Prerequisites and innovative aspects of Arctic tourism development

A V Kuchumov¹, Ya S Testina² and Yu M Boykova³

¹Saint Petersburg State University of Economics, Saint Petersburg, Russia
²Saint Petersburg State University, Saint Petersburg, Russia
³Saint Petersburg State University of Civil Aviation, Saint Petersburg, Russia

arturspb1@yandex.ru

Abstract. Nowadays, the study of the Arctic region highlights, and countries show increasingly greater attention in the developing of Arctic zone. Every country, that owns even a small territory in the Arctic region, tries to use this opportunity to develop tourism and drawing of tourist’s attention. Recently, the question of developing tourism in Arctic is risen more often. Tourism can become a major industry for the regions of Russian North, comparable with the transport or producing sectors. The article shows the Arctic zone as a promising region for the development in the tourist sector. It analyses the legislation documents, which characterize the regulation of activities in the Arctic at the international level. It was found out that the analyzed documents do relate to the activities of enterprises of the tourism industry in the Arctic only indirectly. Based on the analysis the development of legal and methodological documents regulating the tourism industry at the international and regional levels was proposed. In the article, based on an analysis of the structure of tourist flows in the Arctic countries and the structure of tourist routes presented in the Arctic regions of Russia, it was concluded that it is necessary to support regional development. For effective distribution of financial support, it is recommended to use the "Arctic tourism index" as an optimal mechanism for reflecting the overall development of the regions in the tourism industry, taking into account the existing socio-economic conditions. "Arctic tourism index” should become an approved assessment tool that characterizes the participants of the tourism market in the Arctic not only in the Russian Federation, but also at the international level.

1. Analysis of legal support of the tourism industry in the Arctic region

The Arctic zone is undoubtedly one of the most promising regions for the development of various activities for many countries in the world. Such countries as the Russian Federation, Canada, the Kingdom of Denmark (Greenland Island), the Kingdom of Norway, the US of America, Iceland, the Republic of Finland and the Kingdom of Sweden, represent their interests in the Arctic. Now they are called «Arctic countries». The first five countries have the most important influence there because of their geographical location at the Arctic ocean’s shore. The cooperation of the «Arctic countries» in this area has different vectors and development trends: from military conflicts to peace negotiations and joint strategic partnerships.

The most important areas of activity, that generate the most revenue for countries in the Arctic zone are extractive industries as well as fishing, but countries need to consider the tourism industry, which is becoming more developed every year. The direct contribution of tourism to world GDP was
US $ 2,570.1 billion (3.2% of GDP) in 2017, the growth of 4.0% was projected in 2018, as well as a gradual increase of 3.8% per year from 2018 to 2028 to us $ 3,890.0 billion. US (3.6% of total GDP) according to the WTTC report «Travel & tourism economic impact 2018» [1].

These figures show, that tourism is an important part of the national economic development, also it is the impetus for its infrastructure development. However, it is necessary to have a regulatory framework in this area.

For further research, we will study the legal framework of relations arising in the Arctic region. The main document regulating relations in the region is the UN Convention about sea law (1982). In addition, in 1993 was adopted the Nuuk Declaration about environment and development in the Arctic, and in 2008 the Ilulissat Declaration on readiness to use international law in the Arctic [2]. In table 1 (based on [2], [3], [4]) is considered the main legal documents regulating activities in the Arctic zone at the international level.

Table 1. Legal regulation of activities in the Arctic region

| The title of the document | The adoption year | Joined countries | Fundamental principles |
|---------------------------|-------------------|------------------|------------------------|
| Spitsbergen Treaty        | 1920              | 39 counties, (USSR since 1935) | Recognizes the full sovereignty of Norway in the Spitsbergen archipelago. Establishes the duty for Norway to be admitted into its territory and within the territorial waters of the representatives of the countries that signed the Treaty. Russia in the revision of the Treaty. |
| The Charter of the United Nations (UN) | 1945 | Signed by 50 countries. Regulates the activities of 193 UN member States | Regulates General rules of international law |
| Agreement on the polar bears saving | 1973 | USSR, The USA, Denmark, Canada, Norway | Preservation of the polar bear population, as well as prevention of its habitat’s loss |
| The United Nations Convention on the sea law | 1982 Came into force in 1994 | 168 States and the European Union, but the United States has not signed | It regulates international relations in the Pacific, Atlantic, and Indian oceans: the continental shelf and seabed, natural resources, historical waters, peaceful navigation, attitude to foreign ships in coastal waters. It does not directly consider activities in the Arctic ocean; however, NATO and the European Union transfer the norms of this Convention to the Arctic region, which does not comply with the norms of the Arctic legislation of Russia. The important point is that the United States has not signed this document, and, accordingly, may not comply with international law |
| Declaration of the protection of the Arctic environment (Rovaniemi Declaration) | 1991 | The Members of The Arctic Council | Environmental protection of the Arctic region. |
| Arctic Environmental Protection Strategy (AEPS) (the Finnish initiative) | 1991 | The Members of Arctic Council | Monitoring and forecasting of the environmental situation in the Arctic, its analysis, monitoring of the situation in the Arctic, its assessment, reaction to changes in the situation, especially in critical situations, the elimination of their consequences. Conservation of Arctic nature as an object of natural heritage. |
| Nuuk Declaration about «The environment and development in the Arctic» | 1993 | The Members of Arctic Council | Determines that the Arctic ecosystem has unique properties and is very slowly recovering from exposure. [9] Obliges to take into account the interests of indigenous people of the Arctic region. |
| Inuvik Declaration about «The environmental protection and sustainable development in the Arctic» | 1996 | The Members of Arctic Council | Defined the special role of the Arctic countries: Russia, Canada, USA, Denmark, Norway, Finland, Iceland and Sweden in the protection, restoration of the Arctic environment, as well as its sustainable development. It was the impetus for the formation of the Arctic Council. |
| Arctic Military Environmental Cooperation (AMEC) | 1996 | Russia, Norway, The USA | Defines a list of issues related to the financing and implementation of projects aimed at improving the environmental situation in the Arctic region related to military activities, in particular, projects related to radioactive and non-radioactive waste. |
| Ilulissat Declaration of readiness to cooperate in the Arctic zone on the basis of international law | 2008 | Russia, Canada, Denmark, Norway, The USA | The first Ministerial meeting. It defines environmental issues, safety of navigation, exploration and mining. |
| Agreement between the member States of the Barents (Euro-Arctic Council) on cooperation in the area of prevention, preparedness and response to emergency situations | | Norway, Russia, Finland, Sweden | It provides the development of measures for the prevention of emergency situations and joint exercises on the basis of the Kirkenes Declaration of 1993 about the establishment of BEAC. |

1States, that are members of Arctic Union (Arctic Council): The Russian Federation (as a USSR assignee), Norway, The USA, Island, Finland, Sweden, Denmark, and Canada.
2The Council of the Barents Euro-Arctic region (The Barents Euro-Arctic Council) (BAC) includes countries such as Norway, Russia, Finland, Sweden, Commission of the European communities.
The agreement on cooperation in aeronautical and Maritime search 2011 The Members of Arctic Council It is about the demilitarization of the Arctic, the division of the territory for improving the efficiency of search operations, Definition of communication systems, monitoring of requests for assistance

Agreement of the cooperation in the field of preparedness and response to marine oil pollution in the Arctic 2013 The Members of Arctic Council Provides for a procedure for compensation from pollution losses

Based on the study conducted in table 1, it can be concluded that a sufficiently large number of legal documents regulate activities in the Arctic region. Members of the Arctic and the Barents Councils take a huge number of attempts to preserve the natural, historical and cultural heritage of the coastal Arctic countries. It should be noted that these documents do not directly affect the activities of tourism enterprises in the Arctic, but only indirectly. The opinion of the authors, it is necessary to develop legal acts both at the state and international level, reflecting the list of norms and requirements for tourism enterprises operating in the Arctic, as the presence of tourists can cause irreparable harm to the environment and impact on changes in the indigenous population of the North.

2. The analysis of the tourist flow structure in the Arctic countries

Tourism as a separate activity is one of the promising areas of development of the Arctic. All countries that are members of the Arctic Council carry out activities in the tourism industry in their Arctic territories.

There is table 2 (we use the data of the study [5]) and then analyze the structure of tourist flows in the Arctic countries.

Table 2. Structure of tourist flow to Arctic countries

| Country          | Tourist visits Numbers | Date | Tourism structure, % |
|------------------|------------------------|------|----------------------|
| USA              | 75 608 000 [6]         | 2016 | 53,56                |
| Canada           | 19 971 000 [6]         | 2016 | 14,15                |
| Denmark (Greenland) | 2 871 593 all Denmark [6] | 2016 | 2,03 |
| Iceland          | 2 224 603 [6]          | 2017 | 1,58                 |
| Norway           | 5 920 859 [8]          | 2016 | 4,19                 |
| Sweden           | 6 840 963 [8]          | 2017 | 4,85                 |
| Finland          | 3 180 254 [8]          | 2017 | 2,25                 |
| Russia           | 24 551 000 [6]         | 2016 | 17,39                |
| TOTAL            | 141 168 272            |      |                      |

According to table 2, the United States has the largest share of tourist flow among the Arctic countries (53.56%), then come Russia (17.39%) and Canada (14.15%), the remaining countries occupy less than 5% of the total structure. This situation is explained by the difference in the size of the countries (leading countries with the largest area in the world: Russia has the first place, Canada is the second and The USA are the fourth). Data on tourist flows are taken as a whole for the state, as the exact number of tourists visiting the Arctic regions is not available, or the data are outdated, which cannot be used for the research purposes, so we can not specify what percentage of tourists visiting the country visits the Arctic part also. However, the overall situation can be extrapolated to specific regions. As recommendations, during developing a regulatory framework, it is necessary to establish a
mechanism for measuring tourist flow to the arctic regions of countries. It is necessary to obtain valid data on the environmental impact of the required infrastructure and transport facilities.

3. Analysis of the structure of tourist flows in the Russian’s Arctic regions

Arctic tourism in the Russian Federation is currently developing. An increasing number of travel agencies offer tours to the Arctic region in the Russian Federation. The structure of tourist routes presented in the Arctic regions of Russia is considered in table 3 [10]. Arctic tourism is represented in Russia by four Federal districts: Far Eastern Federal District, Siberian District, Ural District, and North-Western District. The Arctic regions are the Republic of Sakha (Yakutia), the Krasnoyarsk territory, the Yamal-Nenets Autonomous District, the Nenets Autonomous District, the Murmansk and Arkhangelsk regions.

Table 3. The structure of Arctic tours in the Russian Federation depending on the region

| The region                  | The district                   | The number of tours | The structure, % | The number of tourists, who used the hotels [10] |
|-----------------------------|--------------------------------|---------------------|------------------|-----------------------------------------------|
| Republic of Sakha           | Far Eastern Federal District   | 10                  | 5,5              | 185,92                                        | 4,9                                           |
| Chukotka Autonomous region  | Far Eastern Federal District   | 0                   | 0                | 17,53                                         | 0,4                                           |
| Krasnoyarsk region          | Siberian District              | 13                  | 7,1              | 662,58                                        | 33,7                                          |
| Yamalo-Nenets Autonomous district | Ural District                        | 35                  | 19,2             | 151,35                                        | 4,8                                           |
| Arkhangelsk region          | North-Western District         | 72                  | 39,6             | 257,46                                        | 7,1                                           |
| Murmansk region             | North-Western District         | 49                  | 26,9             | 266,05                                        | 36,1                                          |
| Nenets Autonomous district  | North-Western District         | 3                   | 1,6              | 7,40                                          | 0,2                                           |
| TOTAL                       |                                | 182                 | 100              | 1530,76                                       | 86,8                                          |

According to table 3, we can see the connection between the number of tourists and the number of developed tours in Arctic. The largest number of tours are developed in the Arkhangelsk region -72 and Murmansk region - 49, the smallest in the Nenets Autonomous district - 3 and Chukotka Autonomous district - 0. The unevenness of tourist flows in the Russian Federation is obvious: domestic and incoming tourist flows are concentrated in the Krasnoyarsk territory, Murmansk and Arkhangelsk regions. In those regions that do not seek to develop Arctic tourism, there are much fewer tourists.

4. Arctic tourism index

For gradation of the regions representing the Arctic tourist routes, the authors propose to use the "Arctic tourism index", which should be monitored to identify the causes of changes.

"Arctic tourism index" should be developed for the Arctic regions of Russia, as well as other countries, which are specialized in the provision of tourist services, and can be calculated as a set of the following parameters:

- a ratio of number of tours provided in this Arctic region to total number of tours in the Arctic part of the country:
• a ratio of number of people employed in the hospitality industry to average number of people in the region;
• a ratio of number of tourist enterprises in the region to total number of enterprises in the region;
• a ratio of number of educational institutions training specialists in the hospitality industry to total number of secondary vocational education and higher professional education organizations in the region;
• availability of a zone with a special economic status in the region (+1 for each economic zone).

If the index of the region is high, it attracts all types of stakeholders: investors, tourists, government and various international organizations.

"Arctic tourism index" represents a study of the regions that carry out their activities in the Arctic zone. The index will allow the regions to allocate funds more effectively, to support projects in tourism, develop small businesses, optimally allocate budget funds and the funds of various international organizations, attract qualified specialists by improving the competitiveness of the territories.

5. Conclusions

Arctic tourism is a modern promising direction in the tourism industry, but only those countries that have access to the coastal zone of the Arctic ocean are specialized in it. These countries have significant opportunities for the formation and promotion of Arctic routes in their country [11]. In order to improve the efficiency of the tourism industry in the studied segment, it was proposed to create an international regulatory framework to regulate the activities of tourist enterprises in the Arctic, which would establish the procedure and regulations for the provision of tourist services, the rights, duties, and responsibilities of the parties, That would approve the procedure for optimizing the process of providing tourist services.

In order to monitor the quality of regional tourism products, as well as to improve the competitiveness of the Arctic regions, it is proposed to use the "Arctic tourism index", which takes into account these parameters: regional Arctic tourism products, the number of enterprises of the tourism industry, as well as educational institutions in the region and the presence of special economic zones.

References
[1] World Travel and Tourism Council Travel & tourism economic impact 2018. World Report of World Travel and Tourism Council Available from: https://www.wttc.org/-/media/files/reports/economic-impact-research/regions-2018/world2018.pdf [Accessed 20th February 2019]
[2] Avahadeev V R 2016 Multilateral international Agreements regulating the legal regime of the Arctic regions, it is proposed to use the "Arctic tourism index", which takes into account these parameters: regional Arctic tourism products, the number of enterprises of the tourism industry, as well as educational institutions in the region and the presence of special economic zones.

[3] Morozov A I 2016 International legal regime of the Arctic: negotiation process Post-Soviet Issues 2(8) 117126
[4] Working Group of the Expert Council under the Government of Russia Arctic Council Available from: https://будущее-арктики.рф/арктический-совет-arctic-council/ [Accessed 21st February 2019]
[5] Maher P.T. 2017 Tourism Futures in the Arctic The Interconnected Arctic — UAрctic Congress 2016 (Springer Polar Sciences) 213220
[6] UNWTO 2017 Tourism Highlights Available from: http://tourlib.net/wto/WTO_highlights_2017.pdf [Accessed 22nd February 2019]
[7] Greenland Tourism Statistics 2018 Available from: www.tourismstst.gl [Accessed 22nd February 2019]
[8] Eurostat. Main table Available from: ec.europa.eu/eurostat/web/tourism/data/main-tables [Accessed 23rd February 2019]
[9] Official website of Federal Agency for Tourism in Russia Arctic tours Available from: https://www.russiatourism.ru/contents/turism_v_rossii/turizm-v-arktike/ [Accessed 23rd February 2019]
[10] Official website of Federal Agency for Tourism in Russia Statistical data for the Russian Federation Available from: https://www.russiatourism.ru/contents/statistika/statisticheskie-dannye-po-rf-2018/ [Accessed 23rd February 2019]
[11] Skvortsova I et al 2018 Cluster as a form of international cooperation in the development of the Arctic region in the framework of the international innovation system MATEC Web of Conferences, Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85058456227&doi=10.1051%2fmatecconf%2f201823904020&partnerID=40&md5=9da49f0e532b8d7a9c030255c2da4f [Accessed 23rd February 2019]