

## **ENVIRONMENTAL COOPERATION AS A WAY OF DEVELOPING ECO-TOURISM IN THE ARCTIC REGION**

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### **Abstract**

Tourism as a means of diversifying economic development can only be considered in those regions that have enough tourism potential. The application of tourism management methods in the region requires factoring in the specifics of the region itself and the possibility of increasing the number of inbound tourists. The relevance of the study is determined by the fact that the number of regions that can offer a competitive product is quite small and tourism is often their main income category. The novelty of the study is that the Arctic region is subsidized and often the region's economy is focused only on the extraction and processing of minerals. Attraction of tourists is limited due to climatic and infrastructural conditions. As a novelty of the study, the question of how to build infrastructure and provide a management model in the Arctic region is considered, provided that the model meets the standards of public administration. The practical application of the research results can be achieved on the condition that each of the participants in the public administration process can implement a regional development program at the level of the Arctic regions. The main task will be considered the process of formation of a competitive environmental and managerial environment upon financing with self-supporting forms.

**Keywords:** conditions for the development of tourism, the construction of tourist facilities, entrepreneurial activity in tourism activity, tourist demand, study programs at universities.

**JEL classification:** Q57, R11, Z32

### **1. Introduction**

Over the past decades, the tourism industry has become one of the most profitable sectors of the global economy. At the same time, the Arctic region does not completely fulfil its tourism opportunities. Despite the positive dynamics of tourism development in the world, in the Arctic in 2016, the overall contribution of tourism to GDP decreased by 40% compared to 2012. A promising area for expanding international tourism services is ecological tourism. Every year, the number of environmental tourists in the world increases by 25%. In the

Arctic, ecological tourism is at an early stage of development and requires regulation by the state. There is an urgent need for a choice of regulatory impact measures. The basis for a balanced choice of these events is the assessment of the potential for the development of ecological tourism (Belitskaya, 2018).

At the same time, many issues related to the development of ecotourism activities require further research. Detailing the types and principles of the organization of ecological tourism requires elaboration, including the choice of measures of state regulation of this type of tourism activity. State regulation of the development of ecotourism includes a set of technical measures, which include certification. Certification of subjects of ecotourism will not only determine the quality of tourism services but will also enable the evaluation of the development potential of this type of entrepreneurial activity. The lack of research elaboration of these questions conditioned the relevance of the selected subject matter.

According to 11 programs of the federal project "Ecology", the Ministry of Natural Resources of Russia forms project offices. A special unit will be involved, among other tasks, in the development of eco-tourism. This direction has significant prospects. The sights of the Russian Arctic can attract many tourists, contribute to the economic development of the territories. So far, the development of the tourism industry in the Arctic reserves is hindered by logistical and legal difficulties, low transport accessibility of protected areas, lack of infrastructure, poor marketing, high cost of travel.

The relevance of the work is that investors for new projects in the tourism industry should be looked for among potential partners for whom tourism is the main type of their commercial activity. Specially protected natural areas of regional and federal subordination need equal conditions for the development of tourism. Tour operators who are willing to deal with the Arctic are interested in both types of territories. While the national parks have the right to attract extrabudgetary funding for the development of their projects, the regional state institutions do not.

Another significant problem is coordination and the most complex rules for the construction of tourist facilities. To make them profitable, large-scale investments and the joint efforts of many tour operators are needed. It is also necessary to develop competition among air carriers. Transport accessibility of territories can be increased with the help of hydroaviation. Of course, marketing research is important for the development of eco-tourism in the specially protected natural areas of the Arctic. It is important to understand how a territory is reflected in the mass consciousness, what stereotypes and myths impede the development of local tourism. It is important to build the tourism concept of a region based on existing meanings, legends, the search for new ideas and points of attraction that are attractive for tourists.

## **2. Literature Review**

Cooperation between states often takes a leading place in the implementation of programs for the development of the environment at large (Larionova et al., 2018). With the participation of the country in the general process of saving the planet from environmental disaster (Baboshkina et al., 2018), it is necessary to consider not only private, but also national interests that may be affected by the implementation of programs of holistic perception of the processes of territorial development. Activities within the framework of multilateral agreements with international organizations provide an opportunity to actively participate in the negotiation process, to attract financial assistance to solve pressing domestic issues (Vargas-Hernández and Pérez Martínez, 2016; Kruzhilin et al., 2018).

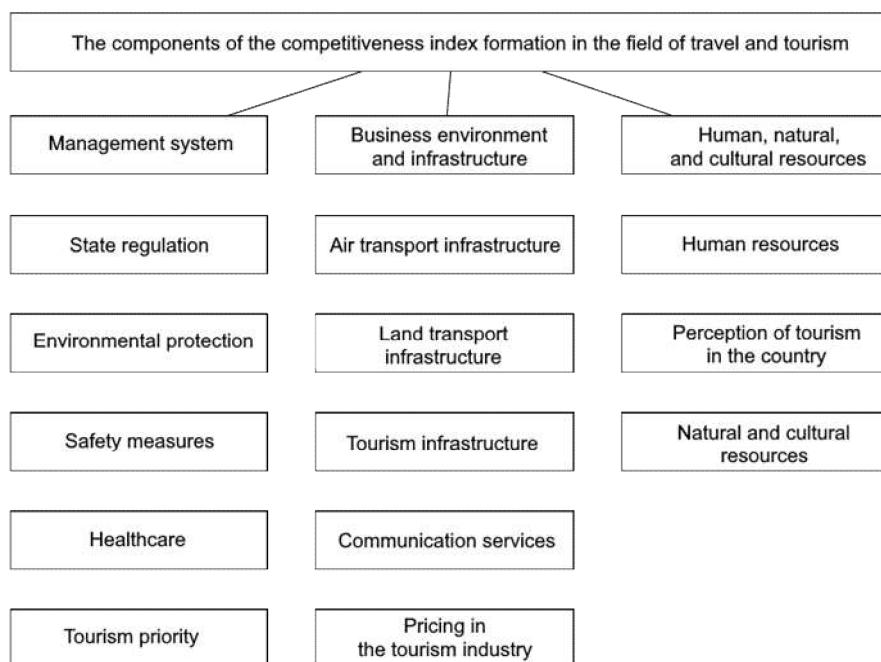
However, currently the researchers from different fields of scientific activity believe that global problems materialize in the form of risks that are multifaceted (Gribust, 2018; Provalova et al., 2019). For example, we see processes when stable societies become fragmented, which leads to a deterioration in the state of the global economy (Cole and Browne, 2015). At the same time, great advances in technology, economics, and ways of doing business are being observed, which are called the "fourth industrial revolution" (Blanco, 2011). This development provides great opportunities to reduce the negative impact on the environment and to solve other pressing global problems. Nonetheless, this revolution holds risks associated with changes in the structure of employment, deepening income inequalities and increasing cybersecurity (Lincaru et al., 2020).

In particular, the uneven socio-economic development of the regions is one of the most relevant areas of economic policy development for most countries of the world (Pedrana, 2013). Their opinion is confirmed by the study of the World Economic Forum, which identified the most significant risks until 2020, including environmental issues and socio-economic development of the population (Primayesa et al., 2019).

### 3. Materials and Methods

According to a study by the World Economic Forum, which was conducted on the basis of the assessment of the Travel and Tourism Competitiveness Index (TTCI) in 2015 (Figure 1), changes were identified that will affect the development of tourism and business (Mikayilov et al., 2019).

**Figure 1: The components of the formation of the competitiveness index in the field of travel and tourism**



It should be noted that the study of the index allows to comprehensively study global processes in the economy, social and environmental fields, as well as to characterize the changes that directly affect the development of business, and tourism in particular. However, the matter of methods for evaluating the components of the competitiveness index in the field of travel and tourism remains debatable, because the indicators that characterize certain components of international ecological tourism are unclear (Baburin et al., 2018).

If we consider the modern experience of entrepreneurial activity in the process of tourism activity, we can say that it is necessary to develop ecological tourism more efficiently, that is, to reduce the level of permissible environmental impact to a value that can be called threshold. We believe that this will generally reduce the level of anthropogenic pressure that the territory experiences from private unregulated tourism in general. An important condition for this is a detailed and professional planning of the development of ecotourism, management, and monitoring of ecotourism.

### 4. Results and Discussion

To support environmental protection activities and search for alternative sources of financing, it is necessary to develop the structure of local ecological tourism. First of all, it is necessary to identify travel companies whose activities are most consistent with the principles of eco-tourism, and to promote their development both in the Arctic and on the international market of travel services, in order to attract inbound tourists to our country.

Equally important is the establishment of relations with leading foreign tourism companies, research centres, universities, etc. with subsequent participation in international

exhibitions, fairs, scientific conferences, and forums that are dedicated to environmental tourism. According to a study by the World Economic Forum, in 2019, climate deterioration is at the highest risk (due to the failure to implement the climate change program, which was adopted at the COP21 climate conference in Paris in 2015), as well as the level of population migration. A number of documents present five global risks projected by the World Economic Forum over the past decade (Hunter, 2002).

At the same time, it should be noted that the principles of eco-tourism provide not only that the local population receives income or new jobs as a result of an increase in the number of tourists, but the economic activity of the entrepreneur must meet the requirements of environmental sustainability, that is, not harm the environment, considering the needs of both current and future generations. Consequently, climate change is one of the most serious threats to society, the economy, and the environment. Changes in climate and weather patterns drive the demand for travel and tourist flows (Pleshanova and Yalyalieva, 2019). Due to the increase in temperature, the attractiveness of many destinations will disappear. Winter sports will become less practical in some places (Hunter, 2002). Coastal tourism is quite vulnerable to sea level rise. The changes that may take place soon are presented in Figure 2.

**Figure 2: Territories that are under threat of different nature**



Note: 1) WS – warmer summers; 2) WW – warmer winters; 3) SLR – sea level rise; 4) PD – political disorder; 5) LB – loss of land biodiversity; 6) MB – loss of biodiversity of marine animals and plants; 7) W – reduction of drinking water; 8) D – increased outbreaks of disease; 9) TCI – transportation costs increase; 10) EE – increase in the number of extreme events.

Global issues that affect tourism and business development should also include administrative barriers that impede the movement of people between countries. In this case, outdated practice of the visa issuance process and border control is seen. Nevertheless, this system is being improved: according to a UNWTO study, the share of global travellers who must apply for a visa has decreased from 77% in 2008 to 62% in 2014. Indeed, visa facilitation generates 89 billion US dollars in added revenue from international tourism and 2.6 million more country jobs in 2019. At the same time, there is now a global population migration in the world, therefore it is necessary to note the importance of border control to eliminate the possibility of a terrorist threat.

Secondly, the next step, which has an impact on the tourism sector, is the complication of the processes of hiring a professional. Studies show that for every 30 new tourists one job is created. It is believed that the field of aviation and tourism services is the largest employer in the world. In addition, this area has immense potential for further job creation. For example, according to forecasts of the World Economic Forum, by 2023, 338 million people will be employed in these areas. But currently there is a shortage of professional staff.

Thus, the public and private sectors need to work closely and update university curricula to meet the needs of the market and meet the technological advances of humanity. As noted, proceeding from the study, it is necessary to develop a curriculum in such a way as to satisfy the current and strategic needs of a particular circle of customers, social needs that require emphasis on the formation of existing competencies (Santos et al., 2017).

A key factor is also the process of changing tourism demand. The tourism sector needs to thoroughly analyse the services that enterprises currently provide, because demographic indicators are changing, and the needs of tourists are changing with them. At the same time, modern tourists are paying increased attention to reducing the negative impact on the environment from an environmental standpoint. This happened due to the following processes currently being seen (Pessoa, 2013):

- forecasting an increase in the passenger flow of air transport by 31% until 2020;
- increase in electricity consumption by 20%;
- the rising number of tourists also increased the volume of waste, water use, and the deterioration of the state of cultural and world heritage objects.

Despite all the forecasts, world organizations are already trying to change the situation, namely: active negotiations are underway to establish standards and targets for measuring environmental impact. In addition, a major step is to increase the level of consciousness and responsibility of tourists (Maltseva et al., 2019). At the modern stage of human development, the most relevant is the issue of safety during travel. The progress that has been seen in tourism development in recent decades can stop and even change to regress through the following factors (Katircioglu et al., 2018):

- geopolitical tensions in the Middle East;
- growing threat of terrorism from the Islamic state;
- pandemic risk (an example is an Ebola virus outbreak);
- population migration due to several reasons.

Countries with political disorder are inevitably experiencing a decrease in the number of international tourists. No country has been able to protect its tourism sector from the consequences that have arisen due to the instability of the political system. Egypt's experience over the past decade is a good example. In 2005, in Sharm el-Sheikh and in 2006 in Dahab, terrorist acts were organized in which 23 Egyptians and tourists were killed. This situation caused a loss of 8% of foreign revenue from tourism. In 2011, following the resignation of President Mubarak, the Egyptian tourism market experienced a decline in annual tourism revenue from 14 million to 9.5 million US dollars. The story repeated two years later when political turbulence, which led to the overthrow of President Mursi, caused a decrease in tourist flow from 11.5 million trips in 2012 to 9.5 million in 2013.

Another example is Lebanon. The Lebanon-Israeli War of 2006, and a series of episodes of violence in 2008, according to the travel and tourism competitiveness report, led to a gradual decrease in tourism revenue by 17.3%. Examples can be found in other regions of our world. Thailand has seen a decline in tourist confidence since December 2008, when international airports started closing and many foreign travel agents left the country. This led to a 3% decrease in foreign tourist arrivals and a 12% decrease in foreign tourism revenues in 2009. The effect continued in 2010. Unfortunately, the current political situation caused a drop in about 18% of foreign tourist arrivals. All this leads to a decrease in the country's willingness to accept tourists, as well as a further decrease in its attractiveness for domestic tourists (Table 1).

**Table 1. The average change in tourism costs of inbound and domestic tourists due to political disorder**

<b>Average expenses of inbound tourists, thousand dollars USA</b>			
	2008	2009	
Thailand	1,543	1,400	
	2011	2012	2013
Egypt	983	967	927
<b>Average expenses of domestic tourists, thousand dollars USA</b>			
	2008	2009	
Thailand	15,600	14,000	
	2011	2012	2013
Syria	1700	1100	800

Given the above dynamics of changes in tourism costs of inbound tourists in different countries that have had political crises, we can conclude that each of these countries has suffered economic changes. Thus, the average expenses of foreign tourists in Thailand decreased by 9%. In Egypt, there is a situation where over two years the level of tourism costs

of inbound tourists decreased by only 6%. According to the travel and tourism competitiveness report, a vicious cycle is observed: political instability leads to lower demand and private investment is reduced (as investors lose confidence), public investment is reduced, tour operators and travel agents become less active due to insufficient orders or fear of tourists' security.

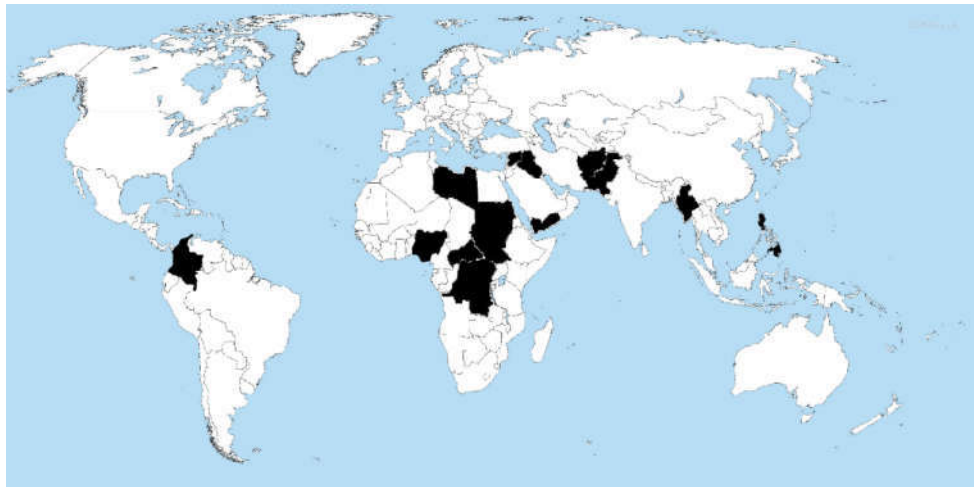
For example, German tourism giant TUI reported a loss of 46.4 million euros in the first quarter of 2012, mainly due to weak demand for travel to North Africa due to the Ebola virus outbreak, including a change in cruise lines in March 2014. Over the past decades, the scientific literature that covers trade processes and the factor of mobility, paid much attention to the issue of the correlation between migration and tourism. The connection between tourism and migration can occur in the following steps:

1) firstly, this is a causal relationship between tourism and migration in matters of both obtaining jobs and consuming tourism services. This relationship is known as "tourism under the migration hypothesis";

2) secondly, migration encourages relatives and friends to visit the country (VFR trips), thereby affecting the development of tourism in this country.

Thus, migration is one of the main prerequisites for VFR travel. However, more researchers in the world are starting to agree with the fact that the rate of increase in the number of forced migrants reaches a critical limit. The definition of this risk includes forced migration, which is caused not only by violence and conflict in countries such as Syria and Iraq, but also due to environmental or economic reasons. Global refugee flows have reached levels that are unprecedented in recent history. In 2014, 59.5 million people were forcibly displaced (compared to 40 million during the First World War). This problem is global in nature (Figure 3).

**Figure 3: Map of macroregions with the most intensive migration flows in 2014-2015**



It follows that migration processes have a negative impact not only on the development of tourism, but also on the state of the economy and the social standard of living of the population. Furthermore, currently there is a tendency when people remain in the host countries more than they are used to (for example: in 1980 the average length of stay of a migrant in the country reached nine years, and in 2000 increased to 20 years). The longer people stay away from their home countries, the more difficult it is to return. This is because often they lose their money for life, family ties and physical properties, etc.

Lack of an effective integration policy in most countries can lead to the formation of ghettos or isolated communities on the margins of society, an increase in environmental pressure, and the emergence of social tension. In Europe, the rapid influx of migrants in 2015 challenged local financial and environmental resources, reinforced the trend towards polarization of society, which in turn undermined the effectiveness of European governance structures. All these factors, if unresolved, can pose risks in host countries. Although research on the economic impact of refugee influx is limited, it suggests that refugees can make a positive contribution to the host economy by increasing demand, remittance inflows, promoting the use of technology, and participating in international trade.

Thus, summarizing the above risks, the issue of the process of reviving the intensity of tourist flows after periods of instability becomes relevant. One of the best ways to solve the abovementioned issues is to change the orientation from international tourism to domestic. A striking example of such changes is Thailand. In 2008, the government of this country started collaborating with the private sector to organize the Thailand Tourism Exhibition, according to which it was established that the tax rate was reduced for local airlines, hotels, and other tourism enterprises, thereby lowering prices and increasing the number of domestic tourists. However, revenues from domestic tourism are not always able to fully compensate for the losses incurred by enterprises because foreign tourists usually spend more money than domestic tourists. It should be noted that the development of eco-tourism will attract the attention of not only residents of the region neighbouring the Arctic, but also foreign tourists, due to the fact that they pay attention to environmental conservation, and also actively participate in eco-tourism trips. The development of ecological tourism in territorial-administrative units can provide an increase in real incomes for the rural population due to the following:

- provision of services for the reception of tourists;
- arrangement of tourist routes and the provision of excursion services;
- transport services for tourists;
- jaeger activities;
- provision of services for the rental of tourist equipment;
- production and sale of environmentally friendly products to tourists
- food, the provision of culinary services;
- sale of handicrafts;
- cultural and recreational activities factoring in the historical and ethnographic heritage (animation).

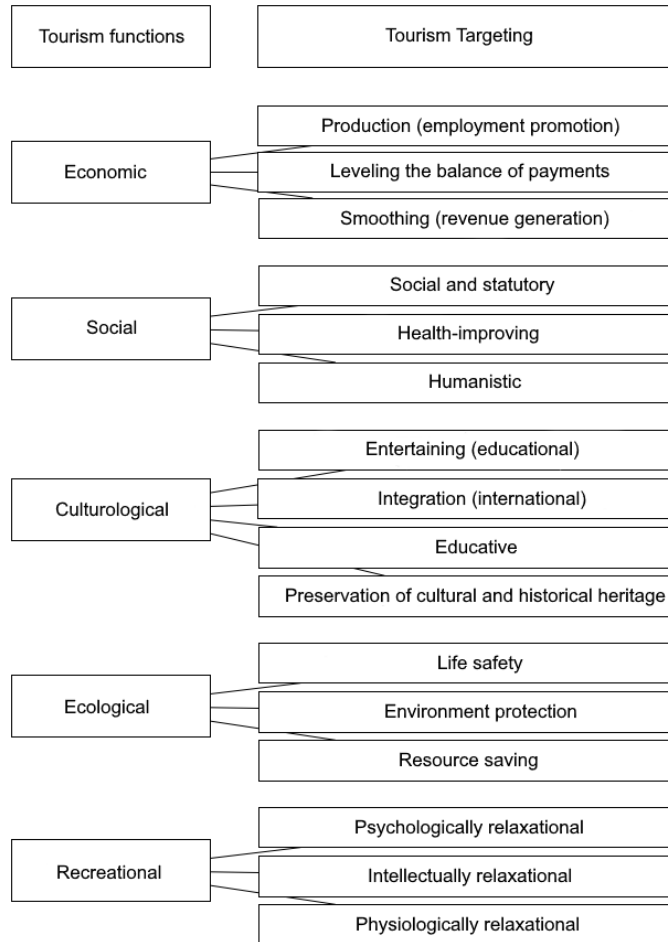
In addition, to reduce these risks and reduce the negative impact of various issues, it is important to make technological progress and introduce innovative processes that can increase both efficiency and traffic safety. There is a need to study ways to implement risk early warning systems, scenario planning, tourist data exchange. That is, it is necessary to improve the system of cooperation between international organizations, governments, and the private sector.

Thus, the global problems that have directly arisen already in the Arctic region, including national problems that play an important part in the course of travel planning, necessitated the development of not only the process of effective implementation and management of ecological tourism, but also the formalization of a system for assessing the development potential of eco-tourism.

Furthermore, as noted in the report “Socio-Economic Potential of Sustainable Development of the Arctic Region”, one of the most important tools for long-term sustainable development of the Arctic region is the creation and development of medium and small business companies, providing them with simplified access to capital, and development of business related to tourism and the cultural heritage of the territorial-administrative units. With that, the environmental issues, contribution to the reduction of environmental risks, and the creation of new jobs in environmental professions do not go unnoticed. Thus, the matter of certification of ecotourism services as a part of the state evaluation of the potential of ecological tourism is still unsettled.

Currently there is a trend in the world in which ecological tourism, compared to mass tourism, is characterized by the most powerful and dynamic development. One of the main reasons for this dynamic is that environmental problems have become global, although they are manifested to varying degrees in various parts of the world. Extrapolation of the main provisions of the concept of sustainable development has its own logical, natural, scientific justification. This relates to the recognition of tourism as a multifunctional phenomenon of the 20th century (Figure 4):

- interdisciplinary subject area of knowledge;
- diversified field of human activity;
- sector of the global economy – the tourism industry, which is dynamically developing.

**Figure 4: Functions of tourism and their target orientation**

According to UNWTO forecasts, ecotourism is one of the five main strategic directions of development for the period until 2020. According to expert estimates, the number of people concerned about the state of nature is growing. Environmental dysfunction creates the need for some people to change their attitude towards nature, for others – to actively participate in its protection and conservation, for still others – to renew natural resources. Some people, not limited to their own efforts, seek to attract supporters to their vigorous activity.

For example, 96% of CondéNastTraveler readers believe that hotels, motels, and resorts should handle environmental issues. Over 74.5% of respondents believe that the environmental policy of hotels affects their decision to stay there or not. Thus, the above suggests the seriousness of ecological tourism as part of the global tourism business and as part of the domestic tourism business. 55 billion US dollars' worth of goods and services are produced annually for ecological tourism, which makes up 25% of international trade in services and 12% of the gross world product. According to various sources, the annual growth in revenues from eco-tourism in the world amounts from 20% to 30% (Table 2).

**Table 2. Forecasts of revenues from ecotourism in the world, billion dollars USA**

1997	2000	2008	Fact	2014		
				Forecast		
				Pessimistic	Realistic	Optimistic
31.7	154	665	945	1,985.7	2,540.8	3,210
2019				2020		
Forecast				Forecast		
Pessimistic	Realistic	Optimistic	Pessimistic	Realistic	Optimistic	
4,117.5	6,203.1	9,168	5,929.2	9,692.3	15,493.9	

In 2019, there was a deviation from the predicted values of the rates of development of ecological tourism in the world. However, it should be noted that the increase in income from eco-tourism is growing not only due to increased demand. This increase is also conditioned upon population growth, income growth of its individual groups, reduction of working hours



in many parts of the world, increase in vacation time, increase in the cultural and spiritual component, the increasing role of globalization of the world economy and social processes, etc. According to this, it can be argued that growth in demand for eco-tourism is determined by three main factors:

- general growth in tourism volumes;
- growing popularity of “travel for special interests”;
- increasing public awareness and attention to environmental issues.

To date, analysis and evaluation of the demand of natural and ecological tourism are based on 60% of data for North America. The potential of the European continent, the Arctic region and the newly industrialized countries is still understudied. Currently, there are no fundamental studies of the global eco-tourism market. There are only a few marketing studies of individual tourist regions (for example, Kenya, Belize, Costa Rica, and of the latest – Germany, Finland, Namibia, Turkey). At the same time, existing studies focus on tours organized by tour operators and implemented as a single package of services, while the segment of individual tourism is not paid enough attention.

Promoting the social and environmental safety of tourism, especially in areas with a significant amount of natural resources, offers many opportunities for the country to become more competitive in the global market. The mainstream of ecotourism in the world is made up of residents of industrialized countries, interested in nature and life, preserved in the pristine corners of the planet. Of interest are the exotic nature and culture of Africa, Asia, Central America. The targeted policies of the host countries contribute to the formation of a large flow of ecotourists to Kenya, Tanzania, South Africa, China, Ecuador, Costa Rica, Thailand, as well as to New Zealand, Australia, and others. However, travellers interested in pristine nature of their own country or countries of their continent make up a large share of tourist flows.

Such trips are typical for Americans traveling in their own national parks, Europeans who choose the pristine territories of the Scandinavian countries for recreation. In the Dominican Republic, for example, tourists who spend the night in a bungalow spend 18 times less resources compared to passengers on cruise ships. In Costa Rica, according to experts, up to 53% of tourism income can be attributed to environmental tourism and environmental activities, as well as related services. Costa Rica is often seen as an example of how a country can develop strategically with the help of the correctly proposed eco-tourism policy.

Supporting protected areas that tourists visit so often can also bring long-term economic benefits to the national economy. Some countries were able to create a source of profit based on eco-tourism, to create foreign exchange earnings in the budget and provided employment for the local population. Positive forecasts of experts on the development of eco-tourism are noted in several European countries, such as Switzerland, Austria, Germany. According to experts, an increase in the volume of ecotourism trips will contribute to:

- the growing importance of daily environmental problems in leading tourist countries;
- an increase in the target ecotourism group at the expense of children brought up in an atmosphere of a conscious attitude to environmental protection;
- the growth of efforts that have been made to ensure tourism in the host countries.

The income of local enterprises received for the provision of services by environmental tourists is much higher than those that originate from mass tourism. Standard all-inclusive travel packages, as a rule, supply only 20% of revenues to local companies, and the remaining 80% of revenues come from airlines, hotels, and large tour operators. In contrast, ecological tourism allows saturating the budget of the local economy to 95%.

Africa is a market leader in ecotourism and accounts for about half of all environmental trips around the world: Botswana, Kenya, South Africa, and Tanzania. In the Great African Lakes region, tourism revenues based on gorilla and other animal species generate around 20 million US dollars a year. In Kenya, a ticketing system has been introduced to visit the Masai village. Instead of the guides who took the bulk of the income exploiting the locals, the Masai tribe themselves began arranging excursions. Currently, a fair share of income goes to residents. In general, revenue grew by 800%. The export of tourism services in Africa creates significant incentives for governments and local organizations to support their rich environment as the basis for sustainable tourism.

## 5. Conclusions

Thus, tourism is an excellent means of transferring income from developed countries to developing countries. Ecotourism is especially effective in this transfer. Therefore, it is necessary to determine the potential for the development of ecological tourism. A particular issue is the support of protected areas that can bring long-term economic benefits to the national economy. Some countries were able to create a source of profit based on eco-tourism, created foreign exchange earnings in the budget and supplied employment for the local population. The protected areas in Costa Rica, for example, have received over one million visitors each year for five years. Mexico has 14 million visitors a year, as well as over 25,000 jobs.

The opportunities and prospects of different continents and countries to develop ecological tourism on their territory significantly vary. It should be noted that the emergence and development of ecological tourism is closely related to the allocation of nature reserve funds, which are attractive from an aesthetic and recreational standpoint. It is the territories of the nature reserve fund that have become centres of ecological tourism around the world.

Studies by the IUCN Economic Service and the World Commission on Protected Areas (WCPA) have shown that in Canada, for example, annual GDP growth from conservation measures reaches 6.5 billion Canadian dollars. This allows to create 159 thousand jobs and provide tax revenues in the amount of 2.5 billion Canadian dollars.

In Japan, in turn, according to estimates by the Ministry of Agriculture and Forestry, forest ecosystems and agroecosystems provide public services worth 240 and 120 billion US dollars (12% and 6% of GDP, respectively). This played a significant part in the implementation of the national policy of conservation and preservation of lands occupied by natural biocenoses, and in the search for ways to generate income from them. In the case of the Arctic region, the nature reserve fund should become one of the main drivers of development.

## 6. References

- Baboshkina, A.A., Savina, N.P., and Morozov, I.V. 2018. "Management Processes in the Development of the Socio-Economic Environment of the Region", *Journal of Advanced Research in Law and Economics*, 9(2), 376–385.
- Baburin, V.L., Tikunov, V.S., Badina, S.V., and Chereschnia, O.Y. 2018. "The Assessment of Socio-Economic Potential Density of Arctic Territories in Russia", *Regional Science Inquiry*, 10(2), 37–44.
- Belitskaya, M. 2018. "Ecologically Adaptive Receptions Control the Number of Pests in the Ecosystems of Transformed at the Forest Reclamation", *World Ecology Journal*, 8(2), 1–10.
- Blanco, E. 2011. "A Social-Ecological Approach to Voluntary Environmental Initiatives: The Case of Nature-Based Tourism", *Policy Sciences*, 44(1), 35–52.
- Cole, S., and Browne, M. 2015. "Tourism and Water Inequity in Bali: a Social-Ecological Systems Analysis", *Human Ecology*, 43(3), 439–450.
- Gribust, I. 2018. "Regulation of the State of Plantings in the Anthropogenically Transformed Territories: the Principle of Dendrological Diversity", *World Ecology Journal*, 8(2), 11–21.
- Hunter, C. 2002. "Sustainable Tourism and the Touristic Ecological Footprint", *Environment, Development and Sustainability*, 4(1), 7–20.
- Katircioglu, S., Gokmenoglu, K.K., and Eren, B.M. 2018. "Testing the Role of Tourism Development in Ecological Footprint Quality: Evidence from Top 10 Tourist Destinations", *Environmental Science and Pollution Research*, 25(33), 33611–33619.
- Kruzhilin, S., Baranova, T., Mishenina, M., and Zaitseva, M. 2018. "Regional Specificity Creation of Protective Afforestation Along Highways", *World Ecology Journal*, 8(2), 22–32.
- Larionova, N.I., Yalyalieva, T.V., and Napolskikh, D.L. 2018. "Trends and Prospective Models for the Formation of Innovative Clusters in the Russian Federation", *Regional Science Inquiry*, 10(1), 91–101.
- Lincaru, C., Pirciog, S., Atanasiu, D., Stroe, C., Ciucă, V., and Grigorescu, A. 2020. "Patterns of Mainly Tourism Sectors at Local Level by Employee's Characteristics Using GIS Multivariate Clustering Analysis - Romania Case Study", *Regional Science Inquiry*, 12(1), 261–290.
- Maltseva, A., Veselov, I., and Bukhvald, E. 2019. "Estimation of Region's Intellectual Capital Based on the System of Indicators: Case of the Russian Federation", *Regional Science Inquiry*, 11(1), 147–157.

- Mikayilov, J.I., Mukhtarov, Sh., Mammadov, J., and Azizov, M. 2019. "Re-evaluating the environmental impacts of tourism: does EKC exist?", *Environmental Science and Pollution Research*, 26, 19389–19402.
- Pedrana, M. 2013. "Local Economic Development Policies and Tourism. An Approach to Sustainability and Culture", *Regional Science Inquiry*, 5(1), 91–99.
- Pessoa, A. 2013. "Competitiveness, Clusters and Policy at the Regional Level: Rhetoric vs. Practice in Designing Policy for Depressed Regions", *Regional Science Inquiry*, 5(1), 101–116.
- Pleshanova, D.A., and Yalyalieva, T.V. 2019. "On the Issue of Effective Economic Policy in Region under Leasing", *Regional Science Inquiry*, 11(2), 29–39.
- Primayesa, E., Widodo, W., and Sugiyanto, F. X. 2019. "Tourism and Economic Growth Nexus in Indonesia. The dynamic panel data approach", *Regional Science Inquiry*, 11(2), 83–91.
- Provalova, E.V., Lukyanova, M.N., Skrobotova, O.V., and Ivanova, R.M. 2019. "Prospects for the Development of Ecological Tourism in Specially Protected Natural Areas of the Ulyanovsk Region", *Journal of Environmental Management and Tourism*, 10(4), 809–818.
- Santos, K., Gonçalves, H., Sequeira, T., and Deniz, F. 2019. "Development and solidarity economy strategies in brazil: Case studies", *Regional Science Inquiry*, 11(2), 153–165.
- Vargas-Hernández, J. G., and Pérez Martínez, M.A. 2016. "Mergers and Acquisitions Strategies for Market Penetration in New Countries: The Case of Alsea Group", *Regional Science Inquiry*, 8(2), 55–64.