International Organisations Research Journal, 2022, vol. 17, no 3, pp. 155–174
Original article
doi:10.17323/1996-7845-2022-03-06

Russia's Arctic Science Diplomacy: Theory and Practice[1]

M. Gutenev, A. Sergunin

Maxim Gutenev—PhD (Candidate of Science) in Philosophy, Associate Professor of the Department of Internationa Relations, Political Science and Regional Studies, South Ural State University; 76 Prospekt Lenina, Chelyabinsk, 454080, Russia; gutenevmi@susu.ru

Alexander Sergunin—Doctor of Sciences (Political Science), Professor of the Department of Theory and History of International Relations, St. Petersburg State University; 1/3 Smolnogo Ulitsa, St. Petersburg, 191060, Russia; a.sergunin@spbu.ru

Abstract

Arctic science diplomacy (ASD) is both a relatively new topic and an acute issue in Russian academic and political circles. There is neither a clear definition of the concept nor a consensus on the stakeholders, tools, and activities of science diplomacy. This article focuses on the main approaches in Russia in relation to the concept of ASD. The first approach considers ASD as a soft power tool of regional players. Science diplomacy helps to promote a positive image of specific states and to gain access to non-state resources that are usually inaccessible to state actors. A technical/instrumentalist approach to ASD involves the use of academic and scientific-technical cooperation between regions, countries, and societies to create reliable international partnerships on a non-ideological basis and to solve generally significant world problems. The third direction considers ASD as a form of new diplomacy, the strategic goal of which is not only to build friendly relations and cooperation with all Arctic countries, but also to develop international scientific cooperation and improve the international image of Russia.

This analysis makes it possible to explain the strategic motives and driving forces of ASD and to identify the stakeholders and key forms of Russia's ASD. It is established that the majority of participants in ASD share the idea that international scientific cooperation to ensure the sustainable development of the Arctic can become an effective mechanism for solving the most acute problems of the region, as well as for improving the current relations of western countries with Russia. The authors believe that Russia has largely managed to form the necessary platforms for the implementation of both strategic and tactical goals of its ASD. These platforms include both national platforms—The Arctic: The Territory of Dialogue and The Arctic: Present and Future—and the active use of international platforms—Arctic Frontiers, Polar Circle, and Arctic Science Summit Week—and organizations such as the Inter-Agency Standing Committee (IASC), the International Arctic Social Sciences Association (IASSA), and the Association of Polar Early Career Scientists (APECS).

Keywords: Russia, Arctic, science diplomacy, international cooperation, soft power, public diplomacy

Acknowledgments: the study was financially supported by the Russian Science Foundation within the framework of research projects No. 22-28-01287 and No. 22-28-20276.

For citation: Gutenev M., Sergunin A. (2022) Russia's Arctic Science Diplomacy: Theory and Practice. *International Organisations Research Journal*, vol. 17, no 3, pp. 155–174 (in English). doi:10.17323/1996-7845-2022-03-06

[1] This article was submitted on 01.02.2022.

Introduction

In the 21st century, the interest of the entire global community in the Arctic has grown steadily. An analysis of the Arctic agenda shows that in addition to economic, environmental, and military interests, circumpolar states also have pronounced research interests in this polar region.

As a result of the interest in the development of research activity in the region an agreement was concluded in May 2017 under the auspices of the Arctic Council (AC) on enhancing international Arctic scientific cooperation [Arctic Council, 2017]. In addition to the full members of the AC, much attention is paid to scientific research in the region by states that have observer status in the council, in particular Switzerland, Italy, Poland, Great Britain, China, Japan, and Korea.

In addition, numerous international governmental and non-governmental organizations and forums are active subjects of research activities in the region, ranging from the United Nations (UN) and its specialized agencies—the World Meteorological Organization (WMO) and the Intergovernmental Panel on Climate Change (IPCC)—to regional structures including the Barents Euro-Arctic Council, the Northern Forum, and the European Union (EU). In this list, a special place is occupied by organizations whose goal is to directly study the region—the International Arctic Science Committee (IASC), the International Arctic Social Sciences Association (IASSA), and the "network" University of the Arctic, which unites about 200 universities from around the world engaged in the study of the Far North and/or training for this region.

The above dynamic processes have led to the emergence of the phenomenon of Arctic science diplomacy (ASD) in the 21st century, which complements and sometimes challenges traditional diplomacy. This study is aimed at understanding this phenomenon, as well as its nature, functions, forms, and platforms.

Theoretical Approaches to the Study of Science Diplomacy

The first widely known theoretical attempt to comprehend the phenomenon of science diplomacy was the seminal report of the American Association for the Advancement of Science, entitled *New Frontiers in Science Diplomacy: Navigating the Changing Balance of Power* [The Royal Society, 2010]. The main result of the report was the identification of tåhe dimensions of science diplomacy.

The first dimension is science in diplomacy, that is, the provision of consulting services by the scientific community to government bodies to develop effective foreign policy to solve significant world problems. The report mentioned, for example, the IPCC as an organization that informs national governments and international organizations about global climate change. In the Arctic region, in addition to the IPCC, important consulting activities are also carried out by the AC working groups on the protection of the Arctic marine environment and the sustainable development of the Arctic, the elimination of pollution in the Arctic, the conservation of Arctic flora and fauna, the prevention, preparedness, and elimination of emergencies, and the implementation of the Arctic monitoring and assessment programme. Such cooperation between diplomats and scientists, according to the authors of the report, is mutually beneficial since the former make political decisions on international issues based on a scientific approach, while the latter begin to better understand the mechanisms for making political decisions.

The second dimension is diplomacy for science, that is, support for international scientific cooperation. This dimension is based on the idea that current global problems can only be solved by the joint efforts of the governments of all countries of the world. The CERN Large Hadron Collider and the ALMA International Radio Telescope Complex in Atacama have be-

come ideal types of such interaction. In the Arctic region, the main achievement is the already mentioned Agreement on Enhancing International Arctic Scientific Cooperation of 2017.

Third is science for diplomacy, that is, using the potential of scientific collaborations to strengthen trust between individual states and maintain international stability. The manifestation of this dimension includes, for example, scientific conferences and forums (including Arctic Frontiers, Arctic Circle, and the Arctic Science Summit Week), declarations of cooperation, and the creation of intergovernmental and non-governmental scientific organizations (IASC, IASSA). The 2010 report marked the beginning of research in the field of theory and practice of science diplomacy, and this phenomenon is currently being scrupulously analyzed by foreign policy analysts and specialists in the field of international relations. The London report was a milestone in the study of science diplomacy. A number of authors continued research in this field, relying on the report, while others argued that it was based on contradictory theses and that its conclusions were incorrect [Smith, 2014]. In addition, there was a discussion about how applicable the theory of science diplomacy is to different branches of science and regions of the planet.

In addition to expanding the theoretical discourse on the nature of science diplomacy, certain organizational decisions were made. In 2008, the American Association for the Advancement of Science established the Center for Science Diplomacy and began publishing a journal called Science and Diplomacy, which has become the main platform for specialists studying this phenomenon.

Subsequently, many experts began to lose interest in the theoretical foundations of science diplomacy laid down in the London report. This was largely because this concept was not aimed at explaining the very nature of science diplomacy, but rather at describing the relationship between diplomacy and science.

The renewal of interest in the concept of science diplomacy began with a search for its differences from the concept of international scientific cooperation (ISC). Science diplomacy is closely linked to the public interest, in contrast to ISC, which can be carried out by business representatives without the participation of the state and can be motivated by commercial or practical scientific benefits. Science diplomacy is based on the idea of achieving joint progress in research; however, unlike ISC, the improvement of relations between the parties to cooperation is proclaimed as its main motive. Moreover, ISC is usually implemented by individuals and groups of individuals, while science diplomacy, although it can be the result of the activities of specific individuals, often implies the initiative of the state in this area. In this regard, ISC may or may not include science diplomacy.

Despite the fact that the term "science diplomacy" is mentioned in the Russian Strategy for Scientific and Technological Development of 2016 and the Concept of International Scientific and Technical Cooperation of the Russian Federation of 2019, and is often used by politicians, scientists, and the media, there is still no consensus about the content of this concept. The main approaches that have developed today in Russia regarding the ASD concept are examined below.

Technical/Instrumentalist Approach to Science Diplomacy

This approach to ASD has recently become quite popular in the Russian political and academic community. It is characterized by the understanding of academic and scientific and technical cooperation between societies, regions, and countries as a means of building strong international collaborations on a non-ideological basis and creating long-term international partnerships.

Most scientific research in the Arctic is international in nature, goes far beyond the boundaries of one state, and is implemented by international teams of scientists and the joint efforts

of many countries, institutions, and organizations. Within the framework of this approach, science diplomacy is considered to be a set of networked cognitive practices, such as consulting, reporting, research, and evidence provision. These practices appear and are supported at the level of routine activities and everyday life through research platforms, including universities, institutes, centres, laboratories, conferences, seminars, and training events. ASD acquires a network character due to the need to harmonize and coordinate efforts and the timely communication for its implementation (see Fig. 1).

The signing of the aforementioned Agreement on Enhancing International Arctic Scientific Cooperation in 2017 revealed the global significance of ASD. According to then representative of Russia to the AC, V.V. Barbin, the conclusion of the agreement demonstrated the responsibility of the Arctic states for the sustainable development of the region and "the firm determination to achieve this goal by stimulating regional cooperation based on advanced knowledge" [PRO-ARCTIC, 2018]. At the initial stage, Russian experts, cooperating with foreign colleagues on the development of the terms of the agreement, made a great contribution to the preparation of the text of the document.

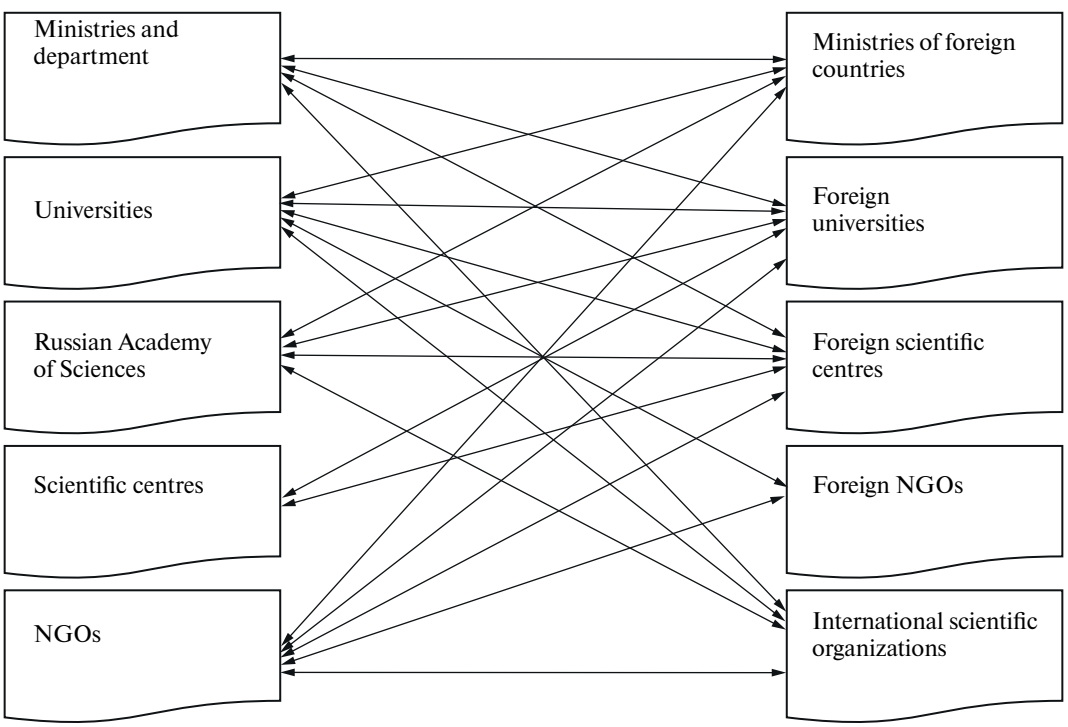

Fig. 1. International Scientific Cooperation in the Arctic

Source: Prepared by the authors.

A prominent representative of the technical (instrumentalist) approach is the Russian researcher N.M. Antyushina. In the article "The Many Faces of the Arctic," Antyushina analyzed the features of the region and stated that the joint scientific activities of states in the Arctic are developing quite actively, which allows them to collect a sufficient amount of data: "countries willingly join their efforts in this regard and agree to exchange the results of the observations obtained" [2013, p. 45]. In addition, the author concluded that the Arctic is an innovative region, "a kind of laboratory for establishing international cooperation on a wide range of issues"

[Antyushina, 2013, p. 45]. According to Antyushina, the goal of ASD should be a transition to the principles of sustainable development of the region agreed between the states. Science diplomacy is designed to prevent the predatory use of natural resources of the Far North and to ensure the use of advanced technologies to establish a management system in which the course for the sustainable development of the region will be consistently pursued without harming its population.

At the Days of the Arctic and Antarctic in Moscow meeting, held on 25–27 November 2020, representatives of the Russian foreign ministry noted that the Russian Federation, in its role as chair of the AC, would rely on the strong foundation of Arctic science. According to the ambassador of the Ministry of Foreign Affairs of the Russian Federation, N.V. Korchunov, ASD should help make the agenda of the AC truly comprehensive: "The scientific approach allows us to build policy in the Arctic in the most optimal and efficient way. This is both meteorological cooperation and cooperation in the field of maritime activities, to which we will also pay close attention during the Russian chairmanship" [Days of the Arctic and Antarctic, 2020].

Russian-American scientist A.N. Petrov, who was the president of the IASSA in 2017–21, noted the special importance of the social sciences in ASD, which "play an important role in understanding what and how we need to do in the Arctic—talk to people, receive data on economic, social, demographic development—all this is a paramount task if we want to ensure the sustainable development of the region" [Ibid.]. At the same time, Petrov noted that one of the main platforms of ASD is the International Congress of Arctic Social Sciences, which takes place every three years.

N.K. Kharlampeva (St Petersburg State University) edited a monograph entitled International Scientific Cooperation in the Arctic, which explored the causes of key changes in the study of the Far North and highlighted the following characteristics: the use of knowledge to create a common environmental space; expanding the possibilities of research expeditions, including their use for scientific tourism; and the internationalization of the research and educational system [Kharlampeva, 2017, p. 5]. Kharlampeva noted that in order to understand the modern characteristics of ASD, it is necessary to determine the expanding composition of participants in international cooperation, as well as to study changes in the methods of decision-making at the national, regional and global levels. According to Kharlampeva, the object of the research should be "the process of formation of the Arctic regional innovation system," and the subject of research should focus on "the process of improving strategic scientific planning and an effective mechanism for the decision-making process" [Ibid.].

M.R. Kalinina (Northern (Arctic) Federal University (NArFU)) asserted that ASD could become the most important resource for the development of universities, because, thanks to joint scientific activities, one can obtain relevant and unique scientific knowledge and understand the processes taking place in the region: "that direction which we are now developing and supporting—science diplomacy and a constant dialogue of experts from the scientific community and authorities at all levels—this is what is needed in the Arctic today precisely in order for the results of scientific research to be the basis for informed decisions" [Days of the Arctic and Antarctic, 2020].

Critics of the instrumentalist approach, however, point out that its proponents significantly narrow the meaning of ASD, reducing it to cooperation between scientists in functional areas and a utilitarian attitude toward the results of this cooperation, applying them only to solve specific technical or administrative problems. According to these critics, the instrumentalists fail to notice that ASD has much more potential than just enhancing scientific cooperation to solve the practical problems of the region [Krynzhina, 2018; Romanova, 2018].

The following approaches to ASD interpret this phenomenon in a much broader context, as part of the state's foreign policy toolkit.

Science Diplomacy as a Tool of Soft Power

The consideration of science diplomacy as a tool of soft power is consistent with the theory of neoliberalism, which views non-military methods of foreign policy in modern conditions to be more effective than the use of hard power. The scientific attractiveness of the state (along with economic, cultural, educational, and other factors) is one of the most important characteristics of the soft power of ASD (Fig. 2). Countries that occupy leading positions in soft power ratings are very active in ASD. These states include Japan, Germany, the United Kingdom, France, and Switzerland—countries that are not Arctic states but have observer status in the AC. Thanks to their scientific work, they have gained great prestige in the field of Arctic research, and the "official" Arctic countries have to reckon with them in matters of regional policy. Understanding the capabilities of ASD for solving the most important foreign policy tasks is also reflected in Russian political discourse.

Russian researcher A.A. Todorov touched on the theme of ASD, studying the activities of foreign countries in the region. In the article "Interests of Switzerland in the Arctic," Todorov described the main research institutions of the confederation and made predictions about the prospects for cooperation between Switzerland and Russia in the Arctic. ASD, according to Todorov, could significantly contribute to strengthening the polar status of the state: "Switzerland has taken a course on the use of science as a tool of state diplomacy in the international Arctic areas. Thanks in large part to increased research in the Arctic and the establishment of the Swiss Polar Institute, the country became an observer on the Arctic Council in 2017" [2018, p. 6].

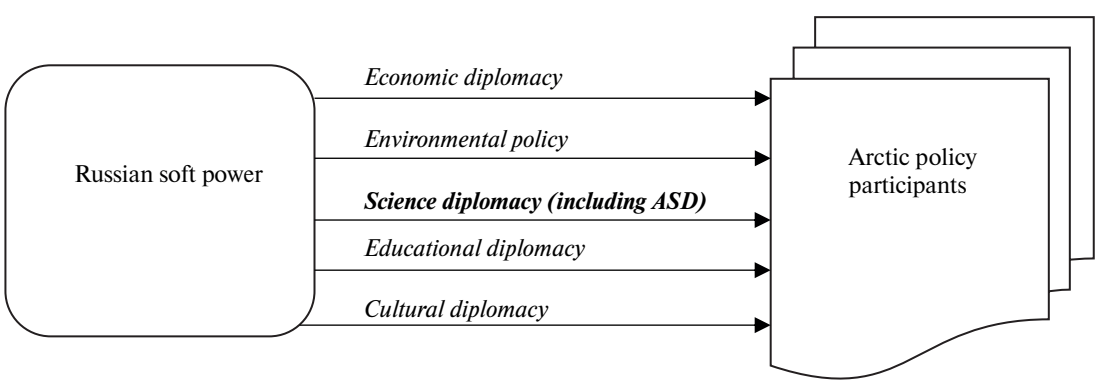

Fig. 2. Arctic Science Diplomacy in Russia's Soft Power Strategy

Source: Prepared by the authors.

In a later article, "British Interests in the Arctic," Todorov considered the science diplomacy concept as a tool to strengthen the influence of London in the region: "By developing bilateral cooperation with the Arctic countries, as well as other interested players, Britain... relies on science diplomacy" [2019, p. 93].

Many Russian scientists and politicians believe that Russia can effectively draw on the experience of other countries and use ASD as its own tool of soft power in the region. Proponents of this approach believe that science diplomacy can help strengthen Russia's positive image in the Arctic, change the foreign policy behaviour of international partners, and gain access to non-state resources that are usually inaccessible to state actors.

This direction follows the logic of J. Nye [2004] and considers soft power to be the ability to be attractive. Russian scientists are very active in all expert and working groups of the AC; to-

gether with foreign colleagues, they participate in research activities at polar stations in Chersky (Yakutia), Snezhinka (Yamal), and Barentsburg (Spitsbergen), as well as Russian sea and land expeditions.

The director of the Institute of Regional Consulting, Professor A.N. Pilyasov, sees ASD as the basis of Russia's soft power in the region. According to Pilyasov, ASD is an important tool with which Russia is able to maintain the status of the world's Arctic leader. Pilyasov argued that science diplomacy is the key to maintaining control over the Arctic territories for Russia: "Russia needs to be present at all international scientific forums, participate in international research projects, initiate them itself in order to acquire the new world knowledge about the Arctic territories, which accumulated over the past one and a half to two decades and is rapidly updated from year to year" [2012]. Pilyasov held that Russia should recognize the internationalization of research that has already taken place in the Arctic, and that the main task of Russian ASD should be the creation of its own research initiatives in priority areas to fill gaps in research.

In their joint study, N.Yu. Zamyatina and A.N. Pilyasov concluded that there is a need for the formation of Arctic regional science. According to them, the cementing factor for its creation would be "the highly specific environment of the Arctic itself, the study of which requires an interdisciplinary synthesis of sciences that study the properties of this space" [2017, p. 7]. The open project of the new Arctic science, the researchers noted, will contribute to the consolidation of intellectual efforts aimed at a better understanding of the region.

In many respects, the popularity of this approach to ASD is connected with the positions of the Russian political elite. The Kremlin is showing a steady interest in ASD as a geopolitical tool of soft influence on political processes in the Arctic region. Statements by Russian top officials, as well as some normative and doctrinal documents, indicate that the Russian political leadership is well aware of both the potential benefits and the threats that soft power can hide.

In 2012, V.V. Putin, in his article "Russia and the Changing World," defined soft power as "a set of tools and methods to achieve foreign policy goals without the use of weapons, but through information and other levers of influence" [2012]. He stressed that such tools can often be used to manipulate public consciousness and interfere in the internal affairs of sovereign states. Following Putin's logic, it can be assumed that ASD could be a tool for broadcasting soft power in the region and used by the subjects of international relations to strengthen their polar status and protect national interests.

Many Russian soft power initiatives (including ASD) often pursue pragmatic goals and do not take account of the interests of international partners. In this regard, Russia's science diplomacy may be perceived by other regional players as a continuation of the Kremlin's "expansionist" policy in the Arctic, but by other (non-military) methods.

Science Diplomacy as a Kind of New (Public) Diplomacy

This approach considers science diplomacy as a form of new diplomacy, which has become a general concept that describes a number of informal and formal research, academic, and technical exchanges within the general sphere of international relations. Science diplomacy, along with digital, economic, sports, non-state, and paradiplomacy, is a sub-category of "new" diplomacy, as opposed to classical state-oriented diplomacy. As part of this approach, ASD uses not only state, but also non-state actors and institutions to communicate with foreign partners. Depending on the nature of interstate relations, ASD may target either governmental or non-governmental partners, or both (Fig. 3).

ASD is not only a tool for improving the image of Russia in the international arena and turning it into an attractive scientific partner, but also a mechanism for participating in long-term and meaningful cooperation with the academic communities of foreign countries in or-

der to solve the most important practical and theoretical problems related to research in the Far North. In fact, this approach does not negate the previous two; rather, it tries to combine and subordinate them to a more general strategic goal—to use ASD to establish good relations with all circumpolar players. Prior to the start of the special military operation in Ukraine, the supporters of this approach believed that the use of ASD was especially relevant in the face of deteriorating relations between Russia and the West. Cold War science left a legacy of examples of the successful use of science diplomacy to defuse international tensions.

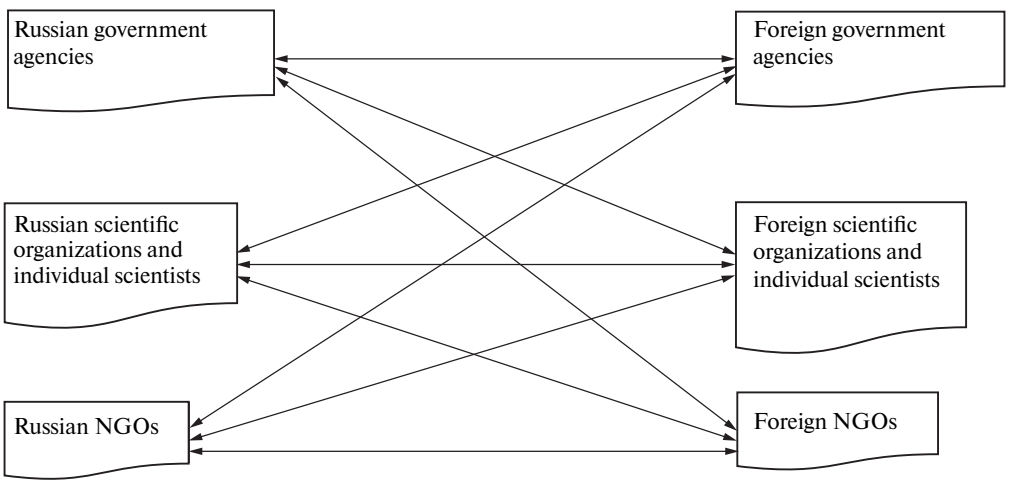

Fig. 3. The Place of ASD in Russian Public Diplomacy

Source: Prepared by the authors.

At the height of the Cold War, the USSR and the United States entered into several agreements on scientific cooperation, one of which was devoted to bilateral cooperation in the field of ecology and led to the creation of the Commission on Environmental Protection, which included the best experts from these two countries [Robinson, 1988]. At the 1986 summit between U.S. president R. Reagan and the general-secretary of the Communist Party of the Soviet Union, M.S. Gorbachev, plans to prepare a joint report on climate change were announced. The report was published in 1990 as a book called *Future Prospects for Climate* [MacCracken et al., 1990]. Long before the IPCC had reached similar conclusions, the report made predictions about the main parameters of climate change, including in the Arctic region.

Examples like these from the Cold War are encouraging even today. It is likely that after the end of the special military operation in Ukraine, science diplomacy will become one of the priority mechanisms for building trusting relations between countries. Apparently, the Kremlin recognizes the important role of science diplomacy in the entire system of Russian public diplomacy, which is aimed at influencing not only the governments of other countries, but also their publics. Thus, the 2016 Presidential Decree "On the Strategy for the Scientific and Technological Development of the Russian Federation" emphasized that science diplomacy is a kind of public diplomacy. In accordance with this document, science diplomacy is one of the mechanisms to protect the identity of the Russian scientific sphere and state interests in the context of the internationalization of science and increase the effectiveness of Russian science through mutually beneficial international cooperation. In this case, one of the main functions of ASD is the formation and promotion of the current scientific agenda of the state as a member of international organizations, increasing the level of Russia's participation in international

systems of scientific and technical expertise and forecasting interaction in the region [President of Russia, 2016].

Associate Professor of the Higher School of Economics O. A. Krasnyak observed that effective science diplomacy has real potential for reducing tensions between nations, bringing the world closer to solving global problems and finding ways to improve people's lives. She noted that "Russia's compliance with international treaties, for example, treaties on the Arctic ... as well as participation in international scientific projects, such as the International Space Station, allow Russia to maintain its position as a reliable partner for other countries" [2018, p. 75].

According to an international team of scientists, one of whom is MGIMO professor A.N. Vylegzhanin, The Agreement on Enhancing International Scientific Cooperation in the Arctic (2017) represents an important stage in the development of regional scientific and diplomatic practices. It confirmed the global importance of ASD, which allows for productive interaction, while other diplomatic channels between states do not work properly: "In the Arctic, as elsewhere, science diplomacy helps to combine national and common interests for the benefit of all people on Earth with hope and inspiration for generations" [Berkman et al., 2017]. A number of Russian and American scientists have proposed specific measures to implement this agreement [Anisimov et al., 2020].

Within the framework of this approach, Russian scientists believe that the removal of obstacles to scientific cooperation will help to defuse international tension. While contacts between scientists cannot resolve specific disputes between Russia and the West, they can still help create many platforms for dialogue at the horizontal level. Working together to address issues such as biodiversity conservation, ensuring maritime security in the Arctic, and increasing resilience to climate change could eventually become the basis for other ways to resolve interstate conflicts.

In principle, this approach to ASD does not exclude the previous two. Rather, it includes them in its toolkit, while subordinating them to a more general strategic goal—to establish working relationships with other participants, both state and non-state, in Arctic policy. A comparative analysis of the characteristics of these three approaches is given in Table 1.

Table 1. Comparative Analysis of Three Theoretical Approaches to ASD

ASD Specifications	Technical/Instrument- list Approach	ASD as Soft Power	ASD as a New (Public) Diplomacy
Strategic Goal of ASD	Expansion of international scientific cooperation in the Arctic	Improving the image of Russia, turning it into a more attractive international partner in the Arctic	Includes the previous two goals, plus improving relations with other participants in Arctic policy (state and non-state)
ASD Members	State and non-state actors with a predominance of state players	State actors	Equal participation of state and non-state actors
ASD Results	Sustainable long-term academic partnerships, joint research projects	A more attractive international image of Russia in the region	Two previous outcomes, plus more friendly relations between Russia and the Arctic, including both state and non-state actors; sees the Arctic as a region of peace and stability
ASD Research Agenda	Orientation to natural science issues	Focus on serving the foreign policy goals of the Russian Federation in the region	Equal representation of natural science and social science topics

Source: Prepared by the authors.

Tools to Implement Russian ASD

This study identifies four main tools for the implementation of ASD in Russia: scientific infrastructure, the availability of international dialogue platforms, membership in international educational and intergovernmental organizations, and specific areas of Arctic scientific cooperation.

The **objects of scientific infrastructure** in which foreign scientists can engage in joint scientific activities include research polar stations, centres, laboratories, research vessels (RVs), icebreakers, and universities engaged in the study of the Far North.

The largest research stations in Russia in the Arctic are the Cape Baranov ice base on Bolshevik Island, the hydrometeorological base in Tiksi, the North-Eastern Scientific Station of the Russian Academy of Sciences in the village of Chersky, and the observatory of the Polar Geophysical Institute in Barentsburg. Starting from 2023, the all-year-round Arctic station of the new generation "Snezhinka" (Snowflake) will start operating in Yamal. According to one of the authors of this project, Snezhinka should become a kind of magnet for scientists from different countries [Sotskova, Kudryavtseva, 2020].

The INTERACT International Terrestrial Research and Monitoring Network allows scientists from all over the world to carry out fieldwork and research in the fields of ecology, meteorology, biology, and cryolithology. The key Russian components of the international network include the following facilities: Aktru Research Station, Bely Island Research Station, Chokurdakh International Tundra Research Station, Elgeeyi Research Station, Igarsk Geocryological Laboratory, Kaibasovo Research Station, and the Khanymei Research Station.

Russian icebreakers play an important role in organizing scientific research in the Arctic. They provide scientists with access to the Arctic Ocean, and also allow them to deliver materials and equipment to research stations located on the polar islands remote from the continent. The Russian Federation annually conducts about 50 marine research expeditions to the Arctic. The domestic icebreaking fleet consists of 40 vessels, five of which are nuclear-powered. In the near future, it is planned to put into operation several more modern, nuclear-powered icebreakers.

Russia has about a dozen RVs capable of conducting research at polar latitudes. Thus, since 2012, with the support of the Russian Geographical Society, NArFU, and the Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet), an innovative educational project, the Arctic Floating University (AFU), has been implemented. Every year the expedition takes place on the research ice vessel *Professor Molchanov*. Members of the expedition have included politicians, representatives of business, students, graduate students, and researchers of Russian and foreign scientific and educational institutions. During the sea expedition, scientific and educational programmes dedicated to Arctic science are organized for students. The development of international scientific and educational cooperation, including with the countries of the Arctic Council, as part of expeditionary activities in the Arctic, is one of the priorities of AFU [NARFU, 2020].

Currently, more than 500 organizations located in 50 regions carry out scientific research on the Arctic in the Russian Federation. These are higher educational institutions, institutes and departments of the Russian Academy of Sciences, research institutes that are subordinate organizations of federal authorities, and corporate research centres. The international network-type University of the Arctic includes 55 Russian universities, which is the largest indicator among the states participating in this project.

To facilitate research in remote areas of the Russian Arctic by foreign scientists, the Chukotka Science Support Group (CSSG) was established. This organization has been providing logistical and other support services for polar scientists from all over the world since 2001, in-

cluding the issuing of local research permits, translation services, accommodation and meals, collecting and sending samples, and assistance in obtaining a Russian visa.

At the beginning of the 21st century, a number of **international dialogue platforms** were opened in the Russian Federation, allowing domestic scientists, politicians, and business representatives to exchange their experience and opinions on pressing issues in the Arctic. Starting in 2010, with the support of the Russian Geographical Society, an international forum, The Arctic: the Territory of Dialogue, has been held. Since 2017, this forum has been supported by the State Commission for the Development of the Arctic. The forum has become the largest international platform in Russia for discussing the prospects for sustainable development of the Arctic, developing multi-level, multilateral mechanisms for the joint disclosure and effective development of the powerful resource potential of the region. In 2019, the event was attended by over 3,600 representatives from 52 states, and the forum was covered by 845 media representatives [Roscongress, 2019].

Since 2013, with the support of the regional government of the Republic of Sakha (Yakutia), the International Organization of the Northern Regions (the Northern Forum), established in Anchorage in1991, has again intensified its work. At present, with the support of the government of Yakutia, all the debts of the Northern Forum have been paid off, and the main secretariat of the forum has been moved to Yakutsk. The forum is a platform for dialogue between northern regions. Using the status of an international organization, representatives of the political elite, transnational companies, scientists, and heads of educational institutions received direct access to the international platform and the opportunity to share the results of scientific research, to launch initiatives to improve the socio-economic development of the Arctic, and to call for solving specific problems [Northern Forum, 2022].

The leadership of the Northern Forum does not forget about the direct role of ASD in maintaining international stability in the region and organizes an event on an annual basis—the Northern Forum for Sustainable Development. Thus, D.D. Maksimova, deputy executive director of the Northern Forum for Sustainable Development and senior researcher at the Institute for the USA and Canada of the Russian Academy of Sciences, confirmed that ASD is one of the missions of the forum, noting that science is a key element in building relations, for example, between Russia and Canada [NEFU, 2020].

Other significant dialogue platforms of the Russian Federation include: Polar Readings, an international scientific and practical conference organized with the support of the Arctic and Antarctic Research Institute; Arctic: Present and Future; and Arctic: History and Modernity, an international scientific conference (all are held in St Petersburg on an annual basis). Arctic scientific conferences and forums, organized with the support of the federal and regional authorities of the Russian Federation, are an effective platform to demonstrate the country's huge contribution to the development of the polar region. In addition, to promote its scientific agenda, Moscow effectively uses international platforms provided by annual conferences such as Arctic Circle (Reykjavik, Iceland), Arctic Frontiers (Tromsø, Norway), and Arctic Science Summit Week (which moves between different cities and countries).

Membership in international educational and intergovernmental organizations can also be an effective tool for the promotion of ASD. The Russian Federation is a member of many organizations aimed at developing regional and international scientific cooperation in the Arctic in various fields of research. These organizations make a significant contribution to the promotion of science among the general public of foreign countries. An extremely important direction in the development of the Russian Academy of Sciences is its activities within the ASD framework. In the foundations of the state policy of the Russian Federation in the Arctic, it is emphasized that the Arctic Council is assigned the role of a key institution coordinating international activities in the region.

In conditions of tension in the Arctic, work in the Arctic Council on the issues of sustainable development of the region as well as environmental and scientific tasks is the most effective way to find solutions through common efforts based on mutual understanding and mutual respect. The activation of the potential of the forum in order to promote the Russian agenda for the period of Russia's tenure as chair is evidenced by paragraph 16 of the Development Strategy of the Russian Arctic, which notes "the active participation of Russian state and public organizations in the work of the AC and other international forums dedicated to the Arctic issues" [President of Russia, 2020a]. A significant part of the events held within the framework of Russian tenure as chair of the AC in 2021–23 is devoted specifically to scientific issues [Government of the Russian Federation, 2021].

Since 1990, Russian experts have been actively involved in the working groups of the IASC, which provides scientific advice to the AC. The fact that the Russian Academy of Sciences is historically at the forefront is evidenced by the emergence in 1993 of the idea of creating the International Scientific Initiative in the Russian Arctic (ISIRA) within the framework of the IASC. The emergence of ISIRA was a joint Russian and international initiative to promote scientific cooperation and sustainable development in the Russian Arctic. The collapse of the Soviet Union and the further reduction of real cooperation between western and Russian scientists, problems with research funding, and language barriers are only some of the problems that foreign scientists faced as they explored the Russian Arctic in the early 1990s. During the existence of this initiative, a number of major projects in the field of social and natural sciences have been implemented. At present, the activities of ISIRA greatly facilitate the solution of the problems of scientific research in the Russian Arctic for foreign scientists [IASC, n.d.].

In addition to the above bodies, scientists and experts of the Russian Federation are actively working within the framework of the following programmes and organizations: IPCC, IASSA, Northern Dimension, Association of Young Polar Scientists (APECS), and the WMO. The extensive representation of domestic scientists in reputable international organizations is an important indicator of Russian ASD.

The list of **areas of international scientific cooperation of the Russian Federation** is long. In "Fundamentals of the State Policy of the Russian Federation in the Arctic for the Period up to 2035," the priority areas of research in the Arctic are laid out: the implementation of complex expeditionary research, development of technologies for saving health and increasing the life expectancy of the population, environmental protection, study of dangerous natural and artificial phenomena, improvement of the environmental monitoring system, active involvement of the Arctic and non-regional states in mutually beneficial economic cooperation in the Arctic Zone of the Russian Federation, development of the research fleet, and assistance to small-numbered indigenous peoples in the implementation of cross-border cooperation, cultural contacts, and contacts in the field of economic activity with kindred peoples and ethnic groups living outside the Russian Federation [President of the RF, 2020b]. A wide range of areas of scientific research in Russia testifies to Moscow's intentions to maintain its leading position in the field of ASD. The Russian Federation also makes a significant contribution to the financial support of international research projects in the AC working groups. As D.N. Voronchikhina, citing the official data of the AC website, noted, "Russia and Canada occupy the first place in financing the Council's projects, Norway and Finland are slightly inferior to them" [2019]. It is very likely that during its tenure as chair of the Arctic Council in 2021–23 Russia will become the sole leader in the financing of the activities of the AC working groups, which, probably, could become one of the measurable indicators of Moscow's contribution to the development of ASD.

Conclusion

Several conclusions emerge from the above analysis.

First, among Russian politicians and scientists, there is still no common understanding of the ASD concept, although it has firmly entered the Russian political and scientific lexicon and is actively used by officials responsible for the development and implementation of a scientific strategy for the Arctic.

Second, part of the Russian academic community and political elite perceives ASD as an effective tool of Russia's soft power in the Arctic. Considering the fact that Russia seeks to avoid aggravating relations with western countries in the Arctic by turning it into a region of peace and cooperation, it can be assumed that the role of ASD in the overall system of Russia's soft power strategy after the end of the special operation in Ukraine will only increase.

Third, Russian discourse is dominated by the understanding of ASD as a mechanism for building strong international partnerships on a non-ideological basis, establishing scientific relations with foreign colleagues to solve common problems, and gaining access to the research infrastructure of foreign partners as well as additional sources of funding.

Fourth, in Russian political and academic discourses, the interpretation of ASD as a form of new diplomacy is gradually gaining momentum. This interpretation does not have a pronounced state-oriented character, but at the same time, it does not refuse to coordinate its activities with official diplomacy. Proponents of this approach to ASD believe that amid the current tension between the West and Russia, less formal non-state diplomacy can achieve more progress than official science diplomacy. This approach to the study of ASD, to some extent, tries to incorporate the two previous approaches (improving Russia's image in the international arena along with the stimulation of ISC by the state) into a single strategy that uses ASD to improve Moscow's relations with other Arctic players.

Fifth, before the start of the special military operation, the majority of participants in ASD shared the idea that ISC, in order to ensure the sustainable development of the Arctic, could become an effective mechanism for solving the most pressing problems of the region, as well as for improving the current relations of western countries with Russia.

Sixth, as a result of increased research funding from the state in the Russian Arctic, research infrastructure has been significantly improved. In addition, Russia has largely managed to form the necessary platforms for the implementation of both the strategic and tactical goals of its ASD. These include national platforms and the active use of a number of international platforms and professional organizations.

At the same time, it would be premature to assume that Russian ASD is absolutely effective or that it has achieved its final form. Currently, Russian science diplomacy in the Far North is under active development. In the near future, it remains to be seen what form the domestic discourse of ASD will take, what the Russian strategy for ASD will be, and whether Moscow will be able to provide synergy between ASD and other components of its polar strategy.

References

Anisimov O., Orttung R., Nyland K., Sergunin A. (2020) Cold War Legacy of Science Cooperation Offers Hope Today. *Russian Analytical Digest*, vol. 253, pp. 9–11. Available at: https://doi.org/10.3929/ethz-b-000420927.

Antyushina N.M. (2013) Mnogolikaja Arktika [Agreement on Scientific Cooperation in the Arctic Came into Force: The Many Faces of the Arctic]. *Sovremennaja Evropa*, no 2 (54), pp. 34–46. (in Russian)

Arctic Council (2017) Agreement on Enhancing International Arctic Scientific Cooperation. Fairbanks, 11 May. Available at: https://oaarchive.arctic-council.org/handle/11374/1916 (accessed 10 August 2021).

Berkman P.A., Kullerud L., Pope A., Vylegzhanin A.N., Young O. (2017) The Arctic Science Agreement Propels Science Diplomacy. *Science*, vol. 358, no 6363, pp. 596–98. Available at: https://doi.org/10.1126/science.aaq0890.

Days of the Arctic and Antarctic (2020) Mezhdunarodnyj arkticheskij forum 25–27 nojabrja, 3 dekabrja 2020 goda [International Arctic Forum November 25–27, 3 December 2020]. Available at: http://arctic-days.ru/ (accessed 15 October 2021). (in Russian)

Government of the Russian Federation (RF) (2021) Ediny plan meropriyatiy po realizatsii Osnov gosudarstvennoi politiki Rossiyskoi Federatsii v Arktike na period do 2035 goda i Strategii razvitiya Arkticheskoi zony Rossiyskoi Federatsii i obespecheniya natsional'noi bezopasnosti na period do 2035 goda. Utverzhden rasporyazheniem Pravitel'stva Rossiyskoi Federatsii ot 15 aprelya 2021 g. no. 996-r [Integrated Plan of Activities on the Implementation of the Fundamentals of State Policy of the Russian Federation in the Arctic for the Period up to 2035 and Strategy for the Development of the Arctic Zone of the Russian Federation and Ensuring National Security for the Period up to 2035. Approved by the Russian Government's Decree of 15 April 2021 no 996-r]. Available at: http://static.government.ru/media/files/p8DfCI0Pr1XZnAk08G7J3jUXUuDvswHr.pdf (accessed 20 April 2021). (in Russian)

Inter-Agency Standing Committee (IASC) (n.d.) International Science Initiative in the Russian Arctic (ISIRA). Available at: https://iasc.info/isira (accessed 25 October 2021).

Kharlampeva N.K. (ed.) (2017) Mezhdunarodnoe nauchnoe sotrudnichestvo v Arktike [*International Scientific Cooperation in the Arctic*]. St Petersburg: St Petersburg State University. (in Russian)

Krasnyak O. (2018) *National Styles in Science, Diplomacy, and Science Diplomacy*. Leiden/ Boston: Brill.

Krynzhina M.D. (2018) Nauchnaja diplomatija v interpretacijah rossijskih specialistov [Science Diplomacy in the Interpretations of Russian Specialists]. *International Trends*, vol. 16, no 4 (55), pp. 193–208. (in Russian)

MacCracken M.C., Hecht A.D., Budyko M.I., Izrael Y.A. (eds) (1990) *Prospects for Future Climate: A Special US/USSR Report on Climate and Climate Change*. Chelsea, Michigan: Lewis Publishers.

North-Eastern Federal University in Yakutsk (NEFU) (2020) SFUR: docent SVFU Dar'jana Maksimova rasskazala pro osobennosti rossijsko-kanadskih nauchnyh otnoshenij [SFSD: NEFU Associate Professor Daryana Maksimova Spoke About the Peculiarities of Russian-Canadian Scientific Relations]. Available at: https://www.s- vfu.ru/news/detail.php?ELEMENT_ID=143651 (accessed 10 November 2021) (in Russian).

Northern (Arctic) Federal University (NARFU) (2020) Jekspedicija "Arkticheskij plavuchij universitet—2020" [Expedition "Arctic Floating University—2020"]. Available at: https://narfu.ru/science/expeditions/floating_university/2020/ (accessed 15 October 2021) (in Russian).

Northern Forum (2022) Available at: https://www.northernforum.org/ru/ (accessed 7 November 2021). (in Russian)

Nye J. (2004). *Soft Power: The Means to Success in World Politics*. New York: Public Affairs.

Piljasov A.N. (2012) Nauchnye issledovanija i innovacii v arkticheskom regione [Scientific Research and Innovation in the Arctic Region]. Russian Council for International Affairs, 16 August. Available at: https://russiancouncil.ru/analytics-and-comments/analytics/nauchnye-issledovaniya-i-innovatsii-v-arkticheskom-regione/ (accessed 11 August 2021). (in Russian)

President of the Russian Federation (RF) (2016) Ukaz Prezidenta Rossijskoj Federacii ot 1 dekabrja 2016 g. no 642 "O strategii nauchno-tehnologicheskogo razvitija Rossijskoj Federacii" [Decree of the President of the Russian Federation No 642 dated 1 December 2016 "On the Strategy of Scientific and Technological Development of the Russian Federation"]. Available at: http://www.kremlin.ru/acts/bank/41449 (accessed 5 October 2021). (in Russian)

President of the Russian Federation (RF) (2020a) Ukaz Prezidenta RF ot 26 oktjabrja 2020 g. № 645 "O Strategii razvitija Arkticheskoj zony Rossijskoj Federacii i obespechenija nacional'noj bezopasnosti na period do 2035 goda" [Decree of the President of the Russian Federation no 645 dated 26 October 2020 "On the Strategy for the Development of the Arctic Zone of the Russian Federation and Ensuring National Security for the Period up to 2035"]. Available at: http://www.kremlin.ru/acts/bank/45972/page/1 (accessed 21 October 2021). (in Russian)

President of the Russian Federation (RF) (2020b) Ukaz Prezidenta RF ot 5 marta 2020 g. № 164 "Ob Osnovah gosudarstvennoj politiki Rossijskoj Federacii v Arktike na period do 2035 goda" [Decree of the President

of the Russian Federation of 5 March 2020 no 164 "On the Fundamentals of the State Policy of the Russian Federation in the Arctic for the Period up to 2035"]. Available at https://www.garant.ru/products/ipo/prime/doc/73606526/ (accessed 1 January 2022). (in Russian)

PRO-ARCTIC (2018) Soglashenie o nauchnom sotrudnichestve v Arktike vstupilo v silu. [Agreement on Scientific Cooperation in the Arctic Came Into Force]. Available at: https://pro- arctic.ru/24/05/2018/news/32176 (accessed 15 September 2021). (in Russian).

Putin V.V. (2012) Rossija i menjajushhijsja mir [Russia and the Changing World]. Moscow Daily News, 27 February. Available at: http://www.mn.ru/politics/78738 (accessed 17 November 2021) (in Russian).

Robinson N.A. (1988) The U.S.-U.S.S.R. Agreement to Protect the Environment: 15 Years of Cooperation. *Environmental Law*, vol. 18, no 403, pp. 403–47. Available at: https://www.jstor.org/stable/43265848 (accessed 29 August 2022).

Romanova M.D. (2018) Znachimost' nauchnoj diplomatii rastet [The Importance of Science Diplomacy is Growing]. *RFBR Journal*, no 1 (97), pp. 78–83. (in Russian)

Roskongress (2019) V Sankt-Peterburge podvedeny itogi Mezhdunarodnogo arkticheskogo forum—2019 [The Results of the International Arctic Forum 2019 Were Summed up in St Petersburg]. 4 October. Available at: https://roscongress.org/news/results-of-the-arctic- territory-of-dialogue-5th-international-arctic-forum-summed-up-in-st-petersburg/ (accessed 27 October 2021). (in Russian)

Rossijskaja Arktika, no 1, pp. 4–7. (in Russian)

Smith F. (2014) Advancing Science Diplomacy: Indonesia and the US Naval Medical Research Unit. *Social Studies of Science*, vol. 44, no 6, pp. 825–47. Available at: https://www.jstor.org/stable/43284255 (accessed 29 August 2022).

Sotskova M., Kudryavtseva E. (2020) Led tronulsja [The Ice Has Broken]. Kommersant, 27 January. Available at: https://www.kommersant.ru/doc/4225728 (accessed 2 November 21). (in Russian)

The Royal Society (2010) New Frontiers in Science Diplomacy: Navigating the Changing Balance of Power. Available at: https://royalsociety.org/~/media/royal_society_content/policy/publications/2010/4294969468.pdf (accessed 11 January 2022).

Todorov A. A. (2018) Interesy Shvejcarii v Arktike [Switzerland's Interests in the Arctic].

Todorov A.A., Lyzhin D.N. (2019) Interesy Velikobritanii v Arktike [UK Interests in the Arctic]. *Arctic and North*, no 36, pp. 84–95. Available at: http://doi.org/10.17238/issn2221- 2698.2019.35.84. (in Russian)

Voronchihina D.N. (2019) Arkticheskij sovet kak mezhdunarodnyj forum sotrudnichestva gosudarstv: uchastie Rossii [The Arctic Council as an International Forum for Cooperation Between States: The Participation of Russia]. *Ars Administrandi (Iskusstvo upravlenija)*, vol. 11, no 2, pp. 306–29. (in Russian)

Zamyatina N.Ju., Pilyasov A.N. (2017) Novoe mezhdisciplinarnoe nauchnoe napravlenie: arkticheskaja regional'naja nauka [A New Interdisciplinary Scientific Direction: Arctic Regional Science]. *Region: Economics and Sociology*, no 3 (95), pp. 3–30. (in Russian)