

Project KO4159 NABL, Northern Axis – Barents Link

WP 6, Helicopter and small airplane study

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Northern Axis



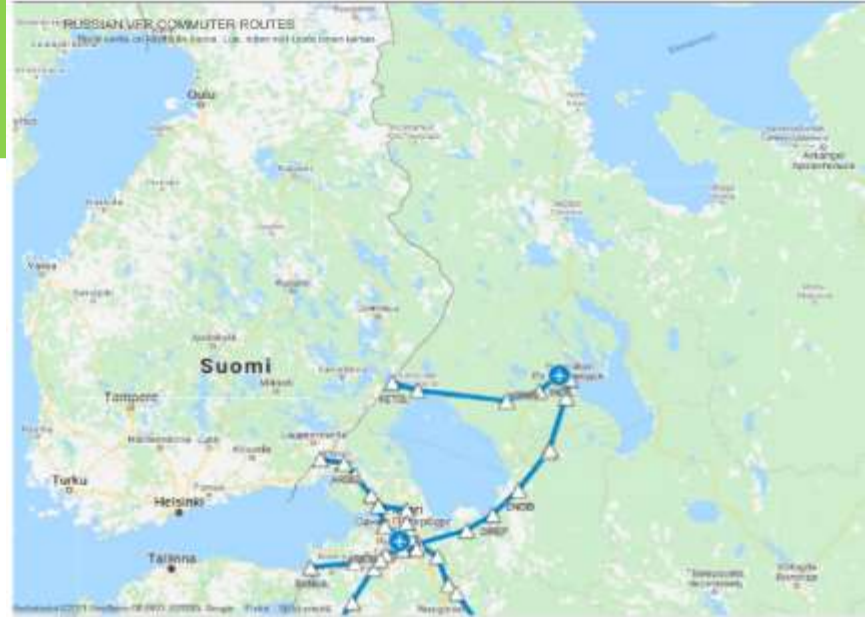
Barents Link

The helicopter and small airplane study

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Existing flight rules



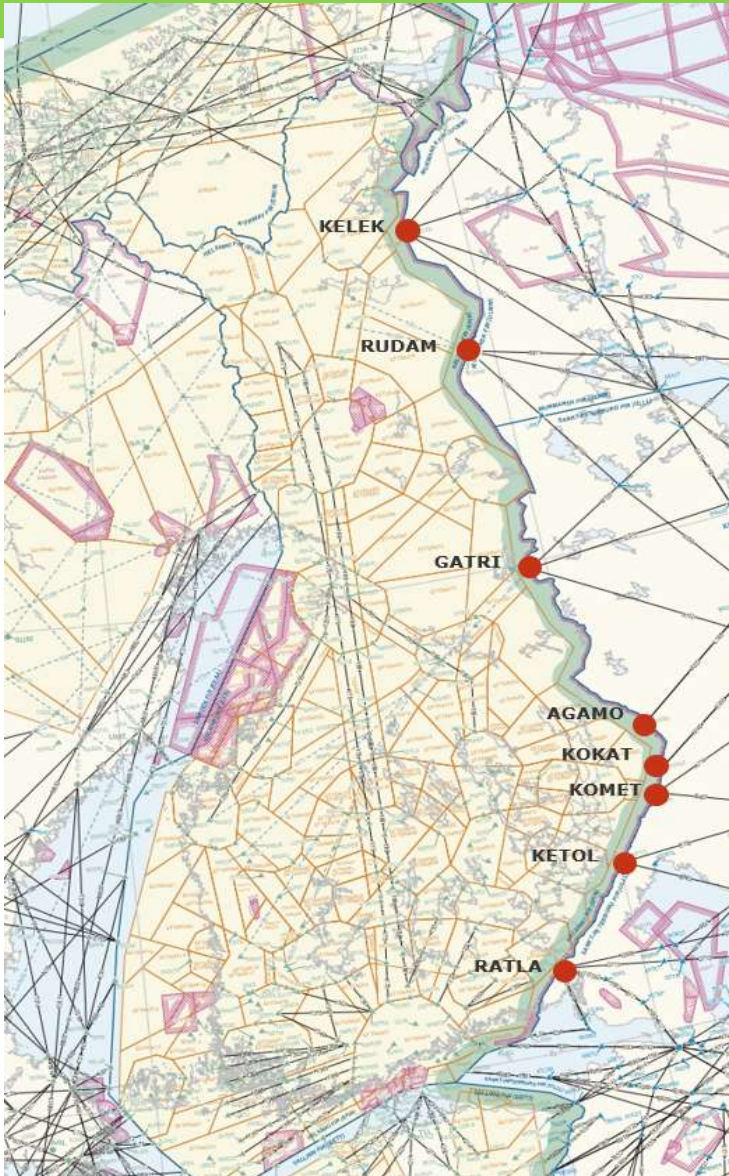
Generally, flights can be divided into **Visual Flight Rules (VFR)** and **Instrument Flight Rules (IFR)**. Flights to Russia need to be agreed separately with special authorities' administration of Russia.

VFR flights are often in an uncontrolled airspace and 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. However, when flying to Russia, flights must be flown via established **waypoints**.

IFR flights are not weather dependent in the same extent as VFR flights, but IFR flights between Finland and Russia should use established **waypoints**.

All 3 northernmost waypoints and airways between them and the nearest Russian international airport, **can be operated in IFR only**. The nearest VFR airway is in the level on Savonlinna-Petrozavodsk.

Existing civil waypoints and civil airways between Finland and Russia



Maps' source: Eurocontrol.



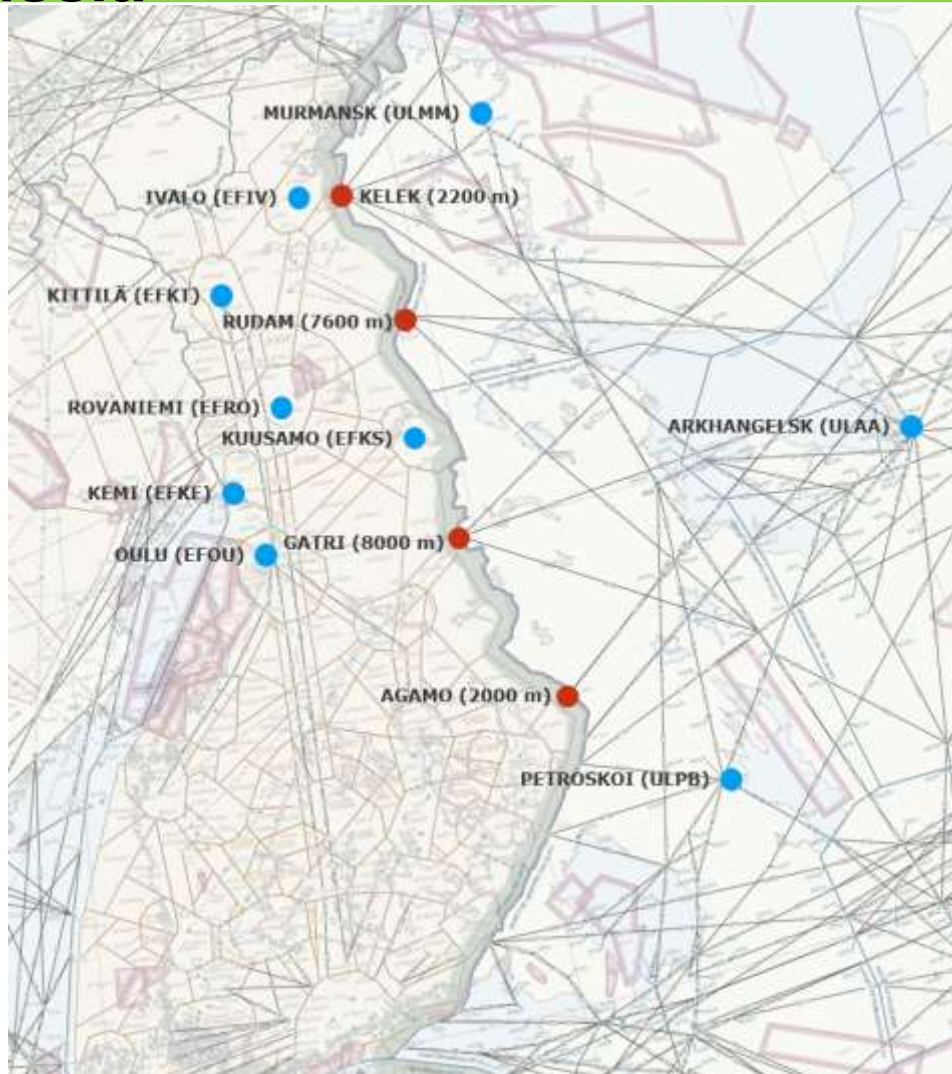
Existing civil waypoints and airways b/w Northern Finland/ Russia

The three most northern waypoints between Finland and Russia are geographically close to existing land border crossing points, all within 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 from Suomussalmi waypoint towards south) is approximately 200 – 250 km. The airways b/w waypoints and the nearest Russian international airport can be used both directions and it is open for all flights that have got permission from Russian Civil Aviation Authority. Permission can be received in normal cases in one day, and even quicker.

Existing civil flight waypoint and airways b/w Northern Finland/Russia



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Businesses, that the current situation is a hindrance

Interviews were made by emails between 4 municipalities, 3 business chambers and 14 commercial and non-commercial organisations.

- The first is the IFR requirement in the Russian side flights corridors for the foreign (and also Russian) air vessels between Northern Finland and Russia. KELEK, RUDAM and GATRI can be used with IFR flight rules only. Small airplanes and light helicopters fly by VFR.
- The second is the minimum flight level when crossing the border. RUDAM and GATRI cannot be used by small airplanes and light helicopters as minimum flight level 7600-8000 meters demand additional oxygen provision in the air vessel. The northernmost waypoint KELEK with 2200 meters minimum flight level could be used by small airplanes and light helicopters. But the demand is IFR rules.
- The third reasons are the needed border crossing procedures in Russia. The air vessel and passengers should be checked by related border crossing authorities stated in the Russian legislation. This concern all civil air vessels crossing the Russian border. The nearest international airports facilitated with the related state services are Murmansk, Petrozavodsk and at Arkhangelsk (and of course in St Petersburg).
- Today, the most cost-effective air vessel to fly a (fishing, hunting, wilderness) tourist group from Northern Finland directly to Russian wilderness would be hydroplane with pontoons to land on water. However, many of the current hydroplanes cannot land to international airports with pontoons for needed cross-border procedures. Nevertheless, small airplanes can be facilitated with pontoons **and** wheels allowing landing to water and asphalt or even gravel runway. What comes to light helicopters, the costs seem to be rather high to fly first to the international airport and only after that to objects at wilderness.

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Is there a need for the new flight path (or/and waypoint)?

The closest waypoints from GATRI are RUDAM and AGAMO, approximately 200 – 250 km away.

Many of the existing waypoints are quite close to those airports, which are also official border crossing points. The Kuusamo airport however (EFKS, shown close to the eastern border of Finland in Figure 2) does not have a waypoint to its immediate vicinity.

Distance from Kuusamo airport to RUDAM (waypoint in the north, near Sorsatunturi, Salla) is approximately 160 km and distance from Kuusamo to GATRI (waypoint in the south, centre of Suomussalmi) is approximately 118 km. This means approximately 30-60 minutes flight time to reach the Russian border.



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New VFR airway?

The northern-most VFR waypoint in Finnish-Russian border is KETOL in the level on Savonlinna – Sortavala leading through VFR 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 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.

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New VFR airway?

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

Official proposal has not (yet) been made.

What comes to small tourism business flights by Finnish small airplanes or light helicopters offering fishing-, hunting-, and wilderness tours from Northern Finland to Russia, even the new VFR airways would not open this, because:

- the first landing to Russia should take place in the international airport. This makes a trip longer and harder or impossible (if no wheels installed) with hydroplane.
- destination should be reached by hydroplane enabling landing to small waters.

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Decision-making process for new flight path in Finland

- Airspace management is led by High Level Policy Body (*HLPB, Kansallinen ilmatilan hallinnan neuvottelukunta*), set by Finnish Government. HLPB consists of civil- and military aviation representatives. New waypoints can be set up by a decision of Traficom.
- Changes in airspace always require changes in air navigation charts as well. The time interval for updating air navigation charts is minimum of one year. National plans of making airspace changes need to be aligned with and support European Route Network Improvement Plan (ERNIP).

Decision-making process for new flight path in Russia

- A proposal from Finnish side can be addressed through Fintraffic Lennonvarmistus Oy (former ANS Finland Oy) and addressed to Russian State Air Traffic Management Corporation.
- The Russian State Air Traffic Management Corporation will process the application and 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 the changes are usually approved twice a year.

What next to get a new waypoint?

If a new waypoint would be proposed, one logical argument would be to use it to shorten flight times between Finland to Russia. 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.

This question waits for an official initiative from the stakeholders.

What next to get new VFR airways?

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.



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