Tourism and Sustainable Development in the Russian Arctic

A Vorotnikov\textsuperscript{1,2}, D Maximova\textsuperscript{3,4} and B Tarasov\textsuperscript{5}

\textsuperscript{1} Assistant Professor, School of Public Policy, Russian Presidential Academy of National Economy and Public Administration, Moscow, Russia
\textsuperscript{2} Expert, Arctic Development Project Office, Moscow, Russia
\textsuperscript{3} Researcher, Department of Canada, Institute for US and Canadian Studies, Russian Academy of Sciences, Moscow, Russia
\textsuperscript{4} Assistant Professor, Department of International Studies, Institute of Modern Languages and International Studies, North-Eastern Federal University, Yakutsk, Russia
\textsuperscript{5} Director, Arctic Development Project Office, Moscow, Russia

E-mail: vdep14@yandex.ru, daryana.maximova@gmail.com, tarasov@porarctic.ru

Abstract. The promotion of ecologically safe types of tourist activity in the Russian Arctic is a promising area. However, for this sector to develop, it will be necessary to use international experience and create systems of state support on the principles of public-private partnership. This paper aimed to present the need for public-private partnership as an essential tool for developing the tourism and recreational sector for sustainable development in the Russian Arctic. Only through the joint efforts of the state and business will it be possible to preserve wealth and ensure sustainable development of the region. Tourism could allow both full uses of such a powerful economic resource as the environment of the Arctic and preserve its fragile nature. At present, tourism in the Russian Arctic is developing poorly. But climate change leads to the development of Arctic tourism, which must be sustainable in order not to harm the fragile nature of this harsh region.

1. Introduction
The 1992 Summit in Rio de Janeiro, following the Brundtland Commission, recognized the so-called sustainable development “that meets the needs of the present, without compromising the ability of future generations to meet their own needs” \cite{1}. Since then, the concept of sustainable development has acquired global significance. It is a fundamental problem of our time. This concept is indeed applicable to such an essential region as the Arctic. Since its foundation in 1996, the Arctic Council has aimed to integrate sustainable development to the main areas of its activities. The forum unites the efforts of the eight member states to solve the challenges of the Arctic region to improve the economic, social and environmental well-being of the ecosystems and peoples living in the area. Therefore, the sustainable development of the Arctic is a global objective and requires the establishment of international cooperation.

Finland’s Chairmanship platform in the Arctic Council states that “the human dimension of the Arctic Council’s work covers such areas as health, water, energy, infrastructure, and Indigenous cultures and languages, and thus contributes to the implementation of the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda. Finland proposes to explore how the SDGs can be
further used in strengthening the economic and social progress and cultural self-expression of Arctic communities” (High North News, 2017). Meanwhile, the current global warming has economic consequences which could be beneficial for the Arctic states. A recent launch of industrial development in the Arctic shows the growing interest toward transport and energy opportunities in the region. Economic indicators are increasing; however, the growth of industry could lead to a high degree of negative impacts on the environment and residents [2]. Climate change leads to the development of Arctic tourism, which must be sustainable in order not to harm the fragile nature of this harsh region.

Thanks to the Internet and the media, knowledge of many remote corners of our planet (such as the Arctic) is becoming more accessible. For supporting the Arctic region with an optional tool of developing tourist destinations, the principles of sustainable tourism were developed by the Arctic Council and promoted to the companies and authorities. Sustainable tourism has been defined, for example, by the World Tourism Organization in the Agenda 21 for the Travel and Tourism Industry as tourism that “meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining the cultural integrity, essential ecological processes, and biological diversity and life support systems. Sustainable tourism products are products, which are operated in harmony with the local environment, community, and cultures so that these become the beneficiaries, not the victims of tourism development” [3]. Moreover, tourism is increasingly recognized as significant for the future economic development of Arctic communities.

The Arctic region is becoming an ever more popular tourist destination, despite the limitations caused by the climate and low levels of infrastructure development. In recent years, southern destinations have lost some of their attractiveness to tourists, due in part to the growing terrorist threat in the Middle East and South East Asia, as well as social and inter-ethnic or inter-religious tensions in Europe, Asia, Africa, and Latin America. Demand for cold territories in the world in recent years has been steadily growing (Table 1) and has a positive outlook in connection with the forecasts for the growth of the "Arctic" economy.

Table 1. Visitors in the Arctic regions of the USA and Canada, 2010–2016

| Total visitors, thousand people | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2016/2010 |
|---------------------------------|------|------|------|------|------|------|------|-----------|
| Alaska, USA                     | -    | 1,820 | 1,960 | 1,934 | 2,067 | 5    |      | 113,7     |
| Canada (the Arctic territories) | 56,4 | 55,8 | 57,083 | 59,1 | 55,5 | 58,7 | 58,7 | 104       |
| Foreign visitors                 |      |      |       |      |      |      |      |           |

For example, in the Northern Territories of Canada in the tourist seasons 2011/2012 and 2015/2016, the number of visits related to the observation of the Northern Lights increased in 3 times [4].

If to look at the economy of the tourism industry using the example of Alaska, we can say that tourism today is an essential sector of the regional economy of the Arctic countries. For example, for the tourist period of 2014/2015, Alaska was visited by 2,067 tourists, sea cruises provided 48% of the total tourist flow, and 90% of visits are in the summer. The average check (excluding transportation costs) per tourist was 938,600 US dollars, and the total tourist expenditure amounted 1,980 million US Dollars. The revenue from the tourism industry to the state budget (excluding related activities) in this period amounted to 104,8 million US dollars to the regional budget (including: railroad transport Alaska – 27,6 million, sea transport – 18,6 million, licenses for fish and caviar – 18,1 million), to municipal budgets – 82,9 million US dollars (including sales tax of 33,4 million, tax on accommodation – 32,6 million, ship fees – 16.9 million). The tourism industry employed 39,7 thousand people (9% of the total number) [5].
The Arctic zone of the Russian Federation has considerable potential for recreational tourism which is currently underutilized. While other circumpolar countries have effectively used the tourism and recreational potential of their northern regions to attract tens of thousands of tourists from all over the world annually, there is currently no developed tourism or recreation complex in the Russian Arctic. Even though Russia controls more than half of the Arctic region, the tourism industry in the Russian polar territories is still in its infancy. The number of tourists coming to the Russian Arctic is much smaller. For example, in 2015, the "Russian Arctic" national park (including Franz Josef Land) was visited by 1,225 people from 30 countries, which was the highest number during the past five years. By contrast, Spitsbergen is rightly considered one of the most famous sights in the Arctic –in the same year around 60,000 people visited it [6]. There is a whole range of reasons for Russia’s backwardness in the area of Arctic tourism development. These include weak transport links, a lack of trained staff, an absence of recognized brands, a lack of existing tourism infrastructure, a lack of ‘green’ (i.e., renewable) energy sources to power tourist infrastructure, and a lack of investment in the sector. Also, as a result, the contribution of tourism to the GDP of the region fluctuates around 1%, while it is about 10% in many regions of the world.

However, it would be untrue to say that Russia has no Arctic tourism. Some exciting tour products have been developed in different regions of the country. These include ethnographic, cultural and historical events, including "A Great Weekend in the Arctic" in the Nenets Autonomous Region; the "Golden Tambourine" and "Spirit of Fire" festivals, the Chaika Theater Festival, Reindeer Herder's Day, Day of the Fisherman, Crow Day, and the Bear festival in the Yamal-Nenets autonomous region; a motor rally from Magadan to Susuman along the Kolyma road, dog sled rides and visiting reindeer herders’ camps in the Shmidtovsky and Iultinsky districts of Chukotka Autonomous District; the Yakut national holiday – Summer solstice "Ysyakh", "Diamond week", culinary tours, and the "Winter begins in Yakutia" festival in the Republic of Sakha (Yakutia). The last one is one of the most promising regions in Russia for ecotourism development. There are a vast number of protected areas in Yakutia which deserve special attention: the "Ust-Lensky" state nature reserve in Bulunsky District, the Momsky Nature Park in the Momsky District, Kisilyakh in the Verkhoyansk District.

The Government’s “Plan for measures for the implementation of the Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period until 2020” (2013) identifies the development of Arctic tourism and the promotion of ecologically safe types of tourist activity in the Arctic as a promising area. However, for this sector to develop, it will be necessary to improve the existing legal support for tourism, create systems of state support on the principles of public-private partnership, form tourist clusters, and promote Arctic tourism in national and international markets. The development of tourism in the Arctic represents a new topic in state strategic planning, research and development, and commercial activities in the Russian Federation [7].

The tourist industry can create new jobs, promote the development of business, and improve the welfare of local populations. Hotels, transportation, communications, trade, souvenir production, and restaurant services could all be developed. One of the main goals of the Russian Federal Target Program for the development of domestic and incoming tourism is that tourism should contribute 5% of Russia’s total gross domestic product (GDP). Besides, Arctic tourism can undoubtedly contribute to the country's GDP.

2. Protected areas
The vulnerability of Arctic ecosystems dictates an emphasis on the development of ecotourism, which implies a minimal human impact on the environment and contributes to the conservation of natural habitats and ecosystems in the region. The critical areas for ecotourism should be specially protected areas such as nature reserves and national parks, which are suitable for the creation of ecological trails, tourist centers, and educational activities. According to Russia’s Federal Law "On Specially Protected Natural Territories" (1995), nature reserves and national parks are state nature protection, scientific research, and environmental education institutions with their special protection services. They ensure
the conservation of natural ecosystems and landscapes of tundra and Arctic deserts, the marine ecosystems of the Arctic seas, and Arctic flora and fauna. These include rare and endangered species of flora and fauna that are listed in the red book of endangered species of the Russian Federation, such as polar bears, walruses, narwhals, Green-land whales, Novaya Zemlya reindeer, Putoran snow sheep, Atlantic brant geese, red-breasted geese, small swans, and white gulls.

According to the Department of Public Policy and Regulation in the Sphere of Environmental Protection, more than 13,000 protected areas of national, regional and local importance exist in Russia. Their total area is over 207.5 million hectares (including sea area), which is 12.1% of the territory of Russia. There are 215 federal protected areas [8].

Twenty-eight specially protected areas of national importance are located within the Russian part of the Arctic region, with a total area of 22.5 million hectares, including 6.5 million hectares of the sea [8]. These include unique areas of many different types, including several UNESCO World Heritage sights: the Lena Pillars in the Sakha Republic (Yakutia); the Solovetsky Islands cultural and historical complex; Wrangel Island in Chukotka Autonomous District; the Putorana Plateau in Krasnoyarsk Krai; Kamchatka’s volcanoes, and many others.

A large number of protected areas, as well as their diversity, offer opportunities for the development of outdoor activities as well as scientific, educational and ethnographic tourism, which deserves special attention. Ethnographic tourism involves indigenous peoples and has the potential to help preserve their cultural heritage and improve their socio-economic status. As shown by the experience of other countries (in Canada), a promising trend in the development of ethnographic tourism is the creation of ethnic settlements and the involvement of tourists in traditional activities. Tourists can, for example, stay in families and prepare national dishes, go dog sledding, and get involved in aboriginal crafts. Such events are in high demand among travelers, so it is essential to continue and expand such practices in the Russian Arctic.

However, the current management system for Russia's protected areas is very inefficient. One of the most visited territories, the Valley of Geysers in Kamchatka, receives only three thousand visitors per year [9]. Instead, the Valley of Geysers in Yellowstone National Park in the United States is visited by two million tourists annually [10].

Here are just a few of the problems that hamper the effective operation of Russia’s protected areas:
- A lack of adequate state management of the protected areas at the federal and regional levels, and lack of coordination of activities between these levels;
- Insufficient financing for protection events and development of the protected areas;
- A failure to attract other sources of financing (including private investment) to protected areas;
- An imperfect regulatory and legal framework for managing protected areas;
- An absence of medium- and long-term strategic development plans for protected areas;
- Unresolved issues around land management within the boundaries of protected areas;
- Low levels of environmental awareness in Russian society.

The state environmental monitoring was not able to effectively address the problem of information support of environmental safety. The evaluation and prediction of the ecological state were not given systemic nature [11]. However, the concept of "ecological tourism" is poorly understood, and there are different understandings of what it entails and how it should be organized.

3. Tools for developing the tourism and recreational sectors of the Russian Arctic

One of the most critical problems facing the development of tourism is that protected areas are primarily created and managed by environmental specialists, rather than people with experience in managing the development of tourism, who might be able to bring better results through developing them for recreational use. In this way, protected areas could become an economic resource, rather than merely an environmental one. However, it is also essential to take into account the specifics of Arctic tourism – including climatic conditions (the temperature in the Arctic can drop to -70 degrees in the Pole of Cold in Yakutia).
For example, it would be practical to use concession agreements within public-private partnerships. In 2017, Prime Minister Dmitri Medvedev gave instructions to the Ministry of Natural Resources of the Russian Federation to focus on using the economic component of activities in the protected areas when forming programs for their development.

The primary model for implementing public-private partnership projects in the field of tourism should be a concession agreement. One party undertakes, at its own expense, to create and (or) reconstruct the property defined by this agreement. The ownership rights to the property belong or will belong to the other party to carry out activities using the object of the concession agreement. As a result, one party undertakes to grant to the other party, for the term established by the agreement, the rights to own and use the object of the concession agreement for the implementation of the activity.

According to the Russian law "On concession agreements" (2005), property used for arranging recreation and tourism, other sites of socio-cultural importance, as well as facilities for the production, transmission, and distribution of electricity can be transferred or built into a concession. It provides opportunities to develop tourism infrastructure with electricity as in Canada. It will be necessary to implement distributed energy projects (often called Micro Grids) to provide tourist infrastructure with electricity which will make it possible to use protected areas as a tourist object and reduce environmental risk in this unique ecosystem. In the economic sphere, the most needed are strengthening of coherency and reliability of the transportation system, energy supplies to distant consumers [12].

Micro Grids have a wide range of potential applications in remote regions of Russia. They can draw their power from renewable energy sources (wind / solar / hydro / heat pumps); energy stores; fossil fuels (diesel engines / petrol engines / gas turbine units); inter permafrost gas; biofuel installations (working both in cooperation with the National Grid of Russia, and separately, providing electricity, heat and cooling). The structure of such applications depends to a great extent on a large number of random factors and needs an intelligent approach to cope with them [13]. So Micro Grids would be useful in the Arctic, Siberia and the Far East in rural settlements located far from extensive network facilities, sanatoriums and recreation centers, protected areas, and military and other remote facilities.

According to the Russian Energy Strategy for the period until 2030 (2009), the country should create a highly integrated new generation intelligent electric system-forming and distribution networks in the National Grid of Russia. Such projects will support the creation and development of tourist infrastructure and build housing for employees, hotels, training centers, congress centers, and related social infrastructure which will implement such projects economically sound and profitable.

4. Conclusion
The development of ecological tourism would allow full use of the tourist and recreational potential of protected areas, make their development sustainable, and at the same time will have a positive impact on the economy of the Arctic region. It will increase revenues in the GDP and create new jobs. Also, to develop the tourism infrastructure in protected areas, it will be necessary to establish legislative provisions and norms for attracting investment through public-private partnership models. Public authorities will also need to consider simplifying the processing of documents to support sustainable tourism development in such a fragile region. Public-private partnerships can provide an essential tool for the development of the recreational and tourism sectors of the Russian Arctic zone. The implementation of public-private partnership models in the field of tourism, including the use of concession agreements, will make it possible to turn the entire Arctic zone of the Russian Federation into a fully developing tourist cluster. In turn, tourism in the North and the Arctic can become a driver for business development, and the Arctic tourist cluster could become a sustainable tourism complex with the potential to bring in real income. Such tourism has a future.
References

[1] WCED 1987 *World Commission on Environment and Development: Our Common Future* (Report Brundtland Commission)

[2] Maximova D 2018 Sustainable Development of the Russian Arctic Zone: Challenges & Opportunities *Arctic Yearbook*

[3] WTO 1998 *Guide for Local Authorities on Developing Sustainable Tourism*

[4] Statistics Canada (Online) Available: http://www5.statcan.gc.ca/cansim/a21

[5] Alaska Department of Commerce, Community, and Economic Development Division of Economic Development (Online) Available: https://www.commerce.alaska.gov

[6] National Tourist Union 2018 *Prospects for the development of Arctic tourism* (Online) Available: https://rusunion.com/perspektivy-razvitiya-arkticheskogo-turizma/

[7] Lukin Y F et al 2016 *Arctic tourism in Russia* (Arkhangelsk: Northern (Arctic) Federal University)

[8] Protected areas of the Russian Federation (Online) Available: http://oopt.aari.ru/

[9] TASS 2016 *The tourist flow in the largest reserve of Kamchatka increased by 2 thousand people per year* (Online) Available: http://tass.ru/obschestvo/3655722

[10] National Park Service 2016 *Yellowstone Visitation Tops 4 Million for the First Time* (Online) Available: https://www.nps.gov/yell/learn/news/16002.htm

[11] Didenko N, Rudenko D and Skripnuk D 2015 Environmental security issues in the Russian Arctic *SGEM* 5 267–74

[12] Leksin V and Profiryev B 2017 Socio-economic priorities for the sustainable development of Russian Arctic macro-region *Economy of Region* 4 985–1004

[13] Arseniev D, Shkodyrev V, Yarotsky V and Yagafarov K 2016 *IS 2016* – Proc. 7737398

Published under licence in *Journal IOP Conference Series Earth and Environmental Science*