



Regional Action Plan

Implementation and testing of new (water) routes
between Petrozavodsk – Zaonezhye (Russia)

December 2020

Content

Introduction	2
Transport planning – national and regional level regulations	4
Description of the region and existing mobility models/offers	6
Challenges of transportation models and recommendations for improving mobility offers in policy and planning documents	14
Mobility needs in the region	17
Disparities between the current mobility needs and the existing mobility solutions	24
Innovative solutions to improve mobility in the region	25
Recommendations and operation plan for improved mobility offers	27
Summary	28

Introduction

MARA – Mobility and Accessibility in Rural Areas – aims to improve the accessibility and mobility in touristic remote areas of the BSR by increasing the capacity of transport actors. The project is funded by the Interreg Baltic Sea Region Programme 2014–2020. The project is gathering 12 full partners and 13 associated partners from nine countries surrounding the Baltic Sea. The partnership is made up of regional and national public administrations as well as universities.

Several common challenges are faced by rural areas of the Baltic Sea Region:

Population decline/demographic change

Seasonal fluctuation of population/tourists

Expensive public transport

Car dependent lifestyle

Many stakeholders involved

Lack of using digital solution

MARA aims to crosscheck the actual mobility demand of residents and tourists with current mobility offers. The project aims to increase the capacity of regional and local transport actors to address multifaceted mobility needs by:

improving existing services

developing and testing innovative sustainable mobility solutions for remote areas.

Finally, the project will integrate its improved or new mobility approaches in remote areas into regional spatial and mobility development plans. This will increase the long-term impact of the main outputs and help to share the project results with other BSR regions.

The territory of the MARA project is part of the Republic of Karelia (Russia). The focus area includes three rural settlements located on Zaonezhsky peninsula which is a part of the Medvezh'egorsk municipal district located north of the regional capital Petrozavodsk.

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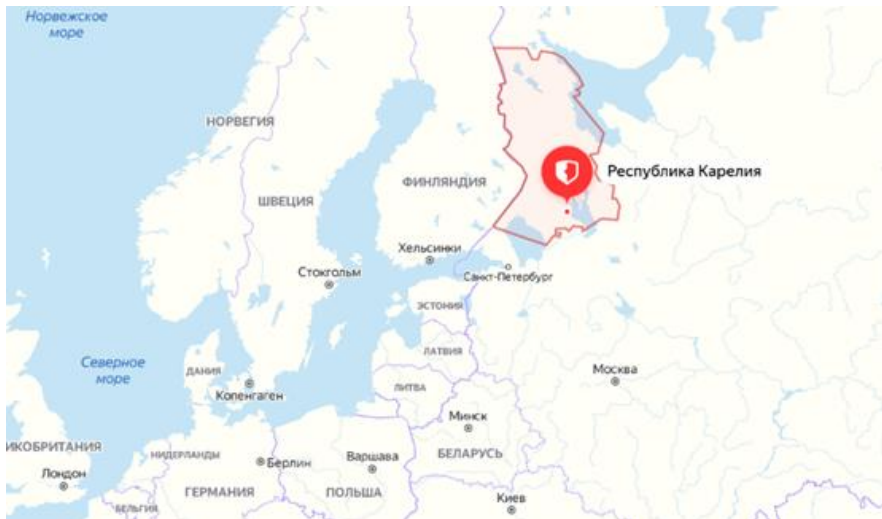


Figure 1. Republic of Karelia on the map



Figure 2. Districts of the Republic of Karelia

Transport planning – national and regional level regulations

The choice of directions for the development of the transport system is based on the forecast of the long-term socio-economic development of the Russian Federation until 2030 and other Federal documents. The strategic documents defining the perspective directions of development of economy and social sphere of the Russian regions, branches of economy, the transport system of the country as a whole and separate modes of transport, prospects of development of transport and logistic infrastructure, prospects of international transport integration are taken into account. Other sectoral development programmes have been taken into account in the development of the Transport Strategy of the Russian Federation until 2030. The experience of development and implementation of strategic documents and initiatives in the field of transport development abroad has been considered when forming priority directions of the Russian transport system development.

The Concept of Social and Economic Development of the Republic of Karelia for the Period up to 2022, approved by Decree No. 227r-P of the Government of the Republic of Karelia of March 20, 2018, defines the main transport development goals for the future as:

- Meeting consumer demand for high-quality passenger and freight transport services;
- Ensuring transport accessibility to communities and production facilities;
- Ensuring comfortable and safe travel conditions for users of the transport system.

The goal and objectives of the state programme are based on the priorities of transport system development, taking into account existing problems.

The objective of the state programme is to develop a safe and efficient transport infrastructure, ensuring transport accessibility of settlements and production facilities, and improving the accessibility of transport services for the population in the Republic of Karelia.

In order to achieve the state programme's objective, the following priority tasks need to be addressed:

- developing and improving the road network of regional or intermunicipal highways and local roads, ensuring safe and uninterrupted cargo and passenger transportation, increasing public mobility, and reducing transport costs
- creating conditions in the Republic of Karelia to reduce the number of fatalities in road accidents;

-develop transport services for the population in suburban and inter-municipal areas.

The goal of the State Programme will be achieved by addressing three objectives within the framework of separate subprogrammes.

Based on the priorities of transport system development and taking into account the existing problems, the goal and objectives of the state programme have been formulated.

The State Programme of the Republic of Karelia "Development of the Transport System" was approved on the 20th of June 2014, the latest amendments were made on the 19th of December 2019. Includes 2 phases: the first phase: 2014 - 2018; the second phase: 2019 - 2030. It consists of three sub-programmes: 1 "Development of road facilities", 2 "Improving road safety", 3 "Development of transport services for the population".

It is financed from the budget of the Republic of Karelia and from non-repayable target revenues to the budget of the Republic of Karelia. The Programme's responsible executor is the Ministry of Road, Transport and Communications of the Republic of Karelia.

Description of the region and existing mobility models/offers

The focus territory within the MARA project in the Republic of Karelia (RUSSIA) is the Zaonezhye area, which includes the large Zaonezhsky peninsula and the adjacent archipelago of the Kizhi skerries (about 500 islands), covering the area of 560 km². The northern border passes through a natural watershed north of the Zaonezhsky peninsula. It is a single unique historical and cultural complex with a historically established settlement system, which is administratively part of the Medvezh'egorsk municipal district of the Republic of Karelia. A large number of shallow rivers and deep-water lakes characterizes Zaonezhye relief. The frequent alternation of elongated bays, lakes and long narrow rocky ridges with strict orientation from north-west to south-east. Historical transport routes for the Zaonezhye area are inland waterways (Lake Onega). Residents of Zaonezhye have created a particular type of boat – "kizhanka", popular on Lake Onega even nowadays. The road network is poorly developed due to the complex relief and water obstacles.

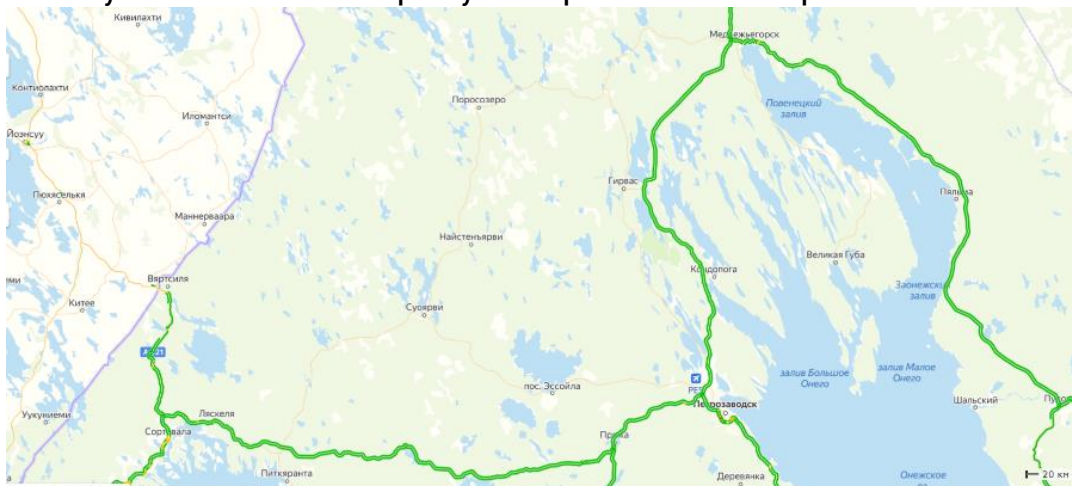


Figure 3. Focus territory - Zaonezhye

There are 3 rural settlements within the territory of the Zaonezhsky peninsula (Velikaya Guba, Tolvuya and Shun'ga). Each of them consists of a number of small villages (about 90 altogether); in some of them residents live only during the summer season. Total population of the peninsula is about 3500 persons. The population has been declining for over past 10 years. Another trend is the ageing of the population; young people leave mainly for the district center Medvezh'egorsk and the regional capital Petrozavodsk.

The territory of Zaonezhye is famous by its' wonderful nature, historical and architectural monuments, the pearl of which is the UNESCO monument Kizhi island. The State Historical, Architectural and Ethnographic Museum-Reserve "Kizhi" was established in 1966. In 1990 Kizhi was included into the UNESCO World Heritage List

<http://whc.unesco.org/en/list/544/documents/%23Abevaluation>

The Kizhi State Nature Reserve of federal subordination includes the protection zone of the Kizhi Museum-Reserve. The protected area of the Kizhi Museum-Reserve is located within the 50,000-hectare, it was created to protect rare species of flora and fauna as well as waterfowl reproduction sites. The Museum-Reserve is also located in close proximity to the planned Kizhi Skerries National Park (the second option is the Zaonezhsky Nature Park) with an area of 115,000 hectares, whose main purpose is to preserve the natural and cultural values of the Northern part of Zaonezhye.

There are several transport options for tourists and local residents coming to Zaonezhye and Kizhi island.

By railway: Oktyabr'skaya railway connects Moscow, St. Petersburg and Murmansk. People can come to Medvezh'egorsk station and then by local bus and car travel to Zaonezhye.

Automobile and bus: one of the main roads is highway R-17 – the asphalted road of regional importance. It starts in Medvezh'egorsk, passes through several villages (Lavasguba, Perguba, Fedotovo, Sigovo, Keftenitsy, Shunga, Bor Pudantsev, Padmosero, Tolvuya, Purgino, Velikaya Niva) and ends in Velikaya Guba settlement. The length of the route is 120 km, low traffic, not developed infrastructure. There is only one petrol station located in Medvezh'egorsk. The other road to Velikaya Guba through the villages of Kazhma, Uzkie and Kosmosero is becoming popular among tourists travelling by cars. This route to Velikaya Guba is shorter by 27 kilometres, runs through picturesque places, but the road is not designed for buses and other bigger vehicles.

Regular bus runs on the route:

1. Petrozavodsk – Medvezh'egorsk - Velikaya Guba (Karelavtotrans state company);
2. Medvezh'egorsk - Velikaya Guba (IE Vinogradov V.V., LLC Petrotransport);
3. Medvezh'egorsk - Tolvuya (IE Vinogradov V.V.);
4. Medvezh'egorsk - Lambasruchey (IE Vinogradov V.V.).

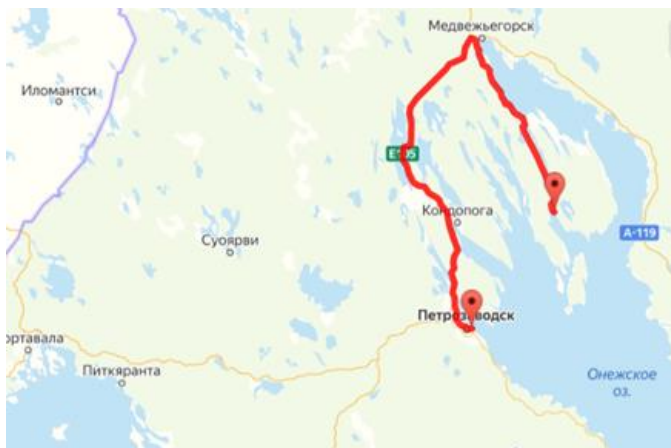


Figure 4. Road from Petrozavodsk to Velikaya Guba through Medvezh'egorsk

By water – during the summer season (average May – October, depends on the navigation period) regular high-speed motorboats of Kometa and Meteor types voyages between Petrozavodsk and Zaonezhje are organised. These voyages are subsidized from the budget of the Republic of Karelia. There are also charter excursion and tourist voyages on the route Petrozavodsk - Kizhi – Petrozavodsk are carried out by some tourist companies ("Hotel Karelia Tour Holding" LLC and "Karelia Excursion Bureau" LLC). Charter voyages for tourists and sightseers are possible on the route Kondopoga - Kizhi – Kondopoga as well as on the route Velikaya Guba - Kizhi - Velikaya Guba and other routes organised by local companies.

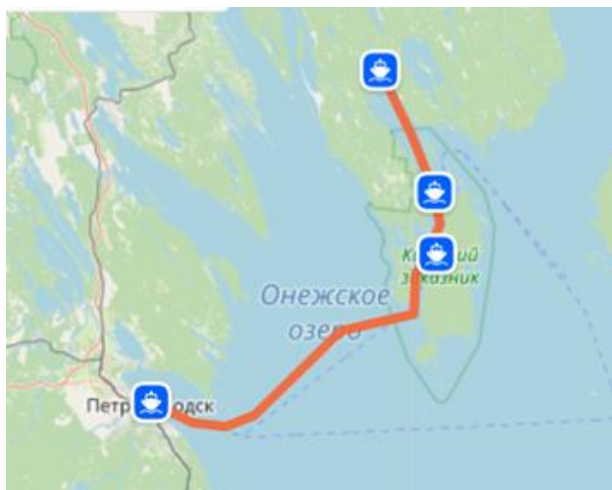


Figure. 5 Water way from Petrozavodsk to Velikaya Guba

The State Historical, Architectural and Ethnographic Museum-Reserve "Kizhi" has a license to carry passengers by 6 local boat "Nord Silver". More than 500 cruise ships arrive on Kizhi island during navigation. Museum - Reserve "Kizhi" notes a trend of 5-10% annual growth of ship calls for the

last 5 years (except of 2020 when a number of boats visiting Kizhi island decreased due to corona crisis limits). During the navigation period 2018 more than 330 small vessels with passengers arrived to Kizhi Island.

Also, cargo and passenger transportation are carried out by private carriers on individual requests. In the water area of Zaonezhye there are passenger berths on Kizhi island (in the operational management of the Kizhi Museum-reserve), municipal berths in the village of Sennaya Guba and Velikaya Guba settlement (Velikogubskoye rural settlement). Passenger ships on the route Petrozavodsk - Kizhi – Velikaya Guba - Petrozavodsk and Petrozavodsk - Kizhi - Petrozavodsk are dispatched from the state berth in Petrozavodsk (tenant - Petrozavodsk Shipping Company).

Due to the limited capacity of vehicles in the winter period, tourist attendance on Kizhi island from November to April (6 months) does not exceed 6 thousand people. While in the navigation period from May to October (6 months) the number of visitors and tourists reaches 200 000 people.

There are no ice class vessels for passenger transportation in winter in Onega Lake water area.

The waterways of Zaonezhye have distinct features:

- Seasonality in operation (usually from mid-May to mid-November, about 180 days per year);
- The need for construction and maintenance of appropriate infrastructure (including dredging) and maintenance of the navigation environment;
- Inland waterways transportation of passengers is subject to licensing;
- The waterways are non-alternative for local residents of the Kizhi skerries as well as tourists visiting the Kizhi Museum-Reserve.

By helicopter - in the inter-navigation period regular communication with Kizhi and Bolshoy Klimenty islands (Sennaya Guba village) is provided once a week by Mi-8 helicopter. The helicopter's passenger capacity is 20 people (the flights are subsidized from the budget of the Republic of Karelia). At the same time, there is no possibility to purchase tickets remotely – tickets are sold only at the ticket office in Petrozavodsk and not earlier than two weeks before the flight. These flights can be changed by the personnel of Rosgvardiya and EMERCOM (rescue service) units located on Kizhi island, which significantly limits the availability of seats on board for the local population.

During the winter time "Hivus 10" Hovercrafts are used on the routes of Petrozavodsk - Kizhi Island - Petrozavodsk, Petrozavodsk - Bolshoy Klimenty island - Petrozavodsk, Velikaya Guba - Kizhi island - Velikaya Guba. The Kizhi Museum-Reserve has 6 "Hivus 10" Hovercrafts, 4 private carriers have 5 Hovercrafts. In the inter-navigation period 2018-2019 the Kizhi Museum-Reserve performed 262 voyages on the route Petrozavodsk - Kizhi island - Petrozavodsk and 128 voyages on the route Velikaya Guba - Kizhi island - Velikaya Guba settlement. Private carriers have performed about 200

voyages on the same routes. The number of passengers is not taken into account, because the voyages are off-schedule and may be related to the transportation of goods, as well as to the transportation of local residents or tourists. Tourist companies carry out organized tours to Zaonezhje on snowmobiles, cross-country vehicles, motorcycles, dog sledges, skis.

Table 1. Basic information about population

Region	Total population	Population		Population changes per 1,000 inhabitants (2014-2019)	Population		
		city	village		0-19 years	20 – 65 years	over 65 years
Velikaya Guba rural settlement	1597	-	1597				
Tolvuya rural settlement	1066	-	1066				
Shun'ga rural settlement	769	-	769				

Table 2. Basic information about region

Region	Area of the region (km ²)	Number of inhabitants	Density of population (number of inhabitants per km ²)	Hard paved public roads per 100 km ² in km	Cars registered per 1000 inhabitants	Bicycle paths (km)	Geographical location/local border traffic/ connectivity to transport hubs (airports, ports)	Access to railway/buses/waterways	Number of holiday and other short-stay accommodation (with more than 10 beds)
Zaonezhskiy peninsula of Medvezh'e gorsk District (Republic of Karelia)	12 000 km ²	3432 (Jan 1, 2020) in 3 rural settlements.	0,3 (2,0 - Medvezh'e gorsk district)			-	-Petrozavodsk airport 230 km	<ul style="list-style-type: none"> - water communication between Petrozavodsk, Kondopoga and Velikaya Guba (during the summer season); - bus connection between Velikaya Guba and Medvezh'egorsk (120 km) and Petrozavodsk (247 km); - closest railway station is Medvezh'egorsk (120 km) 	0

Table 3. Touristic attractiveness about region

Region	Touristic attractiveness
Kizhi island	UNESCO monument Kizhi island. The State Historical, Architectural and Ethnographic Museum-Reserve "Kizhi". http://whc.unesco.org/en/list/544/documents/%23Abevaluation
Velikaya Guba, Tolvuya and Shunga rural settlements	<ul style="list-style-type: none"> - unique natural landscape complexes; - on the territory of the Zaonezhsky peninsula there are 46 historical settlements, most of which have a 500-year history, 194 architectural monuments of cult significance, of which 26 are monuments and 150 residential houses and outbuildings, which can be positioned as unique dwelling complexes which are the main feature of the area that testify to its traditional culture and set it apart from other parts of Karelia (but they are deteriorating and falling into disrepair because their owners have no financial means to maintain them in good condition); - the only soils in Russia composed of shungite rocks (containing nitrogen, phosphorus and potassium); - strongly developed identity of folk culture, allowed preserving to the maximum extent the spirit and religious and household traditions of the Russian North. Zaonezhje has preserved ancient Russian bylinas for Russia.

Table 4. Main problems of mobility and accessibility of region

Region	The main problems of mobility
Zaonezhye and Kizhi island	<p>Accessibility of Zaonezhye have distinct features:</p> <ul style="list-style-type: none"> - the waterways are in operation usually from mid-May to mid-November, about 180 days per year; - the need for construction and maintenance of appropriate infrastructure (including dredging) and maintenance of the navigation environment; - inland waterways transportation of passengers is subject to licensing; - high cost of transport services by water during navigation (2950 rubles (during the 2019 summer season it was appr. 42 Euro)/ person. travel "back and forth" Petrozavodsk - Kizhi island - Petrozavodsk with a 4-hour stay on Kizhi island or 2300 rubles (appr. 33 Euro)/ person one way when buying tickets for different dates); - there are no alternative transport and excursion routes to the water transport to the Kizhi island and the Kizhi skerries; - tourism infrastructure along the route R-17 Medvezh'egorsk - Velikaya Guba is not developed enough; - regular communication with Kizhi and Bolshoy Klimenetsky islands (Sennaya Guba village) is provided once a week by Mi-8 helicopter; the helicopter's passenger capacity is 20 people; - due to the limited capacity of vehicles in the winter period, tourist attendance on Kizhi island from November to April (6 months) does not exceed 6 thousand people (while in the navigation period from May to October (6 months) the number of visitors and tourists reaches 200 000 people); - there are no ice class vessels for passenger transportation in winter in Onega Lake water area.

Challenges of transportation models and recommendations for improving mobility offers in policy and planning documents

Strategy for socio-economic development of the Republic of Karelia until 2030 (amended on December 10, 2019) covers development of all districts and towns of Karelia. Tourism development in Medvezh'egorsk District of the Republic of Karelia and directly in Zaonezhye is carried out in accordance with the Strategy for the Social and Economic Development of Medvezh'egorsk Municipal District of the Republic of Karelia for the period until 2022 (approved by Resolution No. 404 of the XXX session of the Medvezh'egorsk Municipal District Council 18.05.2017).

In accordance with the territorial planning scheme of the municipal district, executed by the Federal State Unitary Enterprise "Russian State Research and Design Institute of Urbanistics" of Gosstroy of Russia (St. Petersburg), the main directions of tourism development in Medvezh'egorsk District are presented in the following areas:

1. Establishment of a regional tourist information centre, formation of the Zaonezhsky Nature Park.

On December 20, 2019, the heads of Medvezh'egorsk District and Velikogubskoye Rural Settlement Administration, the chairman of the Zaonezhskaya Izba non-profit organisation, the media and NGOs of Karelia took part in the opening of the Zaonezhye Visit Centre. The main task of the Visit Centre located in the centre of Petrozavodsk (Lenin Avenue 15) is providing up-to-date information on historical and cultural heritage of the territory, sightseeing attractions and tourist routes of the Zaonezhye region.

2. Formation of the Segozerie, Vygoretsia and Zaonezhye districts into regional tourism centres.

A land plot 10:13:124205:256 was formed for placing recreation objects on the Zaonezhsky peninsula in the Schepino tract (7 km. from the Shunga village).

3. Implement tourism infrastructure development projects around Kizhi island. A presentation titled Land Plots at Velikogubskoye Settlement, Tipinitsy, Kondoberezhnaya was prepared and posted on the websites of the district and Velikogubskoye Settlement, JSC Corporation for Development of the Republic of Karelia.

In 2019, construction of 6.5 km of the Medvezh'egorsk - Tolvuya - Velikaya Guba (106th km) - Bolnichny road was completed. In accordance with the contract between the Road Administration

of the Republic of Karelia and PSK Stroitel, construction of the 31.3 km Velikaya Guba - Oyatevshchina road is to be completed by 30 June 2023.

According to the "Tourist passport of Medvezh'egorsk District", the route along the Zaonezhye Peninsula "Silver Ring of Zaonezhye", formed by the presence of wooden architecture monuments in the area, is referred as a promising area for tourism development. This route is not currently offered to organised tourists due to the lack of collective accommodation, catering facilities and paved roads.

The local population of Zaonezhye is interested in providing tourism services. The locals arrange excursions and organise trips, hikes, outdoor activities for guests from other regions of Russia or districts of Karelia. They make and sell souvenirs, agricultural products, berries, mushrooms, fish. They receive tourists and guests in their houses and specially adapted rooms. They hold cooking master classes and performances by folk art groups. In some cases, these processes take place with the moral support of the authorities at the settlement level.

During the monitoring period of the MARA project 4 new guesthouses were opened in the territory of Kizhi skerries (reconstruction of previously existing historical houses of the 19th-20th centuries). The population is particularly active in the Velikaya Guba area: year-round transport accessibility of the mainland allows diversify the offers and range of services. But there is a problem of personnel in the area of hospitality: as a rule, local residents do not have vocational training and young people are not interested in permanent employment in rural areas.

However, over-regulation in the tourism sector pushes local private micro-business processes outside the legal framework. This, in turn, does not allow the local authorities to support entrepreneurial initiatives. For example - the existing procedures for the operation of accommodation facilities, including migration registration requirements, do not allow for the accommodation of non-citizens, let alone foreign nationals, in remote locations. The requirements of counter-terrorism legislation and mandatory certification of accommodation facilities do not take into account the peculiarities of remote small accommodation facilities - guest houses and individual accommodation facilities (lack of transport links during muddy weather, no mobile phone coverage, no internet or even electricity in some places, no staff to meet the full range of requirements, etc.).

New projects to regulate the training and provision of guide services make no exception for citizens living and working in remote settlements. Legislation in the field of transportation has completely excluded small boats (which have traditionally been the main mode of transportation in Zaonezhye) from the legal sphere of commercial services. Tax legislation does not take into account the seasonal nature of these activities. In 2018, a law on recreational fishing was passed in Russia. According to the new rules, from 2019 it is forbidden to set nets and fish by spinning until 1 July.

Due to these bans, Zaonezhje is losing its attractiveness as an eco- and rural tourism destination, and any local fisherman faces a fine.

The problems listed above relate to the norms established by federal legislation. One possible way of solving the problems of involving the local population in tourism services or legalising such activities is to extend a new special tax regime for self-employed citizens to the territory of the Republic of Karelia from 1 July 2020.

In 2020, the Medvezh'egorsk District Administration was reviewing the Master Plan of Velikogubskoye Rural Settlement with draft boundaries of the settlements located in the vicinity of Kizhi Island. In accordance with the Regulations on the State Nature Reserve of Federal Importance "Kizhi", approved by Order No. 353 of the Ministry of Natural Resources of Russia from 07.08.2018, it is prohibited to provide land plots for individual housing construction, as well as providing gardening and dacha plots outside the borders of settlements on the territory of the reserve (which includes villages in the vicinity of Kizhi Island). These documents are important for the development of tourism in terms of planning the development of tourism infrastructure in the district. The special tax regime for the self-employed provides for renting accommodation facilities as a citizen's activity, and this could stimulate new construction or reformatting of existing individual residences. Meanwhile, the construction of small accommodation facilities and the provision of services in guesthouse format is limited in advance to the boundaries of existing settlements without regard to the distance from the tourist attraction sites.

Additional constraints to the development of the tourism industry in the district are:

- the state of roads of national and local importance;
- lack of investors;
- problems with allocation of land plots and conversion of land from one category to another;
- poor development of engineering infrastructure.

In the future Zaonezhje can have a rather diverse tourist specialization: cultural and educational, rural, water-sports, medical and health tourism, various types of active recreation.

Mobility needs in the region

The collection and processing of information on the study of accessibility in Zaonezhye as part of the project "Mobility and Accessibility in Rural Areas - New Approaches to Developing Mobility Concepts in Remote Areas (MARA)" was organised in two stages.

The first stage of the work was carried out in summer 2019 together with the Kizhi Museum-Reserve and the "Kizhi Ozherel'e" (necklace) and "Karelia Excursion Bureau" travel companies as part of a survey aimed at identifying the motivation of tourists from different regions of Russia and foreign countries to visit Kizhi Island.

The second stage was organized during the summer 2020 when the research expedition aimed to conduct a survey of residents and tourists to identify the motivation to visit these places and the accessibility of the area, as well as to process the data obtained. In 2020, the interviewers were interested in the purpose of the trip, the availability of transport services, the services demanded in the remote areas of Zaonezhje. The survey was conducted in the village of Oyatevshchina, Velikaya Guba and on the islands of the Kizhi skerries. This is the first time such work has been done in the territory of Zaonezhje in the last few decades

The field phase of the study was organised in June-September by the Centre of Social Tourism Development at the request of the Tourist Information Centre of the Republic of Karelia. "Zaonezhskaya Izba" NGO and the Sailing Federation of Karelia were involved in collecting information. Tools development, data processing and analysis (data entry, data processing and analysis, report preparation) were carried out by sociologist A.G. Chukhareva (Sociological Laboratory of PetrSU). The quantitative data obtained was processed and analysed in SPSS in October – November 2020.

Table 5. Research methods used to assess and analyse the needs of tourists and residents

Partner (Institution)	Methods applied																				
	Quantitative						Qualitative									Other					
	PAPI			CAWI			IDI			Case study			Desk research			Delphi method			Spatial information/ dynamic maps development and processing (including PPGIS)		
	T*	I*	A*	T	I	A	T	I	A	T	I	A	T	I	A	T	I	A	T	I	A
Tourist Information Center of the Republic of Karelia (Russia)	x	x																			

*"T" – tourists; "I"- inhabitants; "A" - authorities/tourists entities (e.g. tourist agencies), (other?)

Due to the coronavirus pandemic and the temporary ban on visiting Kizhi Island in June, the bulk of respondents were locals and dacha residents from the villages of Oyatevshchina, Ersenevo, Boyarshchina, Sychi, Yamka, Sennaya Guba, Potanevshchina, Zharnikovo, Korba and Volkostrov. However, already in July and early September tourists from various parts of Russia - from Apatity to Bryansk and Belgorod, from Kaliningrad to Perm and Orenburg - answered the questions. In total, respondents came from 84 cities and regions (apart from Karelia). The greatest flow of tourists was observed from Moscow (20.7%), Petrozavodsk (19.3%), and St. Petersburg (13.6%). Only two foreign guests were recorded, from Kiev (Ukraine) and Brest (Belarus).

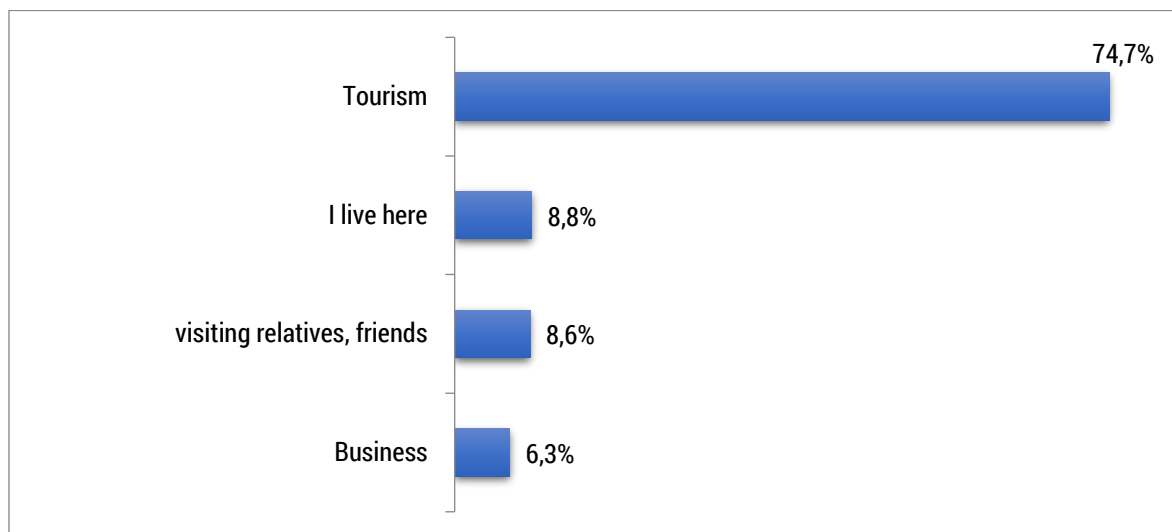


Figure 6. Purpose to visit Zaonezhje

The survey showed that the main purpose of visiting Zaonezhje is tourism for most respondents (74.7%), while one in ten respondents (8.8%) is a local resident.

The main reasons for respondents to visit Zaonezhje are to enjoy the beauty of Karelian nature (77%) and to visit Kizhi island (67%). 47% of respondents want to experience the cultural and historical heritage of the country, 40% want to escape from the bustle of the city and 34% want to spend time with their families. Also, respondents mentioned such reasons as: vacationing "wild" (17%), coming for the company by invitation (15%), I want my friends to know that I've been here (15%). Other answer options include the following: "Work at Kizhi Nature Reserve", "Business trip", "Work as a restorer on Kizhi Island", "Work-related".

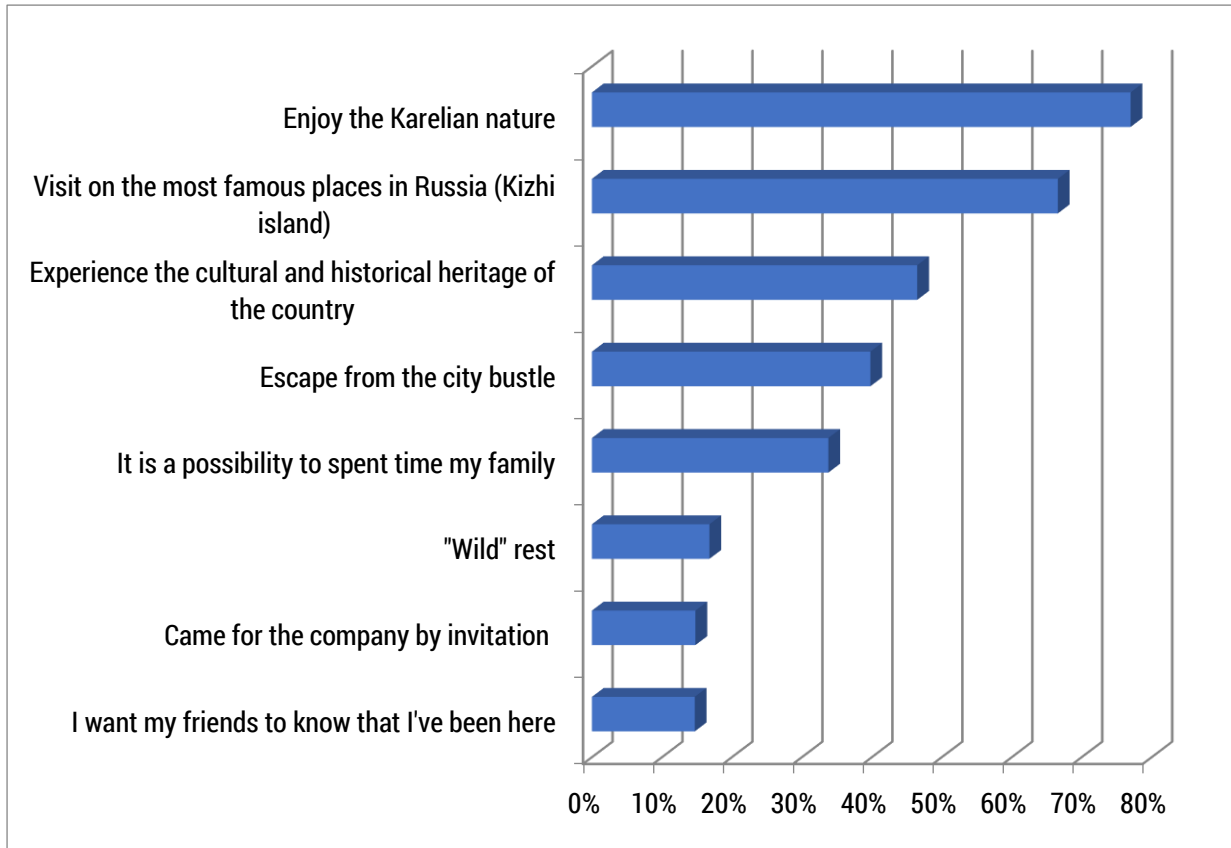


Figure 7. The key reasons visiting Zaonezhje

The vast majority of respondents (86.2%) are independent travelers, with only 3% of respondents having purchased a tour package. One in ten respondents (9.2%) are local residents of Zaonezhje.

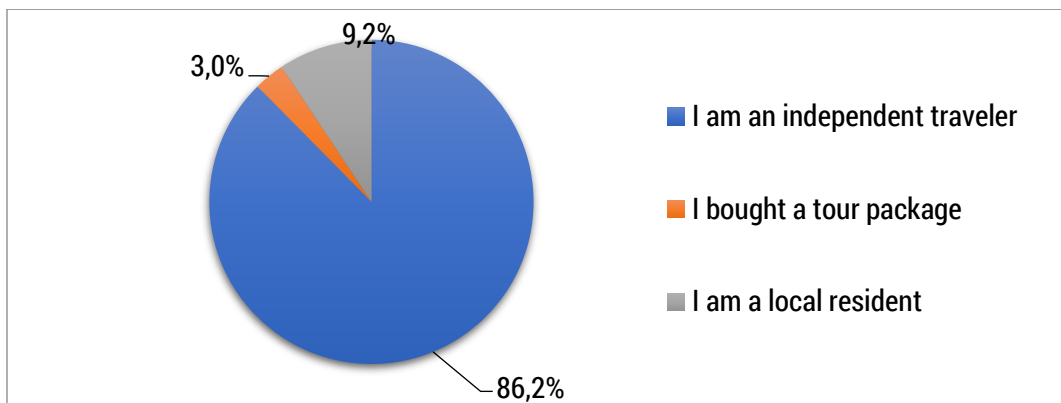


Figure 8. The way of travelling to Zaonezhje

More than half of the respondents (61.9%) visited the area Zaonezhye for the first time, almost a third of the respondents (30%) had visited the area before. The year 2020, the vast majority of respondents (86.2%) were independent travelers.

The majority of respondents (92.3%) use road transport when travelling to Zaonezhje, and they visit the territory for varying numbers of days, depending on the purpose of the trip. The average score on the accessibility of transport services between Petrozavodsk and Zaonezhje was 5.67.

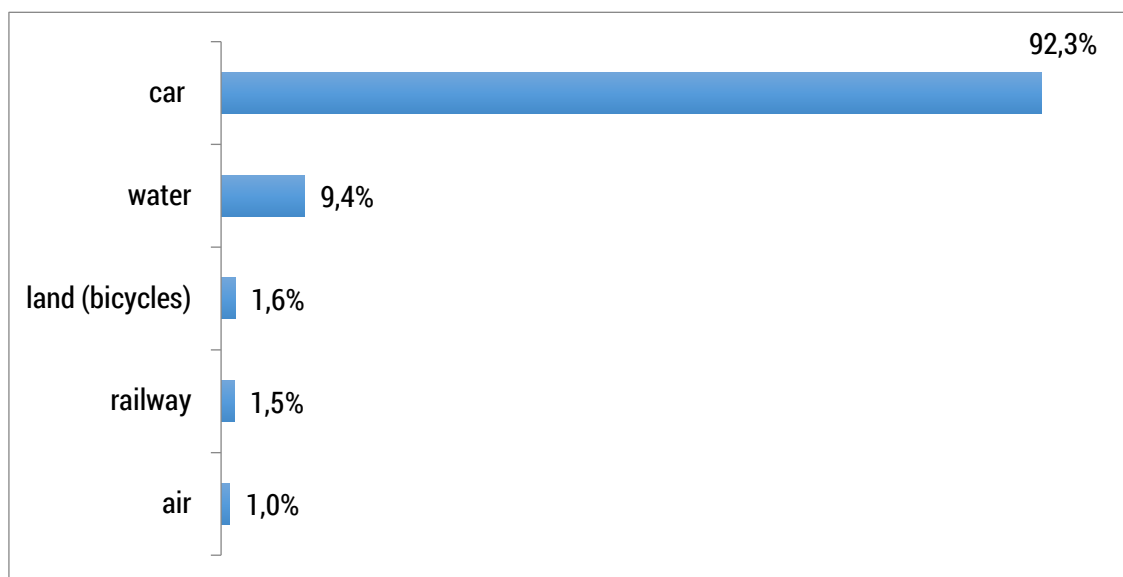


Figure 9. Transport means to visiting Zaonezhje

More than half of the respondents (65.1%) are willing to come to the territory of Zaonezhje to an equipped paid car park with all the amenities (catering facility, rubbish collection, toilet, etc.).

The highest score for accessibility in Zaonezhje was given to non-cash payment services in shops, petrol stations, etc. (the average score for this service was 7.86). The lowest score was given to the catering service (the average score was 5.24).

The overwhelming majority of the respondents (88.0%) met their expectations after visiting the territory of Zaonezhje.

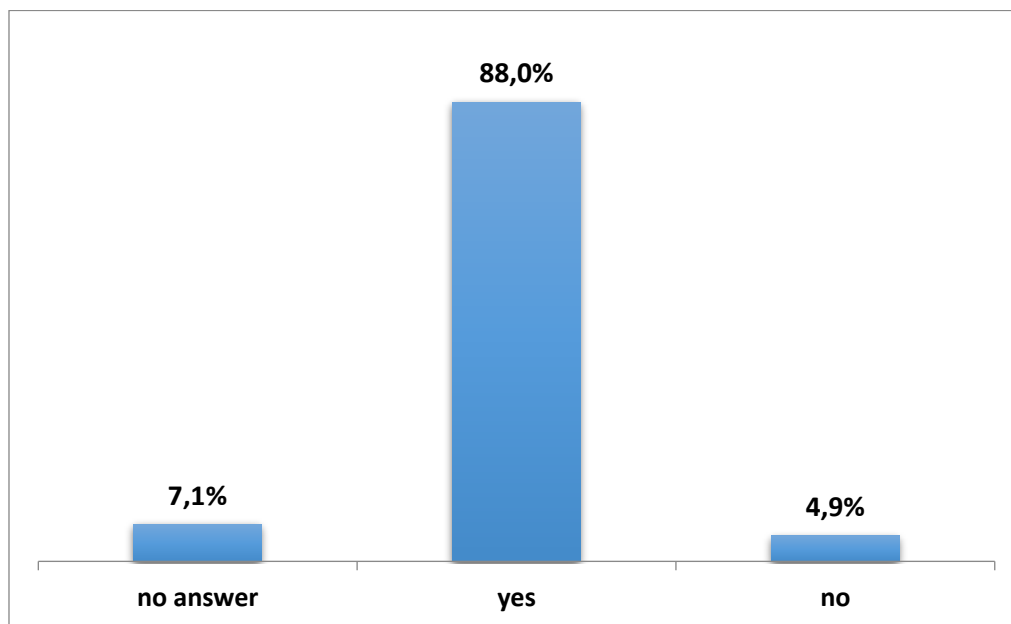


Figure 10. Were your expectations after visiting Zaonezhje fulfilled?

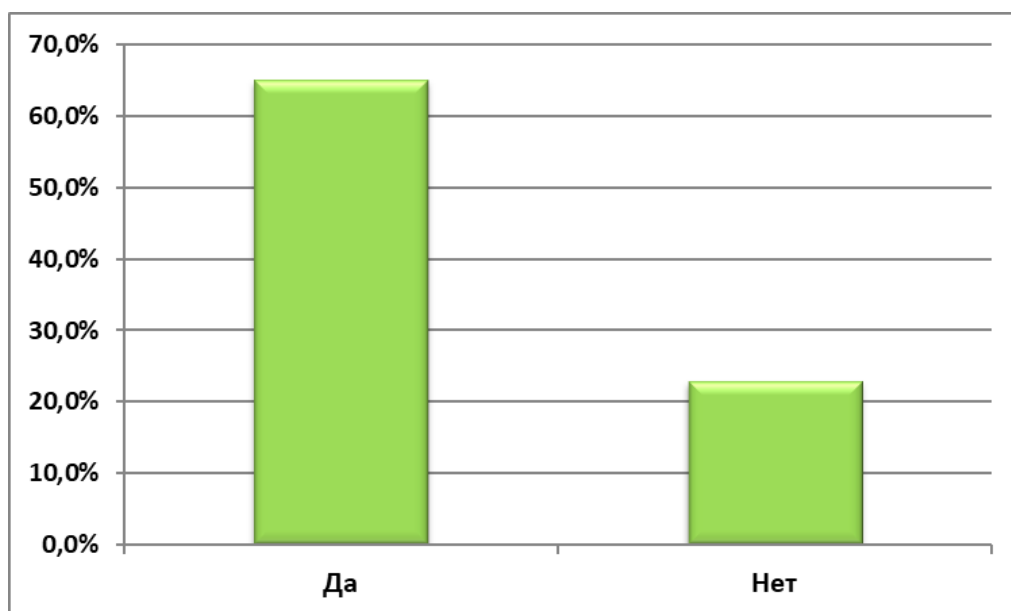


Figure 11. Are you willing to come to a paid car park to rest with all the amenities?

Table 6. The mobility needs of tourists – main results

Region	Measure (% or other indicator)	Mobility needs (in points)
Zaonezhye and Kizhi island		<ul style="list-style-type: none"> ▪ there are no alternative transport and excursion routes to the water transport to Kizhi island and Kizhi skerries. ▪ tourism infrastructure along the route R-17 Medvezh'egorsk - Velikaya Guba is not developed

Table 7. The main mobility needs of inhabitants – main results

Region	Measure (% or other indicator)	Mobility needs (in points)
Zaonezhye and Kizhi island		<ul style="list-style-type: none"> • regular communication with Kizhi and Bolshoy Klimenetsky islands (Sennaya Guba village); • lower cost of transport services by water during navigation; • alternative transport and excursion routes to the water transport in Zaonezhje;

Disparities between the current mobility needs and the existing mobility solutions

The majority of respondents spoke of problems affecting the accessibility and mobility of the area. The first group includes problems related to travelling to Zaonezhje (poor road quality, lack of petrol stations, tire repair stations, insufficient number of information signs along the way). The second group of problems is related to roadside services for tourists (the need for free equipped parking areas, campsites, toilets, shops and cafes along the road, availability of waste disposal services).

Local residents draw attention to the importance of resuming social flights from Petrozavodsk by water transport, solving the problems of electricity outages, low availability of medical and social services.

Taking into account the demand for this area by tourists (as evidenced by the summer of 2020), many social problems of local residents, poor infrastructure development (poor quality of roads, lack of gas stations, electricity outages, lack of catering facilities, problems with berths, etc.) it is necessary to consider the advisability of developing a separate programme for the development of Zaonezhje.

Innovative solutions to improve mobility in the region

Window of opportunity:

- construction of Medvezh'egorsk - Tolvuya - Velikaya Guba road: in accordance with the contract between the Karelian Road Administration and PSK Stroitel, construction of the 31.3 km Velikaya Guba - Oyatevshchina road is due to be completed by 30 June 2023;
- OOO Karelia Tour Tourist Company is building a pier with associated infrastructure in Kondopoga. The plans for 2020-2021 are to buy 5 passenger ships with 45 seats and to open regular voyages from Kondopoga to Kizhi island during the navigation period;
- Kizhi Museum-Reserve is exploring the prospects of organising a ferry from Oyatevshchina village to Kizhi Island;
- By Order of the Government of the Russian Federation No. 734-r of May 5, 2012 the port of Petrozavodsk is included in the list of ports open for foreign-flagged vessels;
- Lake Onega is included in the list of inland waterways of the Russian Federation where vessels flying the flags of foreign countries are allowed to navigate;
- The local population is actively involved in the development of services in passenger and freight transport, excursion services and hospitality;
- The Kizhi Museum plans to create a visit centre at Oyatevshchina and a small multifunctional tourist complex (see the sketch) outside of it. Car drivers wishing to visit the island will be able to leave their cars there, have lunch and, if they wish, spend the night. It will have a capacity for up to 120 guests and will include parking areas, a café, facilities and an area for camping.

Regional Action Plan
Implementation and testing of new (water) routes between Petrozavodsk – Zaonezhje (Russia)



Recommendations and operation plan for improved mobility offers

Based on the analysis some recommendations can be considered to improve mobility and accessibility situation in Zaonezhje:

1. Road infrastructure development incl. road construction, parking places, petrol stations, etc.;
2. Reconstruction/construction of the berths;
3. Development of pedestrian and bike routes and infrastructure in Zaonezhje;
4. Change of helicopter ticket sales' system with a possibility to buy tickets on-line;
5. Development of information resources that can provide tourists and residents with adequate and timely information concerning transport possibilities and means

Summary

Tourists assess the transport accessibility of Zaonezhje as unsatisfactory:

1. High cost of transport services by water
2. There are no alternative transport modes and excursion routes by water transport in Zaonezhje – Kizhi island and the skerries.
3. No berths and tourist information at the sites of the cultural heritage on the islands of Kizhi skerries.
4. Lack of information and navigation in settlements, along roads and even directly near cultural heritage sites; no work schedule and conditions of visiting the sites, as well as no rules for visiting and behaving in specially protected natural areas.
5. Tourism infrastructure along the route R-17 Medvezh'egorsk - Velikaya Guba is not developed enough: no equipped tourist car parks, no routes; no places for collection, accumulation of rubbish and the issue of removing it has not been solved.

The local population is actively involved in the development of tourism infrastructure. During the monitoring period of the MARA project 4 new guesthouses were opened in the territory of Kizhi skerries (reconstruction of previously existing historical houses of the 19th-20th centuries). The local people are looking for options to keep guests in the territory and a variety of services. The population is particularly active in the Velikaya Guba area: year-round transport accessibility of the mainland allows diversify the offers and range of services. But there is a problem of personnel in the area of hospitality: as a rule, local residents do not have vocational training and young people are not interested in permanent employment in rural areas.

Based on the analysis some recommendations can be considered to improve mobility and accessibility situation in Zaonezhje:

1. Road infrastructure development incl. road construction, parking places, petrol stations, etc.;
2. Reconstruction/construction of the berths;
3. Development of pedestrian and bike routes and infrastructure in Zaonezhje;
4. Change of helicopter ticket sales' system with a possibility to buy tickets on-line;

5. Development of information resources that can provide tourists and residents with adequate and timely information concerning transport possibilities and means.

To achieve the goals regular and effective communication of the stakeholders – the local and regional authorities, the Kizhi Museum-Reserve, local residents, NGOs and businesses, travel agencies is important.