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# ARCTIC TOURISM: STATE AND PROSPECTS FOR RUSSIA

**ABSTRACT.** Tourism is the key factor of human presence in the Arctic region. The number of tourist visits has been growing extensively since the end of XX century. The Arctic region is not regarded only as prospective region for oil and gas industry but now it is also recognized as the region with high potential for tourism development. The research is dedicated to the assessment of the spatial distribution of human presence within the Arctic region on the basis of statistical analysis of population and tourist visits in different parts of the Arctic. Taking into account the uncertainty of regional Arctic borders definition, which are commonly determined in accordance with given purposes and tasks, we assessed the population and tourist visits for the Arctic Zone of the Russian Federation as administrative union as well as for the Arctic region as physic-geographical region.

The growing number of tourists in the Arctic region influences future development prospects of the region. In 2017 the Arctic region with population of 4.3 million people was visited by 10.2 million tourist. While the favorable environmental conditions of Arctic ecosystems exist, the Arctic region should be considered as the source of nature resources for tourism and various recreational activities. Modern technologies enable the development of travel industry in the region, and therefore the industrial paradigm of "conquer" and "utilization" should be replaced with the axiological paradigm of "Arctic beauty" and recreational resource value.

**KEY WORDS:** Arctic region, Arctic Zone of the Russian Federation, Arctic borders, tourism, population, recreation

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## INTRODUCTION

Tourism is regarded as one of the factors of prosperity and stable state economy. Increasing demand on leisure and travel determines prospects for future development of remote regions. The Arctic is hard-to-reach area with extreme climate condition has recently become popular tourism destination. The area is attractive for tourists due to its polar landscapes, icebergs, unique flora and fauna as well as its possibility for adventures

and obtaining new cultural experience. Rising interest to the Arctic region may facilitate the social welfare and economic prosperity. The aim of the research is to indicate future prospects and barriers for tourist industry development in the Arctic region. The research is dedicated to the assessment of tourist development trends with the use of comparative study of tourist visits and population distribution in three Arctic regions: the Russian Arctic, the Europe Arctic and the American Arctic.

The Arctic is not homogenous territory and it consists of different territories and administrative units of 10 states. The borders of the region are not determined unanimously and it can be still a question to discuss, especially when it concerns physical and economic geography studies. Defining of the Arctic borders is one of the key critical aspects to understand specific features of tourism in the region (Hall and Saarinen 2010; Lee 2017).

Commonly the Arctic is defined as a polar region located at the northernmost part of the Earth above the parallel 63°33'44" known as the Arctic Circle. Thus such limitation separates continuous homogenous territory of the Arctic region. Different institutions and organizations in order to identify the Arctic region take into account various environmental, biological, economic, jurisdictional, social and other factors depending on purposes and tasks of a given issue.

From physico-geographical positions criteria of the 10° C July isotherm or tree-line is widely used. In accordance with that the Arctic region can be considered as the territory with average temperature in the warmest month July less than 10° C or as the area beyond the treeline (timberline). The south borders of this territory represent the edge separating territory where trees are capable and not capable to grow. Polar boarder of forest formations separates two different ecosystems: multistoried forest with heights up to 10 m on the south and trees and bushes formations with heights 1 m and less on the north (Golubchikov 1996). Nevertheless the shift from one to another formation goes successionaly and several types of tree boarders can be accordingly defined.

Firstly it is a transition from forest to non-forest tundra territories (timberline). Secondly it is the boarder of forests as the edge of territory with continuous forests (forestline). In areas with abrupt transition the two boarders coincide. Outmost edge of upright trees expansion is known as treeline. Sometimes it is difficult to determine whether low rising crook-stem trees known as krummholz line represents a type of forest formation (Arno and Hammerly 1984), however definition of

timberline as the edge of taiga territories can be made easily.

Therefore in order to define administrative-territorial entities which refer to the Arctic region we consider that all such entities mostly located to the north of timberline. Their territories don't expand beyond tundra and tundra-forest areas and should be a part of Arctic and subArctic ecosystems. However in practice given approach isn't applied universally: Russia uses to the term "Arctic zone" given in official documents to define regions which refer to the Arctic territories of the Russian Federation. In accordance with Decree of the President of Russia (№296 of 2nd May, 2014) territories of 9 federal regions are included in the Arctic Zone of the Russian Federation.

Legally defined borders of the Arctic zone don't comply with physico-geographical borders of the Arctic region. For example north parts of the Arkhangelsk region and the Republic of Karelia included in the Arctic zone are characterized by taiga vegetation types, lack of permafrost and therefore don't refer to the Arctic physical region of subpolar and polar ecosystems.

Conversely, territories of the Magadan region and the Koryak Autonomous District are not included in the Arctic zone, thus their territories are covered by subArctic goltsy, dwarf stone pines and marine tundra formations. Even the Cold pole of the Northern hemisphere as well as sparsely populated areas with density less than 1 person per 100 sq. km of the Evenks Autonomous District and the Olenek area of the Republic of Sakha (Yakutia) are not considered as the territories of the Arctic Zone of Russia.

The Arctic zone is observed as an independent administrative entity (Chistobaev 2016) with its own federal budget, provided for economic development of the listed regions. Therefore territories which don't refer to the Arctic physical region but constitute the Arctic Zone of Russia should be taken into account even when they don't refer to the physico-geographical Arctic region.

## METHODOLOGY AND DATA

Considering the fact that the Arctic zone of Russia and the Russian Arctic region have different boundaries, but both are the subject of tourism development studies, we provided the analysis of permanent population and tourist visits for both cases: in the Arctic zone of the Russian Federation (administrative union) and in the Arctic (physico-geographical region). For that purposes

we determined the belonging of the administrative units of regions included in the Arctic Zone to tundra, forest-tundra and Arctic ecosystems. Additionally some administrative units of the Republic of Komi, the Republic of Sakha, Krasnoyarsk, Magadan and Kamchatka region, not included to the Arctic Zone, were added to the list (Table 1) as the typical arctic territories, primarily covered by tundra, tundra-forest and arctic formations.

**Table 1. The list of administrative units which belong to Arctic Zone of the Russian Federation and/or the Arctic region («+» – belonging)**

Region	Administrative Unit	Arctic Zone	Arctic region	Region	Administrative Unit	Arctic Zone	Arctic region
Murmansk region		+	+	Republic of Sakha (Yakutia)	Abiyskiy rayon	+	+
Republic of Karelia	Loukhskiy rayon	+			Allaihovskiy rayon		+
	Belomorskiy rayon	+			Anabarskiy rayon		+
	Kemskiy rayon	+			Bulunskiy rayon		+
Arhangelsk region	Frantz Josef Land and New Land National Park «Russian Arctic»	+	+		Verhnekolumskiy rayon	+	+
	Arhangelsk city	+			Verhoyanskiy rayon	+	+
	Novodvinsk city	+			Zhiganskiy rayon	+	+
	Severodvinsk city	+			Momskiy rayon	+	+
	territories:	+			Nizhnekolumskiy rayon		+
	Mezenskiy rayon	+			Oymyakonskiy rayon		+
	Onezhskiy rayon	+			Olenekskiy rayon	+	+
	Primorskiy rayon	+			Ust-Yanskiy rayon		+
Nenetsk autonomous district		+	+		Tomponskiy rayon		+
Republic of Komi	Vorkuta city area	+	+		Srednekolumskiy rayon	+	+
	Inta city area		+	Eve-Bitantayskiy rayon	+	+	
	Ust-Tsilmenkiy rayon		+	Magadan region			+
	Usinsk city area		+	Kamchatka region	Koryak Autonomous District		+
Yamalo-Nenetskiy region		+	+		Aleutskiy rayon		+
Chukotka Autonomous District (AZRF)		+	+		Karaginskiy rayon		+
Krasnoyarsk region	Norilsk city area	+	+		Olyutorskiy rayon		+
	Taymirskiy kray	+	+		Penzjinskiy rayon		+
	Turukhanskiy rayon		+		Tigilskiy rayon		+
	Evenkiyskiy rayon		+				

For the estimation of population we used data, provided by the Federal Statistic Agency of the Russian Federation (Population of... 2017) and official demographic data of foreign state agencies. Considering the fact that the official statistical data on tourist visits to the Russian northern administrative units is not fully available, the information was received by the means of analytical search in the Internet. The tourist visits estimation was based on the official data from the federal report on tourism development (Report on... 2016; Strategy for... 2014), as well as articles and press reports (murmansk.mk.ru 2018; Dzhavrshan 2017; louhiadm.ru 2017; Maher 2014; Maher 2017; SahaNews.ru 2015; Ralman 2013). If there was lack of information or information was seemed to be incorrect, we provided our expert estimations based on comparative studies of tourism trends in similar regions.

The statistical data on tourist visits to the Russian northern regions was received for different years, nevertheless it shows general conditions and trends of tourism development in the Russian Arctic zone and underlines the necessity for profound comprehensive research of tourism activity in the region.

## RESULTS AND DISCUSSION

Permanent population of Arctic and subArctic areas to the north from forest line consists of 4.2 million people. Almost half of them (2 million) live in Russian part of the Arctic, 1.3 million – in the Arctic regions of Europe and 0.9 million – in the Arctic regions of North America (Fig. 1).

At the same time the total population in the Arctic zone of Russia is higher and consists of 2.4 million people, the major part of them live in Murmansk and Arkhangelsk regions (0.75 million and 0.65 million people, respectively). However it is important to note that the population in Russian part of the Arctic region has been decreasing: since 1989 the region has lost 1.2 million people contrast to European and American parts, where the population has been growing on 365 000 people (primarily in Island and Alaska) (Golubchikov and Kruzhalin 2018). Observed population

decline in the Russian Arctic is unprecedented phenomenon and challenge for the Russian Federation. When the Arctic region goes through the period of postindustrial development (Zaikov 2017) the unsatisfactory demographic problem can be solved only in the framework of tourism development recognized as the main factor of human presence in the Arctic.

Since the end of XX century the number of tourist visits to the Arctic region has been growing rapidly. In the begging of the 1990s only 5 million tourists visited it, then the rate was 5 million in 2010, and 10.2 million in 2017.

The number of tourists has exceeded in 2.5 times the permanent population of the region. In Europe Arctic the amount of tourists is in 6 times higher than the number of people who live there.

In Island 1.3 million tourists account annually for 333 000 people permanently living there. Sweden Norbotten with population of 250 000 receives 2.2 million tourists a year. Finnish Lapland with population of 184 000 people has 2.5 million tourist visits. The most impressive proportion is observed in Shpitzbergen (Norway) where 119 000 of tourists account for 2 000 of local population (Fig. 2a).

In accordance with the official information the Russian part of Arctic is visited by almost 1 million tourists (944 000) annually (Report on... 2016). The estimation is seemed to be excessive as evidenced by the fact, that for example the Yamalo-Nenetskiy region has 106 000 tourists and the Magadan region has only 2 000 tourists. We provided our expert estimation of tourist visits to the Arctic region of the Russian Federation. In accordance with our valuations the number of tourist visits is around 527 000 annually. Therefore the amount of tourists in the Russian Arctic, which territories cover one half of the whole region, is in 14 times lesser than in the second half of the Arctic (Fig. 1).

Almost 50 % of tourist visits (319 000) account for Murmansk region with population of 758 000 people (Fig. 3), what corresponds to global trends observed in Europe and North America (Fig. 2a,b).

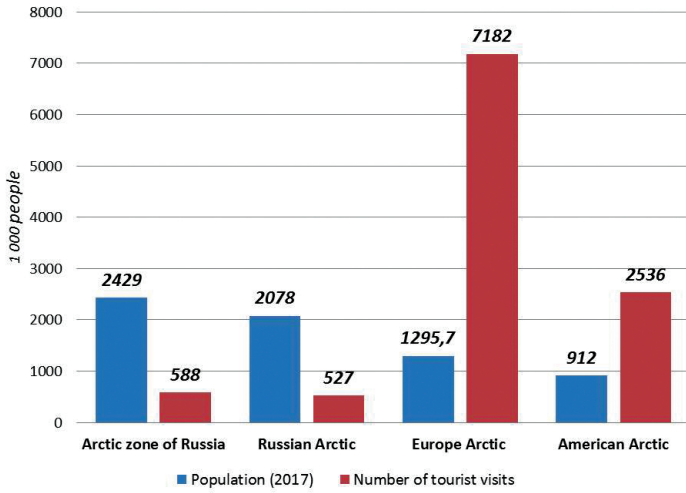


Fig. 1. Population and tourist visits to the Arctic region

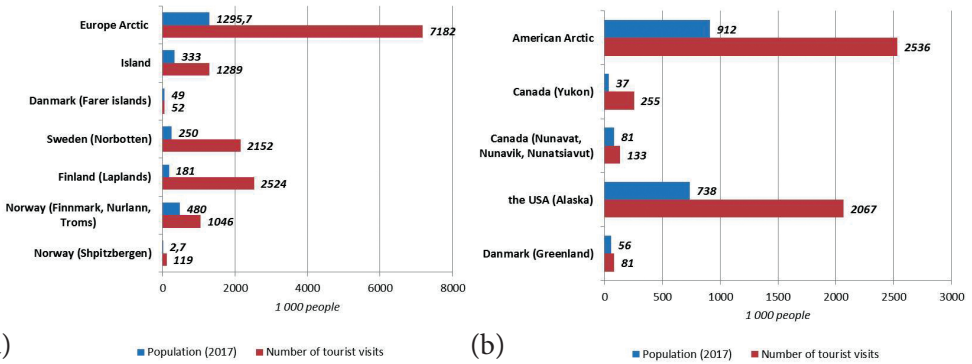


Fig. 2. Population and tourist visits to the Europe Arctic (a) and to the American Arctic (b)

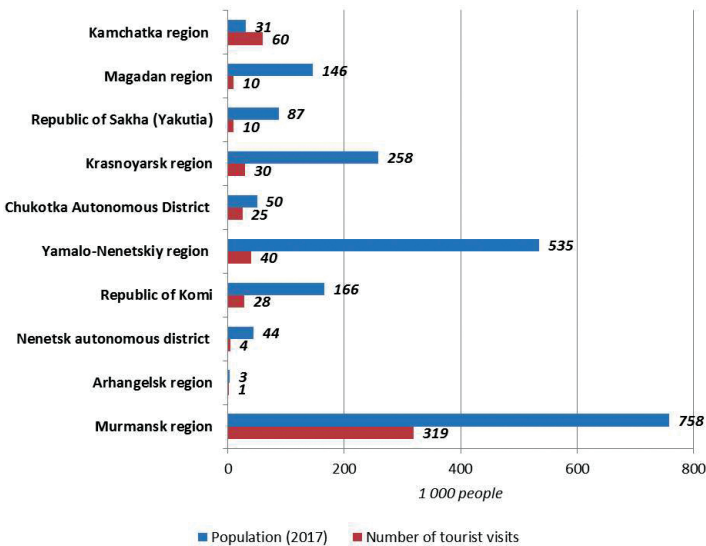


Fig. 3. Population and tourist visits to the Russian Arctic

Murmansk region historically has been the leader for the Arctic tourism development. First regional travel guides were published in the 1930s when the territory was intensively developed: constructed new roads, train lines made the region easily accessible for tourists seeking for sport activities and ethnographic tourism (Tsekina 2018). Since then the region has experienced declines and growths of tourism activity and nowadays it successfully implements programs and projects to support the industry and attract more people to visit Murmansk region. Other Russian Arctic regions haven't yet reached positive tourism performance and not yet reached the level of intensive tourism development what can be explained by poor infrastructure and low tourism industry activity.

Currently the paradigm of industrial development of the Arctic prevails in the Russian Federation. Currently the Russian Arctic is treated as the territories of intensive industrial exploration (Slipenchuk 2013). Oil and gas industry plays important economic role in the region, however for the other foreign Arctic regions it doesn't have such significant influence. For example in Greenland, in the northern regions of Norway, in Finland and Sweden the share of value added from extractive industries is about 15 %, for the USA and Canada – 30 %, while for the Russian Arctic regions it is 60 % (Pilyasov 2011).

The industrial paradigm of the Arctic exploration causes future premises to jeopardize current regional problems of ensuring sustainable development, preserving the resource potential, solving the ecological issues and problems of social infrastructure and economic diversity, currently indicated by experts (Kasimov 2018).

Against the background of energy oriented economy of the northern Russian regions, tourism is currently incapable to compete with extractive businesses and to reach leading position, however it can increase public interest to the Arctic, its history, culture and nature and provide local people with new work places. Recent experience of the foreign Arctic regions (Alaska, Iceland, Northern Canada etc.) has proved that tourism is very

profitable industry, which involves primarily local population and creates 3 new work places on every tourist (Golubchikov and Kruzhalin 2018).

The Arctic and SubArctic territories form unique group of ecosystems stored in its virgin natural conditions. They provide services and goods which constitute important part of Earth circulation process and they are indicated as the most vulnerable to human-induced environmental changes especially to climate change and pollutions (Sustainable model... 2006). With arising tourist interest to the Arctic, the region is now observed from new point of view with emphasizes on its recreational, axiological values rather than on its natural extract recourse potential (Melnikov 2013).

The tourism development influences the limitation of polluting industries and the delivery of nature conservation policies (Golubchikov and Kruzhalin 2018). Therefore in the Arctic region tourism can be observed as one of the most ecologically friendly industries with its potential to facilitate ecosystems and sites of cultural and natural heritage protection and conservation.

For tourists the Arctic environment and unique culture is the main attractions of the region. Arctic landscapes are attractive with its pole days, unique flora and fauna, cultural and historical sites. Landscapes of Arctic can serve with aims to contribute therapeutic effects thank to oxygen enriched air and clean water or can be used for fishing and hunting activities, wild fauna observations, different extreme sports as snow bikes and ski free ride.

## CONCLUSION

Tourism is recognized to be the main factor of human presence in the Arctic region with approximately 10.2 million visits annually. New clothing and equipment technologies, transport systems make the remote Arctic region with severe climate conditions easily accessible and suitable for comfort living. Arctic tourism has currently diverse directions of mass tourism, fishing and hunting tourism, adventure and extreme sport

tourism, ecological and cultural tourism. Nevertheless all the tourists have the similar aspiration to explore remote untouched territories and obtain unique cultural and historic experience of the region. With intensive tourism development the Arctic resources and ecosystems have been recognized from a new point of view as the basis for tourism

development contrast to paradigm of natural resource extraction, which is today indicated as the general and the only for the Russian Arctic. Future support of the new approach may facilitate the solving of environmental, social and economic problems and grant sustainable development to the region. ■

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