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HELICOPTER AND SMALL AIRPLANE STUDY

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Northern Axis



Barents Link

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1. INTRODUCTION

This project is a part of the Northern Axis – Barents Link (NABL) project, which aims to enhance regional transport possibilities and between border areas. NABL is managed by the Regional Council of Kainuu. There are ten partners in the project from Finland, Sweden, Norway, and Russia. NABL is funded by the partners and the Kolarctic CBC programme.

1.1 Background

The Local Federation of East Lapland (Itä-Lapin kuntayhtymä) is leading two tasks in NABL. One of the tasks is to study impacts of a new railway connection between Kontiomäki-Taivalkoski-Kemijärvi. The other task is to study commercial helicopter and small airplane traffic between North Finland and Russia, since growing demand has been identified to develop flight paths between these two regions. This study is about the latter task, concentrating on the preconditions for helicopter and small airplane traffic between Finland and Russia.

1.2 Project Execution

The study was conducted by Traficon Oy, Ramboll Finland, Ramboll Sweden, and OOO AvtoDoroshniiConsulting (ADC Ltd) on the assignment of The Local Federation of East Lapland (Itä-Lapin kuntayhtymä). The project manager was engineer Juha Hyvärinen from Traficon Oy. Ramboll's consultants were M.Sc Anne Jokiranta and M.Sc Atte Riihelä. ADC's consultant was M.Sc Elena Svatkova.

1.3 Overview of the Methodology

The study was conducted via interviews with related businesses and authorities from Finland. Interviewed authorities from Finland were Fintraffic Lennonvarmistus (former ANS Finland), Traficom, and The Finnish Border Guard. Moreover, correspondence was conducted with AOPA Finland, 4 municipalities, 3 business chambers, and 13 commercial and non-commercial organisations.

Information representative of the Russian perspective was based primarily on correspondence with "AOPA Russia" (Russian Aircraft Owners and Pilots Association).

1.4 Objectives of the Study

The objectives of the study were to identify:

- existing flight corridors between Finland and Russia
- potential users of flight corridors and demand
- possible locations for a new flight corridor
- required support services and facilities in both countries
- required decision-making process
- rough cost estimate to cover the development needs

When flying to Russia, crossing the border must take place through established waypoints and after the waypoint (having crossed the border) pilots (foreign and Russian) should follow the route (flight airway for civil aviation vessel) to the Russian international airport stated in the flight permission. In general, all international flights must arrive or depart from an international airport in Finland as well in Russia. According to the Russian and Finnish legislation, foreign aircraft must perform its first landing at an international airport (airport of entry) where customs and immigration formalities are provided.

There are 3 “waypoints” in Northern Finland when approaching the Russian border. Flying from Finland to Russia (or vice versa) takes place via these specified geographical areas. These waypoints should not be mixed with border crossing points (e.g., point of entry). Border crossing point for departing and arriving aircraft is a predefined international airport with customs and other necessary functions.



Figure 1. Locations of waypoints between Finland and Russia highlighted in red. Waypoints listed from the north to the south: KELEK, RUDAM, GATRI, AGAMO, KOKAT, KOMET, KETOL and RATLA. Map source: Eurocontrol.

1.5 Flights Using Visual Flight Rules (VFR)

VFR flights are often in an uncontrolled airspace and at low altitudes with good flying visibility. Helicopter traffic often operates under VFR, with the pilot responsible for the flight and navigation. Usually, these flights have flexible routes in most countries.

There are no waypoints and VFR airways continuing from them to Russia for flights between Northern Finland and Russia. The northern-most VFR waypoint in Finnish-Russian border is named

KETOL at the latitude of Savonlinna – Sortavala leading through the VFR airway to Petrozavodsk International Airport. The minimum flight altitude at the border is approximately 430 meters.

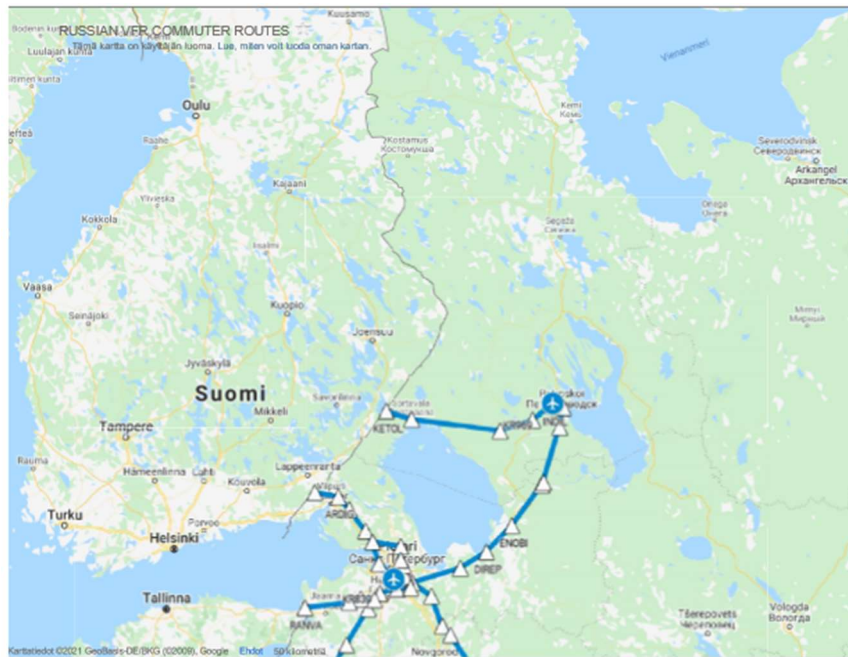


Figure 2. KETOL waypoint and VFR airway to Petrozavodsk international airport.
(source: MAK Aviation services)

All civil flights between the Northern Finland and Russia should be flown under Instrumental Flight Rules (IFR).

1.6 Flights Using Instrument Flight Rules (IFR)

IFR flights are not weather-dependent to the same extent as VFR flights. Also, IFR flights between Finland and Russia should use established waypoints and, after crossing the border, follow the airway for civil aircrafts (as well as for the Russian and foreign ones) towards the designated Russian international airport to carry out border and customs procedures. Several existing waypoints between northern Finland and Russia are shown in Figure 1. All waypoints between Finland and Russia are used the same way with no variations to restrictions. The differences between these waypoints are for directions (inbound, outbound, or for both directions) and border crossing minimum flight altitude (i.e. minimum height of the air vessel at the border).

The three most northern waypoints between Finland and Russia are geographically close to existing land border crossing points, all within a 5 – 50 km radius (Raja-Jooseppi, Salla, Vartius). They are:

Waypoint	Municipality	Minimum Flight Altitude (m)	Description
KELEK	Inari	2 200	5 km south of Raja-Jooseppi border crossing near Saariselkä
RUDAM	Salla	7 600	50 km north of Salla border crossing near Sorsatunturi
GATRI	Suomussalmi	8 000	40 km north of Vartius border crossing near Suomussalmi centre

The distance between the waypoints from RUDAM, GATRI, and AGAMO (next waypoint south of Suomussalmi) is approximately 200 – 250 km. The airway between waypoints and the nearest Russian international airport can be used bi-directionally and it is open for all IFR flights that have received permission from the Russian Civil Aviation Authority. Permission can be received in normal cases within one day, or even quicker.

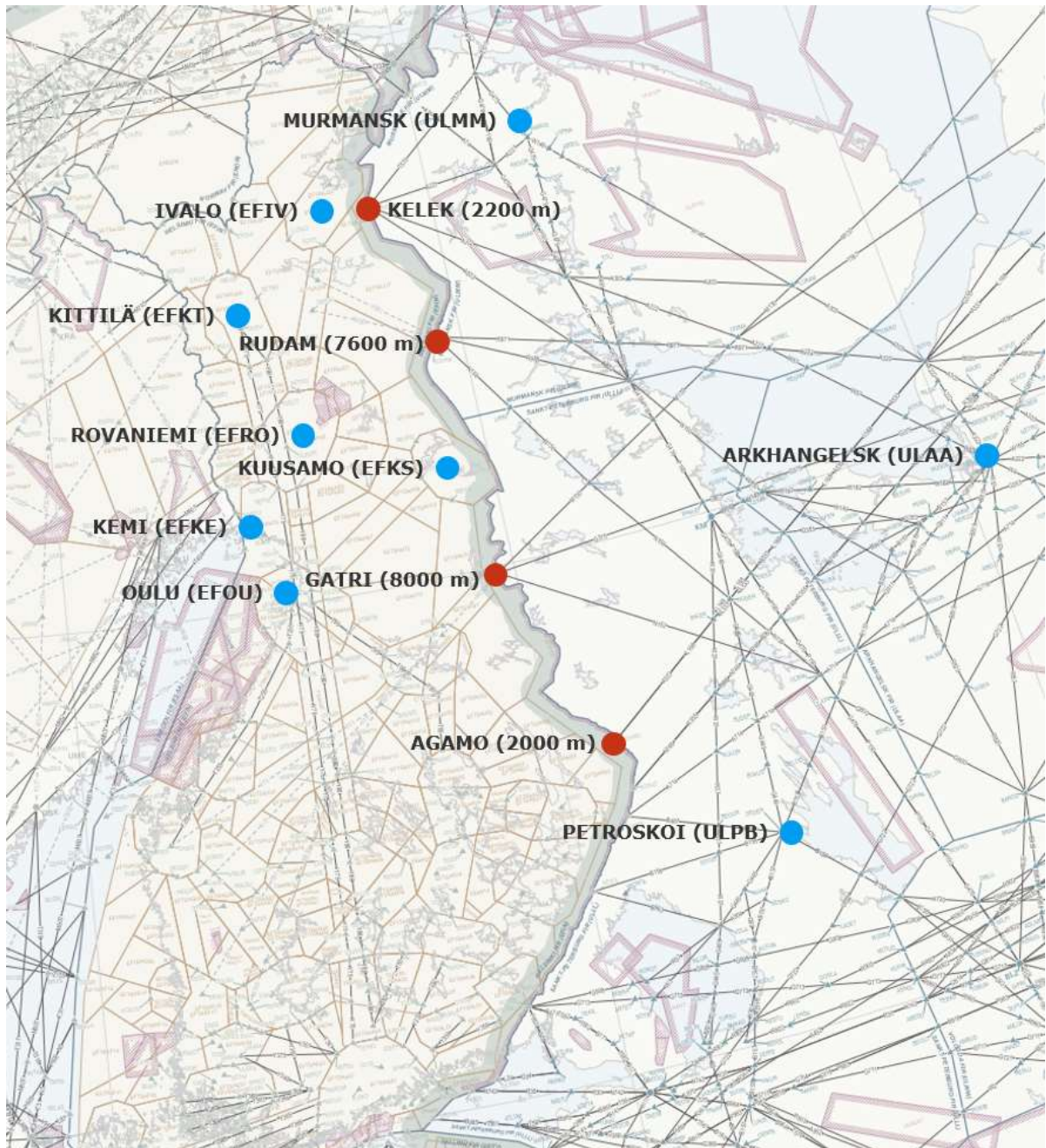


Figure 3. Locations of the waypoints between Northern Finland and Russia and their minimum flight level on the border illustrated in red. The international airports in Northern Finland and the nearest international airports in Russia illustrated in blue. Map source: Eurocontrol.

1.7 Hindrances in the Current Situation for Cross Border Flights to Russia

Three main reasons are identified as either a hindrance or a preventative matter for flights of small civil airplanes and light civil helicopters from Northern Finland to Russia, as follows:

1. The IFR requirement for foreign air vessels by the Russian government for flights within most corridor between Northern Finland and Russia. KELEK, RUDAM, and GATRI can only be used with IFR flight rules. Small airplanes and light helicopters are usually not facilitated with IFR-equipment and they fly with VFR rules.
2. The minimum flight level when crossing the border. RUDAM and GATRI cannot be used by small airplanes and light helicopters as the minimum flight level of 7 600 to 8 000 meters demands additional oxygen provision in the aircraft. Normally, small airplanes and light helicopters are not facilitated with this equipment. The 2200 meters minimum flight level at the northernmost waypoint of KELEK could be used by small airplanes and light helicopters, but it is too far north for many flights.
3. Required border crossing procedures both in Russia and Finland. An international flights' first landing and last departure should take place at an international airport. The aircraft and passengers should be checked by related border crossing authorities as stated in the Russian legislation. For foreign civil aircraft crossing the Russian border from Northern Finland, the nearest international airports capable of conducting the needed state services are Murmansk, Petrozavodsk, and at Arkhangelsk (as well as St Petersburg). Today, the most cost-effective aircraft to fly tourist group (for activities such as fishing, hunting, and wilderness excursions) from Northern Finland directly to the Russian wilderness would be hydroplane. However, current hydroplanes in Lapland are facilitated with pontoons only, and therefore cannot land at international airports with pontoons to carry out the required cross-border procedures. Hybrid installations for small hydroplanes (pontoons and wheels on the same vessel) are available, which would remove this hindrance. For light helicopters, the costs are perceived to be too high to first fly to an international airport and only after that to destinations in the wilderness.

2. POTENTIAL OPERATORS

2.1 Businesses Impacted by Hindrances to Cross-border Flights

To understand the magnitude of the problem, Finnish businesses that propose or use (or proposed/used before the sanctions and counter-sanctions) helicopters or other low-altitude flights over the Northern Finland/Russian border, were interviewed during the Summer 2020.

To understand related regional and local business conditions, the following organizations were contacted:

- Local municipalities (Inari, Sodankylä, Salla, Kuusamo)
- Business chambers (Lapland, Oulu)
- The North Lapland Federation of Municipalities
- Naturpolis Oy.

Based on the advice provided by these organizations, a list of potential stakeholder companies to which an inquiry could be sent was prepared. Of these companies, six provided aviation services and seven tourist services.

2.2 History, current situation, and the future view in Lapland in the cross-border flights

Based primarily on information from Lapland Chamber of Commerce, the following is known:

- Helicopter flights between Lapland and Russia have been on the agenda from time to time. The main challenge has been the lack of projects where flight services would have been utilized.
- During the years 2008-2011, Oulun Tilauslento Oy offered daytime flights with a small aeroplane. About 10 of this kind of charter flights were organized with the price of around 5000 € for the whole plane.
- Today, economic activity between Lapland and Murmansk is nominal. Despite this, the Lapland Chamber of Commerce believes that this could change. For this reason, helicopter and small airplane transport should be kept on the agenda, as the clear need for these services will return after current limitations due to international relations normalizes
 - Flight needs could be e.g. Tourism: The destination of the safari is in the Kola Peninsula (fishing, hunting, down-hill skiing to Kirovsk resort)
 - Mining industry: Flights would be needed between Lapland and Kirovsk-Apatity (e.g. for spare parts and services for mining technology)
 - North Pole overflights: Chinese tourists were the biggest client group of North Pole cruises leaving from Murmansk.
- There is a request for connecting flights from Lapland to Murmansk on icebreaker cruises. For the time being, Finnair has organized these flights directly from Helsinki -Vantaa to Murmansk. When direct flights are made from China to Rovaniemi, the need of these connecting flight will increase. An official flight route between Rovaniemi and China was established three years ago. During the period 2007-2009, serious attempts to re-open the Rovaniemi - Murmansk flight connection were made. At that time, Nordavia was interested to fly (and Finnair was ready for code-sharing), but the project failed due to the financial crisis. A Nordavia plane crash in Perm was the last point of that discussion. In the studies made for the preparation of this flight connection, it was clearly concluded that the operator should be Russian. This was due to, e.g., the bureaucratic permission procedures in Russia.

2.3 Situation in Kuusamo and Koillismaa (based of the company interviews)

A Finnish company runs a tourist resort located in the Paanajärvi national park on Russian side of the border. It has e.g., a helicopter field. The company rented a MI8 Russian helicopter every summer in the years 1993-2008 and they operated widely on the Russian side all the way to the Kola Peninsula salmon rivers. The company has permission to fly to the Russian side of the Kuusamo border crossing but not over the border. For several years, there were attempts to get a low altitude flight corridor over the border, but the permission was not provided. One of the main reasons for refusal was a need to organize international-level border and customs control services at the border as the company was not ready to fly for these procedures in Arkhangelsk, Murmansk, or Petrozavodsk international airports. For aircraft used in this type of tourism, it was concluded that the most realistic application would be a small aeroplane (e.g. hydroplane). This is due to current price levels, where helicopter flight prices are already too high for these kinds of tours.

Other interviewed tourist companies in Kuusamo were interested to propose flight tours beyond the Russian border if there would be related flight service providers available.

3. OPTIONS FOR THE NEW WAYPOINTS AND FLIGHT CORRIDORS

3.1 A possible new waypoint

Finland, like most of the Europe, is part of the free route airspace (FRA). In FRA, users can freely plan a route between defined entry and exit points. Routing within FRA is done through intermediate waypoints and flights remain subject to air traffic control. As Russia is not part of the European free route airspace, flights exiting European FRA and entering Russian airspace must be flown via fixed waypoints and continue by the established flight airway (for Russian and non-Russian civil aviation vessels) to the international airport that have border procedure services.

The question of a new waypoint is complex. The airspace is planned as a whole, and the air navigation charts is a result of years of development. The waypoints between Finland and Russia can be seen in Figures 1 and 3. Many of the existing waypoints are quite close to international airports (ports of entry/exit). The Kuusamo airport however (EFKS, shown close to the eastern border of Finland in Figure 3) does not have a waypoint in its immediate vicinity. The distance from Kuusamo airport to RUDAM (waypoint in the north of Kuusamo) is approximately 160 km and distance from Kuusamo to GATRI (waypoint in the south of Kuusamo) is approximately 118 km. This means approximately 30-60 minutes flight time to reach the Russian border. However, flying via RUDAM or GATRI requires minimum altitudes that are not suitable for small airplanes or helicopters. The closest applicable waypoints from Kuusamo airport (EFKS) are KELEK at 270 km away and AGAMO at 350 km away.

As most other international airports in northern Finland and Russia typically have a direct route to waypoints between Finland and Russia, the new possible waypoint could be considered somewhere close to Kuusamo airport if only reviewed from the perspective of minimizing the flight distances. However, it is important to acknowledge that the possible location of the new waypoint is dependent on multiple other factors.

Due to the reasons explained in more detail in Chapter 6, the location of the new waypoint could be considered close to Kuusamo airport. In this scenario, flights could use existing infrastructure and border control points while shortening the flight distances significantly and reducing flight time and the cost of the flight to the customer.

There are no international airports in the area of the Local Federation of East Lapland. International airports in Lapland (such as Rovaniemi, Ivalo, and Kittilä) all have relatively direct routes to waypoints between Finland and Russia.

Suggestions for a new waypoint have to be submitted for Traficom and its respective authority in Russia. The possible location for a new waypoint between Finland and Russia requires statements at least from the Finnish and Russian authorities, Finnish and Russian Air Forces, and Eurocontrol. Applications for permanent airspace changes can be submitted once a year in May, and they are coordinated with relevant stakeholders: Fintraffic Lennonvarmistus (former ANS Finland), The Finnish Defence Forces/The Finnish Air Forces, The Finnish Border Guard, Finnish Aeronautical Association, AOPA Finland, and other identified stakeholders.



Figure 4. Eurocontrol Route Network Chart. Kuusamo airport (EFKS) highlighted in blue. Map source: Eurocontrol.

3.2 Possible new VFR airways from current waypoints in Russia

As explained in the Chapter 2, the northern-most VFR waypoint along the Finnish-Russian border is KETOL at the latitude of Savonlinna – Sortavala leading through VFR flight airway to Petrozavodsk International Airport.

To make VFR flights over the border between Northern Finland and Russia possible, there would be a need to provide at least one of the following waypoints and flight airways for VFR flights as follows:

Waypoint	Description
KELEK	New VFR corridor via KELEK waypoint from Lapland continuing after border as VFR airway to Murmansk airport (ULMM)
RUDAM	New VFR corridor via RUDAM waypoint from Lapland continuing after border as VFR airway to Arkhangelsk airport (ULAA)
GATRI / new waypoint	New VFR corridor via GATRI waypoint or via new established waypoint near Kuusamo from Northern Finland continuing after border as VFR airway to Arkhangelsk airport (ULAA).
GATRI	New VFR corridor via GATRI waypoint from Northern Finland continuing after border as VFR airway to Petrozavodsk (ULPB) airport.

As in the case of new waypoints, new VFR corridors would also require concrete suggestions from potential stakeholders to the relevant authorities.

4. AUTHORITIES' DECISION-MAKING PROCESS FOR THE NEW FLIGHT PATHS AND FIGHT CORRIDORS

4.1 Decision-making process in Finland

The decision-making process is described in Airspace Management Operations Manual (*ASM-Toimintakäsikirja*) published by Traficom and Finnish Air Forces.

Airspace management is led by the High Level Policy Body (*HLPB, Kansallinen ilmatilan hallinnan neuvottelukunta*), set by the Finnish Government. HLPB consists of civil- and military aviation representatives. The task of HLPB is to promote the flexible use of airspace and handle the coordination of civil and military aviation as an advisory board.

Changes in airspace always require changes in air navigation charts as well. The time interval for updating air navigation charts is a minimum of one year. National plans of making airspace changes need to be aligned with and support the European Route Network Improvement Plan (ERNIP).

New waypoints can be set up by a decision of Traficom. Stakeholders involved in the decision-making process are also The Finnish Border Guard, The Finnish Air Force, and Eurocontrol. The Finnish Air Force's training activities within a certain area might have an effect on the location of a new waypoint.

4.2 Decision-making process in Russia

A proposal to establish new crossing points (waypoints) could be initiated by Fintraffic Lennonvarmistus Oy (former ANS Finland Oy) and addressed to Russian State Air Traffic Management Corporation.

Another option could be that AOPA-Russia initiates the same by applying directly to Russian State Air Traffic Management Corporation.

Upon receiving an application for a new route to be established, Russian State Air Traffic Management Corporation will process it and then apply to the Ministry of Transport. Once approved by the Minister, it will be published and become available.

For the process, at least 6 months lead time may be expected as changes are usually approved twice a year.

5. REQUIRED SUPPORT SERVICES AND FACILITIES

5.1 Required services and facilities in Finland

All non-Schengen flights landing in or departing from the territory of Finland shall first land at or finally depart from one of the border crossing points for aircraft listed in the Decree (901/2006) in Section 6 §. Therefore, all flights to and from Russia must visit first one of the international airports which are defined as official border crossing point (shown in Figure 5).

A new flight waypoint at the Finnish/Russian border and new VFR corridors described in Chapter 4 would not demand major additional facilities as current services and facilities at Finnish international airports would manage to process the anticipated additional border procedures.

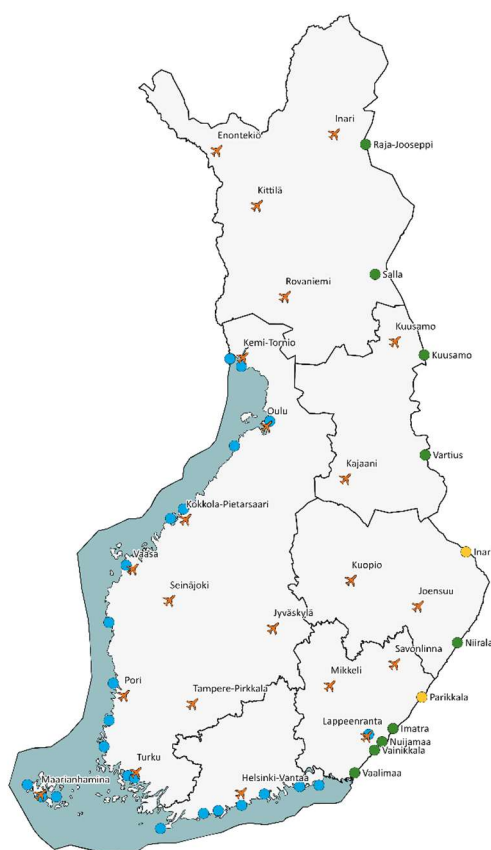


Figure 5: Border crossing points on the map. Defined airports are border control points for the international flights (red aircraft pictogram). (Source: Rajavartiolaitos)

An addition of a new air border crossing point to the above-mentioned regulation does not show the conditions with information available. This would require information (including location, volumes, border control arrangements, facilities, and resources) and more extensive processing with the Border Guard, Customs, aviation, and transport authorities.

5.2 Required services and facilities in Russia

Current international airports in Northwest Russian have all the needed services and facilities to support possible additional international flight traffic which could be produced by a new flight waypoint at the Finnish/Russian border and new VFR waypoints and airways described in Chapter 4.

6. COST ESTIMATES, DEMAND, AND SOCIO-ECONOMIC EVALUATION OF NEW POSSIBLE FLIGHTS CORRIDORS

6.1 Cost estimates of possible new flight corridors

There are no pre-determined costs in the payment regulation for the new waypoints or flight paths regardless of whether they are established for IFR or VFR flights. Setting up a new waypoint and/or a new VFR or IFR airway could be done under existing budget procedures. Labor costs are estimated to be nominal for each of the stakeholder organization.

As the new waypoint or the new IFR or VFR airway does not require more new land for border crossing points, infrastructure costs are not expected.

However, some additional resources to handle border control and customs of increased flight traffic would be needed. No calculated cost estimate has been made for the new waypoint nor for the new IFR or VFR airways.

6.2 Estimation of the cross border civil flights demand

Waypoint GATRI is a central node for flights between Asia and Europe. Dozens of flights are flown daily through GATRI; however, these are usually high-altitude flights above 10 000 m. Vertical separation of IFR flights must be a minimum of 300 / 600 meters, depending on flight volumes.

The Eastern-Lapland and Koillismaa airspace is quite unoccupied, and it is not likely that the possible new waypoints and airways would cause disturbance to the existing flight path waypoints and airways.

As for a possible new IFR waypoint over the Finnish/Russian border at the level of Kuusamo international airport and a continuing IFR airway to Arkhangelsk, there is no immediate request for that at this time.

As for the possible new VFR waypoints and VFR airways following them, there are no immediate requests at this time, but these would offer new possibilities for amateur entities and entrepreneurs, who are flying with small airplanes or light helicopters.

6.2 Socio-economic evaluation

To carry out an analytical socio-economic evaluation would require a minimum estimation of implementation and running (exploitation) costs of a possible new waypoint and possible IFR and VFR airways as well as changes of the traffic volumes from the current situation in coming decades. An evaluation was not possible as none of these data were available.

However, it can be stated that, especially for possible new VFR airways continuing from current IFR waypoints, if established, could offer new possibilities to new forms of tourism increasing in Western Countries via flight tourism using small airplanes and light helicopters.

7. FINAL WORDS

As the Finnish and Russian border is also a border of the Schengen area and European free route airspace, border crossing is not as flexible as it would be within these areas. When flying with (a foreign or Russian) aircraft from Finland to Russia, a flight permission must be obtained, and a flight plan made beforehand. The flight should go through a special waypoint and continue via a defined airway ending up to a Russian international airport, where border formalities to aircraft and passengers will be held.

Between Northern Finland and Russia, there are 3 waypoints which require the use of Instrumental Flight Rules (IFR) continuing as IFR airways to NW Russian International airports (Murmansk, Arkhangelsk, Petrozavodsk and St. Petersburg). There are no possibilities for small airplanes and light helicopters to use these waypoints and airways as they are using more modest Visual Flight Rules (VFR) and fly at lower altitudes. The northernmost waypoint that has a VFR airway is KETOL at the latitude of Savonlinna-Sortavala leading to Petrozavodsk International Airport.

Establishing a completely new waypoint would require very a high-level decision-making process and extensive coordination of relevant stakeholders (air forces, customs, border control, and air navigation services of both countries, at a minimum).

If a new waypoint would be proposed, one logical argument would be to use it to shorten flight times between Finland to Russia. As illustrated in Figure 3, Kuusamo airport is close to the border and does not have a waypoint in its immediate vicinity. The closest applicable (currently IFR) waypoints for-airplanes are located 270 and 350 kilometres away. Therefore, having a waypoint near Kuusamo airport at the border between Finland and Russia would reduce flight times to certain locations in Russia.

To make VFR flights over the border between Northern Finland and Russia possible, it would be necessary to provide a minimum of one of the following waypoints and flight airways for VFR flights as follows:

Waypoint	Description
KELEK	New VFR corridor via KELEK waypoint from Lapland continuing after border as VFR airway to Murmansk airport (ULMM)
RUDAM	New VFR corridor via RUDAM waypoint from Lapland continuing after border as VFR airway to Arkhangelsk airport (ULAA)
GATRI / new waypoint	New VFR corridor via GATRI waypoint or via new established waypoint near Kuusamo from Northern Finland continuing after border as VFR airway to Arkhangelsk airport (ULAA).
GATRI	New VFR corridor via GATRI waypoint from Northern Finland continuing after border as VFR airway to Petrozavodsk (ULPB) airport.

As in the case of new waypoints, new VFR airways would also require concrete suggestions from potential stakeholders. During this study, such suggestions have not been solicited. However, based on preliminary discussions, some stakeholders who could foster the idea have been identified. Discussions could be continued with these stakeholders and, potentially, initiatives could be established. Some of these stakeholders are AOPA Finland, the Finnish authorities, AOPA Russia, and the corresponding Russian authorities.

AOPA Russia has expressed an interest and readiness to support the initiatives made in this study with respect to the Russian decision-making process if the initiative will be made from Finland.

AOPA Finland has expressed its interest to propose a new VFR corridor via KELEK waypoint (with appropriate minimum border crossing altitude) continuing from Lapland beyond the border as a VFR airway to Murmansk airport (ULMM) to Finnish flight authorities and welcomes AOPA Russia with its readiness to support this initiative in the Russian decision-making process. AOPA Finland considers this a test to understand the request of a new VFR flight possibility. Further steps can be considered after experiences of this test.

Small airplanes or light helicopters offering direct flights to fishing-, hunting-, and wilderness destinations from Northern Finland to Russia are not possible even with the new VFR corridors because:

- the first landing to Russia should take place in the international airport. This makes a trip longer, harder, and more expensive.
- the most cost-effective air vessel currently to fly a (fishing, hunting, wilderness) tourist group from Northern Finland directly to Russian wilderness would be hydroplane. However, current hydroplanes in Lapland are facilitated with pontoons only, and therefore cannot land at international airports for the required cross-border procedures. Nevertheless, there are available a hybrid solution for small airplanes (pontoons and wheels on the same vessel), which removes this hindrance.

Because of this, it can be forecasted that wilderness tours from Northern Finland to Russia will be most likely organized as they are currently; by car over the border crossing to Russia and with Russian small hydroplane or helicopter continuing to the destination.

8. LIST OF REFERENCES

Eurocontrol, 2020. *EUROCONTROL route network chart (ERN) - Spring 2020*. Accessed September 2020. Available at: <https://www.eurocontrol.int/publication/eurocontrol-route-network-chart-ern-spring-2020>

ANNEX 1 A PRACTICAL EXCAMPLE OF THE PROBLEM AND A PROPOSAL TO SOLVE IT

The client of the this study (the Local Federation of East Lapland) had her decision-making body meeting in Posio 14.09.2021. After hearing a presentation of the study, was initiated a practical idea, how to solve one problem concerning crossing the border with a small helicopter. It has been described below in a partial example.

A group of tourists in Pyhätunturi downhill skiing resort (in the border of Kemijärvi and Pelkosenniemi municipalities in Eastern Lapland) wants to move by a small helicopter to Apatity to make downhill skiing in Khibiny mountains (Kirovsk, Murmansk Region). Direct airway would be about 270 -280 km.

Currently, if this small helicopter could use only VFR Flight Rules, they should fly first to Joensuu, carry out the Finnish border crossing formalities there, and continue to Petrozavodsk via the northernmost VFR - flight route between Finland and Russia, and make the Russian border crossing formalities Petrozavodsk international airport. After that they may fly to Apatity. The flying distance in about 1450 km.

If this small helicopter was facilitated with IFR equipment (was able to use IFR Flight Rules) they could fly first to Ivalo, make the Finnish border crossing formalities there, and continue to Murmansk via the most direct IRF flight corridor Ivalo – Murmansk. And make the Russian border crossing formalities there. After that they could fly to Apatity. The flying distance is about 600 km. This example applies also, if helicopter did not have IFR equipment and the VFR flight corridor would be facilitated between Finland and Russia in the location of the current IFR – flight corridor.

Could it be possible to facilitate a special VFR helicopter flight corridor between Northern Finland and Russia via Salla road border crossing point? A small helicopter could fly from Lapland (e.g. Pyhätunturi) to the Finnish side of the Salla border crossing and make the Finnish border crossing formalities there continuing to fly to Russian side of the Salla border crossing (with rather low altitude), landing there and make Russian border crossing formalities and fly further to Russia along the new VFR helicopter airway. Although the Russian airway might not be the most direct line between Salla border crossing and Apatity, the flight distance Pyhätunturi – Apatity would be around 280 -320 km.

The client of this study wants to give this proposal (to use a road border crossing to make a helicopter waypoint) for consideration although it is against many of the current flight rules (European and Russian). The proposal would not request any investments, only proposals from the stakeholders and administrative decisions (including possibly changes of law).