenets Autonomous District, Russian Federal Agency for Youth Affairs, relevant organizations, regions of the Russian Federation	2023
9.	Arctic Council Young Leaders Forum	Russian Federal Agency for Youth Affairs, Yamalo-Nenets Autonomous District, relevant organizations, regions of the Russian Federation	2023
10. EMERGENCY PREVENTION IN THE ARCTIC			
1.	Comprehensive Interagency Scientific and Practical Exercises with International Participation to Implement Practical Measures to Protect the Population and Territories against Natural and Man-Made Emergencies	Russian Ministry of Emergency Situations, Ministry for the Development of the Russian Far East, relevant federal executive authorities, Rosatom State Corporation, regions of the Russian Federation	2021, 2023

No.	Event	Responsible agencies/organizations	Year
2.	Roundtable on Global Climate Change and Permafrost Degradation	Russian Ministry of Emergency Situations, relevant federal executive authorities, relevant organizations	2021
3.	'Ensuring Security in the Arctic' Thematic Cluster during the 'Integrated Security 2021' International Salon of Security Equipment	Russian Ministry of Emergency Situations, relevant federal executive authorities, relevant organizations	2021
4.	'Barents Rescue 2022' International Exercises	Russian Ministry of Emergency Situations, relevant federal executive authorities	2022
5.	'Security Service in Russia: Experience, Problems, Prospects. The Arctic – A Region of Strategic Interests: Legal Policy and Modern Technologies to Ensure Security in the Arctic Region' International Scientific and Practical Conference	Russian Ministry of Emergency Situations, relevant federal executive authorities, state corporations	2022
6.	'Monitoring Systems in the Arctic Zone' International Scientific and Practical Conference	Russian Ministry of Emergency Situations, relevant federal executive authorities	2023
		11. ARCTIC TOURISM	
1.	Accessible Arctic Forum	Russian Federal Tourism Agency, relevant federal executive authorities, relevant organizations, regions of the Russian Federation	Annually
2.	Conference on Sustainable Cruise Tourism in the Arctic	Russian Federal Tourism Agency, relevant federal executive authorities, relevant organizations, regions of the Russian Federation	2021
3.	'100 Arctic Crafts and Goods' Exhibition	Russian Federal Tourism Agency, relevant federal executive authorities, relevant organizations, regions of the Russian Federation	2022
4.	Bering Strait International Festival	Russian Federal Tourism Agency, relevant federal executive authorities, relevant organizations, regions of the Russian Federation	2022
5.	International Tourism Forum	Russian Federal Tourism Agency, Krasnoyarsk Territory, relevant federal executive authorities, relevant organizations, regions of the Russian Federation	2022

Appendix No. 4

Key Arctic Projects and Initiatives Implemented by Russia, China, India, and Brazil

Over the last decade, the portfolio of joint projects between Russia, Asian, and Latin American countries in the Arctic has significantly expanded, however several joint projects that Russia had been implementing with Japan, South Korea, and Singapore have been frozen or postponed indefinitely due to the geopolitical crisis and threats of secondary sanctions from Western countries.

Joint projects were being implemented in such areas as environmental protection, liquefied natural gas and oil production, geological exploration, transport, and logistics. Scientific research plays a special role in Russia's cooperation with India, China, and Brazil, although Brazil generally remains less involved in bilateral cooperation in the Arctic than the other two countries.

The following is a list of key sustainable development projects in the Arctic that are being implemented with the participation of Russia, China, India, and Brazil.

Energy

- Joint Yamal LNG and Arctic LNG-2 projects by Russian and Chinese companies to produce liquefied natural gas in the Arctic territories;
- Partnership between Russian and Chinese companies for geological exploration at Arctic fields and the drilling of exploration wells in the Okhotsk and Kara Seas;
- Participation of Indian state-owned companies in the development of the Vankor field (northern Krasnoyarsk Territory, Russia);
- Joint projects to study the potential of using renewable energy in oil and gas production in the Arctic based on an agreement with Chinese companies to study the wind energy potential of the Vostok Oil project.

Transport and Logistics

- Agreement on cooperation in the Northern Sea Route between the Ministry for the Development of the Russian Far East and the Arctic and China's National Development and Reform Commission (2015): inclusion of the NSR in the One Belt, One Road initiative;
- China's participation in providing transport equipment for joint projects with Russia based on an agreement between NOVATEK, China COSCO SHIPPING Corporation Limited, Sovcomflot, and the Silk Road Fund to create the Arctic Maritime Transport enterprise (2019);
- Russian-Indian cooperation to integrate the NSR into the North–South and Vladivostok–Chennai international transport corridors.

Science and Education

- Coordination and support of bilateral cooperation between Chinese and Russian scientific centres by the China-Russia Arctic Research Centre;
- Joint research on ice quality and changes in Arctic ecosystems by the Shirshov Institute of Oceanology of the Russian Academy of Sciences and the Qingdao Ocean Science and Technology National Laboratory;
- Activities of the Russian-Chinese Scientific Centre on Arctic Shipping, the Development of Monitoring Systems in the Arctic, and the Preparation of Transport Corridor Projects;
- Arctic industrial development projects of the Russian-Chinese Polar Engineering and Research Centre in cooperation with Far Eastern Federal University (FEFU) and Harbin Institute of Technology (HIT) (since 2016);
- Participation of Chinese and Indian partners in the construction of Russia's year-round Snezhinka Arctic Station (see clause 1.5.4);
- Joint scientific expeditions: an expedition led by the Chinese Arctic and Antarctic Administration with the support of China's State Oceanic Administration and the Russian Academy of Sciences (2016); expeditions by the Professor Molchanov research vessel in the format of the Arctic Floating University (since 2012);
- Joint forums and scientific conferences – the roundtable 'Russian-Chinese Cooperation in the Arctic: Opportunities and Constraints', under the guidance of the Russian International Affairs Council (RIAC) and the Chinese Academy of Social Sciences (CASS) (2022);
- University exchange programmes for students and teachers: cooperation between Minin University and Anhui Normal University; joint Chinese-Russian Bauman Institute; joint MSU-BIT University in Shenzhen; cooperation by the Northern Arctic Federal University (NAFU) with Chinese partners.

Tourism

- Cooperation between Russian and Chinese travel companies to establish tourist trips to the North Pole by the Chinese travel company Polar Beauty on board the Russian nuclear icebreaker 50 Let Pobedy.

Appendix No. 5

Key Factors of Scenarios for the Intensification of International Cooperation in the Arctic by 2030

Criteria	S1. 'Arctic Reset'	S2. 'Isolation of Russia'	S3. 'Arctic without Borders'	S4. 'Stagnation in Arctic Cooperation'
Functionality of international institutions in the Arctic region	High level of functionality of international institutions in the Arctic. Resumption of an active dialogue, work of the main platforms and working groups, extension of programmes and projects as part of the AC, BEAC, and cross-border cooperation programmes with Russia and the EU. AC's status of an international organization could be strengthened. Russia is involved in previous formats and is able to influence negotiations and shape the agenda.	Low level of functionality of international institutions in the Arctic; new projects are emerging, but not on a large scale and with a limited number of participants. The importance of sites in the Arctic is declining due to Russia's isolation. Russia is only involved in international cooperation in the Arctic on a limited bilateral basis.	High level of functionality of international institutions in the Arctic, but no new projects, initiatives, or agreements are rapidly developing or emerging. Russia has opportunities to promote its interests on multilateral platforms in the Arctic and expand alternative foreign economic and political ties.	Low level of functionality of international institutions in the Arctic. The isolation of Russia and a lack of opportunities to effectively defend its interests on international platforms in the Arctic. On the whole, the role of international institutions and international cooperation is declining.
Extent of non-Arctic countries' involvement in Arctic multilateral cooperation institutions	More non-Arctic countries are becoming involved in Arctic multilateral cooperation institutions, and new formats and organizations of international cooperation are emerging in the Arctic. Asian states generally continue to participate in the activities of Arctic institutions at the same level and cooperate with Russia due to the reduced threat of US sanctions.	Substantial involvement of non-Arctic countries, including Asian countries, in Arctic platforms and formats as demand for energy resources recovers and the need for sea transport routes grows.	New non-Arctic countries have little involvement in the system of multilateral cooperation in the Arctic due to the weak recovery of the global economy, but they remain interested in the Arctic due to the region's fragility and global significance. Long-term prerequisites are being created to revise Article 234 of the UN Convention on the Law of the Sea.	Low level of involvement of non-Arctic countries given the weak recovery of the global recovery and high proneness to conflict in the global economy.

Extent of fragmentation of the system of multilateral cooperation institutions	The fragmentation of the multilateral cooperation system in the Arctic is minimal. The Arctic Council maintains its role as the leading institution in the Arctic. No significant or functional platforms are being created as a counterbalance to the AC. Russia continues to build partnerships with China and India.	Preconditions are being created for the greater long-term fragmentation of the system of multilateral cooperation institutions due to Russia's isolation and the continued interest of non-Arctic states in tapping into the region's potential with significant dominance of Western countries in international Arctic institutions.	Preconditions are being created for the greater fragmentation of the system of multilateral cooperation institutions due to the growing opportunities presented by Russia's cooperation with non-Arctic countries.	Low level of fragmentation due to the lack of objective opportunities and interest of non-Arctic countries in the Arctic.
Priorities of Arctic cooperation	There are numerous opportunities for economic, financial, technological, and socio-cultural cooperation and the development of transport, infrastructure, renewable energy sources, and digitalization.	Multilateral cooperation is limited to politically neutral issues such as environmental protection, including the fight against climate change, and social support for the Arctic population.	Multilateral cooperation in environmental protection and socially oriented projects. Given the weak economic recovery, there are few objective opportunities for the implementation of major capital-intensive projects and agreements (in infrastructure and mining).	Multilateral cooperation is limited to politically neutral issues such as environmental protection, including the fight against climate change, and social support for the Arctic population.

Source: compiled based on a report by the National Research University Higher School of Economics 'Scenarios for the Development of the Russian Economy and Social Sector amidst Geopolitical Turbulence'

Appendix No. 6

List of participants in the measures of the Think Arctic – Think Global project

1. BK Sharma, Major General, AVSM, SM (Retd); Director of United Service Institution of India
2. Troy Bouffard, Director, Center for Arctic Security and Resilience at the University of Alaska (Fairbanks)
3. Gilles Breton, Chairman, CERBA National Board
4. Glenn Diesen, Professor, University of South-Eastern Norway
5. Piotr Dutkiewicz, PhD, Professor, Centre for Governance and Public Management, Carleton University
6. Lassi Heininen, PhD, Professor of Arctic Politics in the Faculty of Social Sciences, University of Lapland, an Adjunct Professor, University of Oulu
7. Hide Sakaguchi, Executive Director of the Sasakawa Peace Foundation (SPF), President of the Ocean Policy Research Institute of SPF
8. Jonathan Wood, PhD Candidate at the University of Iceland and Editor for the Nordicum Mediterraneum Journal (Iceland)
9. Nivedita Kapoor, Post-doctoral Fellow, International Laboratory on World Order Studies and the New Regionalism, Faculty of World Economy and International Affairs, National Research University Higher School of Economics
10. Timo Koivurova, PhD, Research professor, Director of Arctic Centre at the University of Lapland
11. P. Whitney Lackenbauer, PhD, Lead at North American and Arctic Defence and Security Network
12. Mikko Niini, CEO of the Vientistrategit Oy, Arctic & Maritime Consultancy; Chairman of the Navidom Ltd and Rauma Marine Constructions Ltd
13. Soili Nystén-Haarala, Professor of Commercial Law, Dean of the Faculty of Law, University of Lapland
14. Zachary Paikin, PhD, Nonresident Research Fellow at Institute for Peace & Diplomacy
15. Sinikka Parviainen, PhD, Senior analyst at the East Office of Finnish Industries in Helsinki
16. Alla Pozdnakova, Professor, University of Oslo
17. Sakiko Hataya, Research Fellow, Ocean Policy Research Institute of SPF
18. Satish Soni, Vice Admiral, PVSM, AVSM, NM (Retd)
19. Jennifer Spence, SDWG Executive Secretary, Arctic Council
20. Florian Stammler, PhD, Research Professor, Arctic Anthropology Research Group, Arctic Centre, University of Lapland
21. Abiru Taisuke, Senior Research Fellow Security Studies Program, The Sasakawa Peace Foundation (SPF)
22. Van Yali, Master's degree student, National Research University Higher School of Economics

23. Datla Bala Venkatesh Varma, Ambassador Extraordinary and Plenipotentiary of the Republic of India to the Russian Federation (2018–2021)
24. Wang Wen, Executive Dean of Chongyang Institute for Financial Studies (RDCY), the Deputy Dean and Distinguished Professor of Silk Road School, Renmin University of China, Executive Director of China-US People-to-People Exchange Research Center, Chongyang Institute for Financial Studies (RDCY)
25. Yang Cheng, Professor, Shanghai International Studies University
26. Yang Xiaoning, Legal advisor, Chinese Embassy in Russia
27. Zhou Liqun, President, Elus Union of Chinese Entrepreneurs
28. Igor Ashik, Deputy Director for Scientific Work; PhD of Geographical Sciences; Associate Professor; Deputy Chairman, Academic Council, Arctic and Antarctic Research Institute
29. Kirill Babayev, Acting Director, Institute of Far Eastern Studies, Russian Academy of Sciences; Doctor of Philology; Chairman, Academic Council
30. Daria Boklan, Deputy Department Director; Professor, Faculty of Law, Department of International Law, National Research University Higher School of Economics
31. Vladimir Vasilyev, Executive Director, Northern Forum
32. Grigory Velikikh, Deputy Director for Expert and Analytical Work, Roscongress Foundation
33. Natalya Vyakhireva, PhD of Political Sciences; Programme Manager, Russian International Affairs Council
34. Gao Tianming, Professor, Director, and Chief Expert, Arctic Blue Economy Research Centre, Harbin Engineering University, China
35. Andrey Gubin, PhD of Political Sciences; Associate Professor, Department of International Relations, Far Eastern Federal University
36. Pavel Gudev, Director, Research Group for US and Canadian Policies in the World Ocean, Institute of World Economy and International Relations, Russian Academy of Sciences
37. Guo Peiqing, Professor, School of International Affairs and Public Administration; Executive Director, Institute for Ocean Politics Studies, Ocean University of China
38. Maxim Dankin, Director, Department for the Development of the Arctic Zone of the Russian Federation and the Implementation of Infrastructure Projects, Ministry for the Development of the Russian Far East and Arctic
39. Bruno De Conti, Professor, Institute of Economics, University of Campinas, Sao Paulo, Brazil
40. Pavel Devyatkin, Researcher, The Arctic Institute, Washington DC
41. Cardia Simoes Jefferson, Polar and Climate Centre
42. Dan Wang, Professor, College of Transportation Engineering, Dalian Maritime University

43. Vasily Yerokhin, PhD; Researcher, Arctic Blue Economy Research Centre, Harbin Engineering University, China
44. Alexander Zhebit, Professor and Doctor, Centre for Philosophy and Humanities, Federal University of Rio de Janeiro
45. Yulia Zayka, Director, International Department, Kola Scientific Centre, Russian Academy of Sciences; Secretary, International Scientific Initiative in the Russian Arctic, International Arctic Science Committee
46. Konstantin Zaykov, Doctor of Historical Sciences, Vice Rector for Information Policy and International and Interregional Cooperation, Lomonosov Northern (Arctic) Federal University
47. Alexey Zakharov, Research Fellow, Institute of Oriental Studies, Russian Academy of Sciences
48. Vasily Kashin, PhD of Political Science; Director, Centre for Comprehensive European and International Studies, National Research University Higher School of Economics
49. Dmitry Kobylkin, Chairman, Committee on Ecology, Natural Resources, and Environmental Protection, State Duma of the Russian Federation
50. Nikolay Korchunov, Ambassador-at-Large, Ministry of Foreign Affairs of the Russian Federation
51. Maria Lagutina, Doctor of Political Sciences and Professor, Department of World Politics, St. Petersburg State University
52. Anastasia Levkina, Deputy Director for Science, Financial and Economic Institute; Director, Centre for Arctic Studies, Tyumen State University; Professor, Department of Economic Security, System Analysis, and Control, Tyumen State University
53. Anastasia Likhacheva, Dean, Faculty of World Economy and World Politics, National Research University Higher School of Economics
54. Artyom Lukin, Associate Professor, Department of International Relations, Far Eastern Federal University
55. Liu Di, International Project Manager, Chongyang Institute for Financial Studies, Renmin University of China
56. Abidat Magomedova, Chairman, International Sustainable Development Working Group, Arctic Council; Director, International Cooperation Division, International Department, Ministry for the Development of the Russian Far East and Arctic
57. Alexander Makarov, Director, Arctic and Antarctic Research Institute
58. Pan Ming, PhD and Professor; Deputy Director, Centre for Polar and Ocean Research, School of Political Science and International Affairs
59. Sergey Mikhnevich, PhD of Political Sciences; Managing Director, Department of International Multilateral Cooperation and Integration, Russian Union of Industrialists and Entrepreneurs
60. Maxim Moskalevsky, Scientific Secretary, Scientific Council of the Russian Academy of Sciences for the Study of the Arctic and Antarctic; Russian Delegate to the Scientific Committee on Antarctic Research (SCAR); Scientific Council of the Russian Academy of Sciences for the Study of the Arctic and Antarctic

61. Lyudmila Nemova, PhD of Economic Sciences; Director, Economic Problems of Canada Sector, Institute of the USA and Canada, Russian Academy of Sciences
62. Sergey Nikonorov, Director, Centre for Economic Problems of Arctic Development; Professor; Sustainable Development Expert, Arctic Development Project Office
63. Oran Young, Professor Emeritus, University of California, Santa Barbara
64. Viktoria Panova, Vice Rector and Member, Scientific Council, National Research University Higher School of Economics
65. Larisa Ryabova, PhD of Economic Sciences; Deputy Director for Scientific Work, Luzin Institute for Economic Problems, Kola Science Centre, Russian Academy of Sciences
66. Richard Sakwa, Professor, University of Kent
67. Alexander Sergunin, Professor and Doctor of Political Sciences, Faculty of International Relations, St. Petersburg State University
68. Uttam Kumar Sinha, Senior Research Fellow, Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA)
69. K.M. Seethi, Professor, School of International Relations and Politics, Mahatma Gandhi University
70. Ilya Stepanov, PhD of Economic Sciences; Director, Arctic Project, Centre for Comprehensive European and International Studies; Deputy Director, Laboratory for Economics of Climate Change, National Research University Higher School of Economics
71. Irina Strelnikova, PhD of Legal Sciences; Research Fellow, Faculty of World Economy and International Politics, National Research University Higher School of Economics
72. T.G. Suresh, Professor and Doctor of Economics, Jawaharlal Nehru University
73. Ravni Thakur, PhD and Professor, Department of East Asian Studies, University of Delhi
74. Sergey Timoshkov, Advisor to the Director of Ethnic Affairs, Federal Agency for Ethnic Affairs
75. Iosif Tukkel, Professor, Peter the Great St. Petersburg Polytechnic University
76. Paul Fuhs, President Emeritus, Marine Exchange of Alaska
77. Zhao Long, Senior Research Fellow, Centre for Russian and Central Asian Studies, Institute for Global Governance Studies, China
78. Alexey Shapoval, Administrative Aide, Department of International Cooperation, Ministry of Natural Resources and Environment of the Russian Federation
79. Elias-Piera Francyne, Postdoctoral Research Fellow, Oceanographic Institute, University of Sao Paulo; PhD of Environmental Sciences, Oceanographic Institute, University of Sao Paulo

Appendix No. 7

Universities Participating in the Events of the Think Arctic – Think Global Project

RUSSIA

National Research University Higher School of Economics (Moscow, St. Petersburg, Perm, and Nizhny Novgorod)

National Research University Higher School of Economics, one of the leading universities in Russia, trains specialists in a variety of fields and conducts numerous fundamental and applied research studies each year. The University has a Scientific and Educational Laboratory for Social and Humanitarian Research of the North and the Arctic, which aims to study the culture of people of the North. In addition, the Centre for Comprehensive European and International Studies (CCEIS) conducts a number of Arctic studies, for example, the project 'Arctic Region: New Agenda', which seeks to develop solutions to improve state policy for the development of the Russian Arctic. The University has also initiated international cooperation on Arctic research, for example a joint project with the University of Oslo, the University of Akureyri, and the Arctic Economic Council in 2021–2022.

Lomonosov Northern (Arctic) Federal University (Arkhangelsk)

The university's main goal is to establish research base and train personnel to protect Russia's geopolitical interests in the Arctic by conducting Arctic research, creating a continuing education system, and promoting innovative technological developments. The university is home to Russia's first biomonitoring laboratory for research in the Arctic. In 2020, together with the Russian Ministry of Education and the Ministry for the Development of the Russian Far East and Arctic, Northern (Arctic) Federal University developed an Arctic development programme for the period until 2035. Northern (Arctic) Federal University organizes the Arctic Floating University 2023 expedition, which aims to train Arctic researchers in real conditions of the northern seas.

Peter the Great St. Petersburg Polytechnic University (St. Petersburg)

The university is one of the leading technical universities in Russia. The university's representatives are involved in fundamental and applied research on the development of the Arctic. In 2021, the university became a member of the Russian Arctic Scientific and Educational Centre. The university has a platform for discussions on Arctic research. For example, it hosted the International Roundtable 'Logistics in the Arctic: Problems of International Cooperation' in 2019 and the university hosted the 6th International Scientific Conference 'The Arctic: History and Modern Times' in 2021.

Tyumen State University (Tyumen)

The university is one of the most dynamically developing institutions in the region and is part of the University of the Arctic (UArctic) and the BRICS Network University. The university

develops educational programmes related to Arctic research, for example, the international master's programme 'STEP into Russian Arctic', which seeks to train a new generation of specialists with in-depth knowledge about the special features of the Arctic and an understanding of Russia's priorities in the Arctic. In 2021, the university received a grant to implement the project 'Arctic Academy for Sustainability: Environmentally and Socially Responsible Development of the Energy and Resource Base in the Arctic' together with Copenhagen Business School (CBS), the University of Helsinki, and the University of Northern British Columbia. The goal of the project was to bring together researchers, organizations of Indigenous peoples of the North, and representatives of business and government organizations for joint activities in the Arctic.

BRAZIL

Federal University of Rio de Janeiro (Rio de Janeiro)

The Federal University of Rio de Janeiro is the oldest university in Brazil and trains specialists in Arts and Humanities, Engineering and Technology, Life Sciences and Medicine, Natural Sciences, Social Sciences, and Management. Its sustainable development initiatives are supported by green finance instruments. In addition, it has set long-term goals for energy efficiency, renewable energy generation, water efficiency, and urban mobility using local public transport alternatives.

Institute of Economics of the University of Campinas (Barao Geraldo, Campinas)

The university is a key analytical centre for state economic policy. It offers bachelor's programmes in economics and a large number of specialized courses. The university is also the country's largest research centre. It offers additional events for students on such topics as climate research, energy transition, multidimensional poverty, and food security.

Oceanographic Institute of the University of Sao Paulo (Sao Paulo)

At present, the university has two departments: Biological Oceanography and Physicochemical and Geological Oceanography. It has two research bases equipped with advanced technologies, as well as research vessels that graduate students use to conduct field research. Given the university's specialization, the staff's scientific research focuses on SDG 14 – the conservation of marine ecosystems.

CHINA

Dalian Maritime University (Dalian)

Dalian University is the only maritime university under the Chinese Ministry of Transport and trains specialists in maritime affairs: engineers, biologists, and maritime trade specialists. Representatives of the university take part in discussions on the Arctic, for example, in the session 'Global and Local Adaptation to Climate Change' during the International Climate Conference.

Harbin Engineering University (Harbin)

The university trains specialists on the transport industry and ocean research. It has multiple research centres that study the Arctic. For example, in 2023, the Ministry of Education opened a laboratory to study the acoustics of the polar ocean and apply technologies. The university is also a platform for international discussions about developing the Arctic. In May, the university hosted the third Chinese-Russian Forum on Polar Celestial Navigation and Information Technologies, during which the construction of the Ice Silk Road was discussed. In addition, Harbin Engineering University and Far Eastern Federal University have created an Arctic research centre that prioritizes work to design ice-resistant platforms and study the durability of concrete in the Arctic zone and the reliability of vessel-based engineering structures and ice loads.

Institute for Ocean Politics Studies, Ocean University of China (Lianyungang)

This multidisciplinary university offers study programmes in economics, humanities, medical sciences, management, law, natural sciences, engineering, and agronomy. The university is home to the Institute of Polar Research, which primarily focuses on international relations and international maritime law.

Chongyang Institute for Financial Studies, Renmin University of China (Beijing)

The university trains specialists in law, economics, and business. The Chongyang Institute for Financial Studies officially has an independent status, however, it is governed by a committee of Renmin University. The institute's research initially focused on financial markets, but has gradually moved on to the study of global issues. The institute offers training in four programmes, one of which focuses on the study of green finance.

Shanghai International Studies University (Shanghai)

The university specializes in linguistics and literary studies and is also known for its research on international relations and cultural studies. Shanghai International Studies University is implementing the 'Arctic Region: A New Agenda' joint project with other universities in China and the Centre for Arctic Research and Development.

INDIA

Jawaharlal Nehru University (New Delhi)

The university specializes in engineering and trains specialists in technical fields. The university's mission is to conduct interdisciplinary research in numerous areas related to engineering. The university is home to the Transdisciplinary Research Cluster on Sustainability Studies, which takes part in such projects as the 'South Asia Sustainability Hub & Knowledge Network' and 'Urbanization and Sustainability in the Era of Globalization: Emerging Scenarios in South-West National Capital Region'.

Mahatma Gandhi University (Kottayam)

The university offers several hundred educational programs in a variety of fields, such as medicine, journalism, ecology, and hotel management. The university's representatives are actively involved in discussions concerning the development of the Arctic. The university is also home to the Advanced Centre of Environmental Studies and Sustainable Development, which studies climate change, green chemistry and green technologies, and biodiversity conservation.

University of Delhi (Delhi)

The university is one of the most prestigious universities in India and trains top-flight specialists in the arts and humanities, engineering and technology, life sciences, natural sciences, social sciences, and management. The university has numerous research centres, such as the Centre for Environmental Management of Degraded Ecosystems, the University Scientific Instrumentation Centre, and the Centre for Interdisciplinary Studies of Mountain and Hill Environments.

USA

University of Alaska Fairbanks (Fairbanks)

The university is the largest in the state of Alaska and is part of the University of the Arctic. It has a number of large research units, including the following centres that study the Arctic: The Institute of Arctic Biology, which studies biological systems in high latitudes; the International Arctic Research Centre; the Institute of Marine Sciences; and the Institute of Northern Engineering. The university develops numerous educational programmes related to Arctic research, for example, the Arctic and Northern Studies Master's Degree Programme.

University of California (Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara, Santa Cruz, Berkeley, Davis, and Irvine)

The university unites 10 state universities of California. The universities in the association have Arctic research programmes. For example, the University of Santa Barbara has the Arctic Data Centre and other tools to study the Arctic.

NORWAY

University of Oslo (Oslo)

The University of Oslo is the oldest university in Norway and is part of the University of the Arctic network. It is also actively developing educational programmes related to Arctic research, for example, the 'A Changing Arctic' programme, which studies key issues in the Arctic and the interests of members of the Arctic community at the local and global levels. The university also implements a large number of projects that aim to study the Arctic, for example, a project to develop a map of permafrost in the Northern hemisphere.

University of South-Eastern Norway (Kongsberg)

The university is the largest in Norway in terms of students and offers programmes to train specialists in Arctic research, for example, a PhD programme in maritime operations. The university also hosts various projects related to the development of the Arctic, for example, a project in collaboration with McMaster University that aims to solve global health problems in Arctic communities.

ICELAND

University of Iceland (Reykjavik)

The University of Iceland is part of the University of the Arctic network and develops educational courses related to Arctic studies, such as the political economy of the Arctic and Arctic politics in an international context. The university is also a platform for discussions on Arctic research.

UK

University of Kent (Canterbury)

The university is among the best in training specialists in the arts and humanities, social sciences and management, biomedical sciences, engineering and technology, and natural sciences. Its main research focuses are migration, ecology, and technological innovation.

FINLAND

University of Lapland (Rovaniemi)

Finland's northernmost university is part of the University of the Arctic network. The University of Lapland is home to the Arctic Centre, which conducts interdisciplinary research into changes in the Arctic region, including anthropological research and projects in Arctic governance and ecology. The University of Lapland is implementing a number of projects involving international cooperation in the Arctic, for example, a project for cooperation in teacher education in the global Arctic context in partnership with other universities in Finland and Norway.

University of Oulu (Oulu)

The University of Oulu is one of Finland's leading universities and a major international scientific centre that works closely with the research departments of numerous companies, and is also part of the University of the Arctic. It is implementing a number of programmes to promote international cooperation in the Arctic, for example, a joint education project with universities in Finland and Norway.

CANADA

Carleton University (Ottawa)

The university specializes in technical education and computer science in particular. The university also offers courses related to Arctic studies, such as a course on the changing dynamics in the Canadian North and a course on Northern and Arctic issues.

Chairmanship of the Russian Federation of the Arctic Council in 2021–2023