



## Existing and planned (proposed) entry/exit points in the interface between Russia, Kazakhstan, China, the DPRK, Mongolia and Japan

Air traffic during 2014 vs. 2013 in Russia has had a **6,69%** increase of flights (+**3,3%** transit flights).

Traffic along main routes:

| Transit ATS route network in Russia | During 8 months of 2013 | During 8 months of 2014 |
|-------------------------------------|-------------------------|-------------------------|
| Trans-Eastern                       | +9,11%                  | +1,55 %                 |
| Cross-Polar                         | +12,05%                 | +3,05 %                 |
| Trans-Polar                         | -8,16%                  | +2,89%                  |
| Trans-Siberian                      | + 7,35%                 | +18,17 %                |
| Trans-Asian                         | +2,77%                  | +8,74 %                 |
| Asian                               | +2,02%                  | -22,37 %                |

**Air traffic through entry/exit points between Russia, Kazakhstan,  
China, DPRK, Mongolia and Japan, 2014 vs. 2013**

| Country    | Total flight/transit flight number |                 |
|------------|------------------------------------|-----------------|
| Kazakhstan | 103 816 / 9 818                    | 46 585 / 42 799 |
| China      | 21 318 / 19 200                    | 16 518 / 13 695 |
| DPRK       | 4 576 / 4 114                      | 3 077 / 2 814   |
| Mongolia   | 58 220 / 50 267                    | 42 358 / 36 481 |
| Japan      | 21 908 / 18 682                    | 19 105 / 16 297 |

## New cross-border routes

Given a growing demand of airlines for Cross-Polar and Trans-Eastern routes and in order to provide a proper safety level for transit flows along Trans-Siberian and Trans-Eastern routes the Corporation has developed proposals on the establishment of new ATS routes crossing the national border.

### With China

The distance of the border between Russia and China is **4 709 km**, the number of entry/exit points is **6**.

### **Air traffic through entry/exit points (2013 - 8 months of 2014):**

| Reporting point | 2013          |               | 2014          |
|-----------------|---------------|---------------|---------------|
|                 | Total         | 8 months      | 8 months      |
| TELOK           | 4 348         | 2 453         | 3 908         |
| GOPTO           | 558           | 366           | 343           |
| BISUN           | 4 478         | 3 112         | 2 612         |
| SIMLI           | 6 034         | 3 901         | 4 784         |
| ARGUK           | 6 290         | 3 996         | 4 042         |
| MAGIT           | 8 220         | 5 372         | 5 629         |
| <b>Total</b>    | <b>29 928</b> | <b>19 200</b> | <b>21 318</b> |

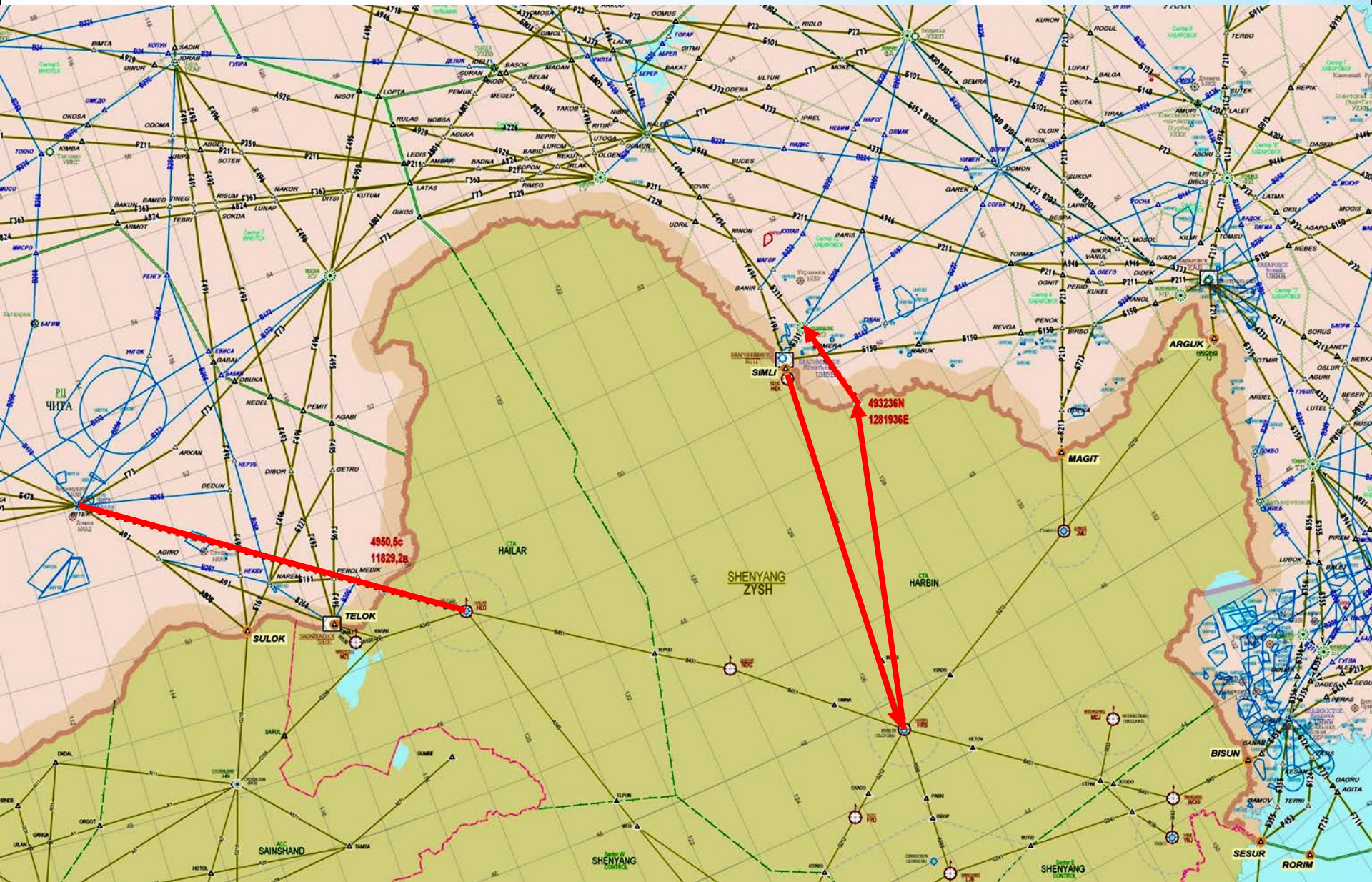
## **Between Khabarovsk ACC and Shenyang (China)**

1. Create an exit point from Russian airspace **SIMLI (5017,4N 12722,1E)**:
  - establish unidirectional traffic on **Blagoveshchensk – SIMLI**.
2. Create an entry point into Russian airspace:
  - via border point **4932,6N 12819,6E** with a new segment of the international route **B331** border point **4932,6N 12819,6E – AMERA – Srednebeloe (460 WZ)**.

Several letters were sent by the Russian CAA to China's CAAC regarding the establishment of the entry/exit points but the issue remains open while SIMLI is crossed by over 6 000 aircraft each year. The number of flights flown via SIMLI totaled 4 784 (4 275 - transit flights) during 8 months of 2014.

“Continue the research and discussion of the proposals on dualized routes in the SIMLI area with regard to specific trans-regional proposals. The consolidated ATS route will be distributed to states and stakeholders for their information (and their relevant economic and safety-related benefit). Members shall continue informing the regional ICAO offices about the status of the proposals”.

# Proposals on airspace structure improvement (Russian and Chinese FIRs)



## **Chita ACC (Russia) and Hailar ACC (China)**

- Create new entry/exit points at the Russian-Chinese border – **border point 495025N 1182854E** – further along China until HLD (Hailar) for Beijing and Seoul.

### **Extending ranges of levels**

1. Change the lower level from **H=6000m** to **H=2400m (FL80)** on **B451** (international route) to **Shenyang FIR** (China) until the reporting point **BISUN** for aircraft outbound from Vladivostok not managing to ascend on time at **BISUN H=6000m**;
2. Change the lower level from **H=7300m (FL240)** to **H=4250m (FL140)** on the international route to **Harbin FIR** (China) until the reporting point **MAGIT** for aircraft outbound from Khabarovsk not managing to ascend on time at **MAGIT H=7300m**.

## **Issues of concern**

- Has the SSR (JIAMUSI area) been commissioned?

This would facilitate decreasing the current intervals (10 minutes) when transferring ATC at ARGUK and MAGIT. Is there any update on commissioning the radar position?

- Communication channels between Khabarovsk ACC, Harbin ACC, and Shenyang ACC  
Currently, there is a direct communication between Khabarovsk ACC Sector 3 and Harbin ACC, as well as Khabarovsk APP and Harbin ACC.

When should direct communication channels be expected for:

- Khabarovsk ACC Sector 12 and Harbin ACC (G494 SIMLI),
- Khabarovsk ACC Sector 4 and Harbin ACC (R213 MAGIT),
- Khabarovsk ACC Sector 13 and Shenyang ACC (B451 BISUN)

- Implementation of OLDI (AIDC) based voiceless communication between ACCs' automated systems



## With DPRK

The distance of the border between Russia and the DPRK is **19 km**, the number of entry/exit points is **3+1**.

“Establish new border-crossing points between Russia and the DPRK due to airspace and ATS route network modernization in the Vladivostok/Khabarovsk FIR area away from SESUR”.

Following a bilateral meeting between the representatives of the DPRK’s General Administration of Civil Aviation and State ATM Corporation’s Far East Air Navigation Branch (Vladivostok, March 2014) it was agreed to:

1) Establish a timeframe of bidirectional ATS route implementation – **11 December 2014**:

- **RIVAT (412900N 1321600E) – GUMSU (383800N 1302300E)** at the flight levels from FL210 to FL530, designators are assigned by the DPRK;

- **NULAR (405912N 1341100E) – GUMSU (383800N 1302300E)** at the flight levels from FL280 to FL530, designators are assigned by the DPRK;

2) Re-sign the LoA between Khabarovsk ACC and Pyongyang ACC effective from 11 December 2014 at a bilateral meeting in August, 2014.

*As the meeting did not take place the DPRK is considering re-signing the LoA at the meeting in Beijing in September 2014.*

3) Establish a timeframe for unidirectional ATS route implementation at a bilateral meeting in August, 2014:

- **BUMEP (415350N 1311255E) – KICHA (404106N 1291140E)** at the flight levels from FL180 to FL530, with the designator B355;

- **BUMEP (415350N 1311255E) – GUMSU (383800N 1302300E)** at the flight levels from FL280 to FL510, designators are assigned by the DPRK;

- **KICHA (404106N 1291140E) – ADNUR (421230N 1304810E)** at the flight levels from FL170 to FL530, with the designator B356;

- **GUMSU (383800N 1302300E) – ADNUR (421230N 1304810E)** at the flight levels from FL290 to FL530, designators are assigned by the DPRK;



## With DPRK

- The State ATM Corporation proposes to establish the implementation timeframe in cooperation with the DPRK at the meeting in Beijing in **September 2014**;
- Dualized ATS route proposals:
  - **BUMEP (415350N 1311255E) – GUMSU (383800N 1302300E)**;
  - **GUMSU (383800N 1302300E) – ADNUR (421230N 1304810E)**are alternative to IATA's proposal «**RUS 1**» from the Asian-Pacific ATS route catalogue: *SESUR – XXXXX – Gangwon (KAE), where XXXXX is approx. 383800N 1292442E,* and «**RUS 3**»:  
*Muraveyka (BG) – TELOD – XXXXX - Gangwon (KAE), where XXXXX is approx. 383800N 1292442E.*
- Proposal NULAR (405912N 1341100E) – GUMSU (383800N 1302300E) is alternative to IATA's proposal «**RUS 2**» from the Asian-Pacific ATS route catalogue: *TEKUK – XXXXX – Gangwon (KAE), where XXXXX is approx. 383800N 1292442E.*
- Proposals on airspace and ATS route structure reorganization in the area of Vladivostok/Khabarovsk FIR and DPRK's proposals were included into the Far East Sub-group's catalogue in October 2013 (RDGE/19) as FE36, FE37, FE38, FE39, FE40.

## With Japan

The Russian-Japanese border is **194,3 km** long, the number of entry/exit points totals **7**.

The 3<sup>rd</sup> Coordinating Meeting on ATM between the State ATM Corporation and ATS Department of Japan's Civil Aviation Bureau was held on 16-18 June 2014 in Khabarovsk.

JCAB's representatives informed that:

- airspace reorganization within Fukuoka FIR is to be completed by **2019**;
- the new route **GTC – AVGOK** (adjustment of en-route environment, route specifications, route features) will be implemented based on the results of a joint trial (flight) between Russia and Japan.

The route **SIBIR-LURED-EKVIK (RUS5/FE0008)** as proposed by Russia:  
*ARLAS – WPT FIR (N40°33'42" E136°07'18") – EKVIK (new EKVIK) and*  
*SIBIR – WPT FIR (N40°33'42" E136°07'18").*

According to Japan:

There is uncertainty regarding VHF overlay for the two routes. To this end JCAB plans to perform a radio communication check in order to assess the possibility of implementing the routes.

## With Mongolia

The Russian-Mongolian border is **3543 km** long, the number of entry/exit points is **9**.

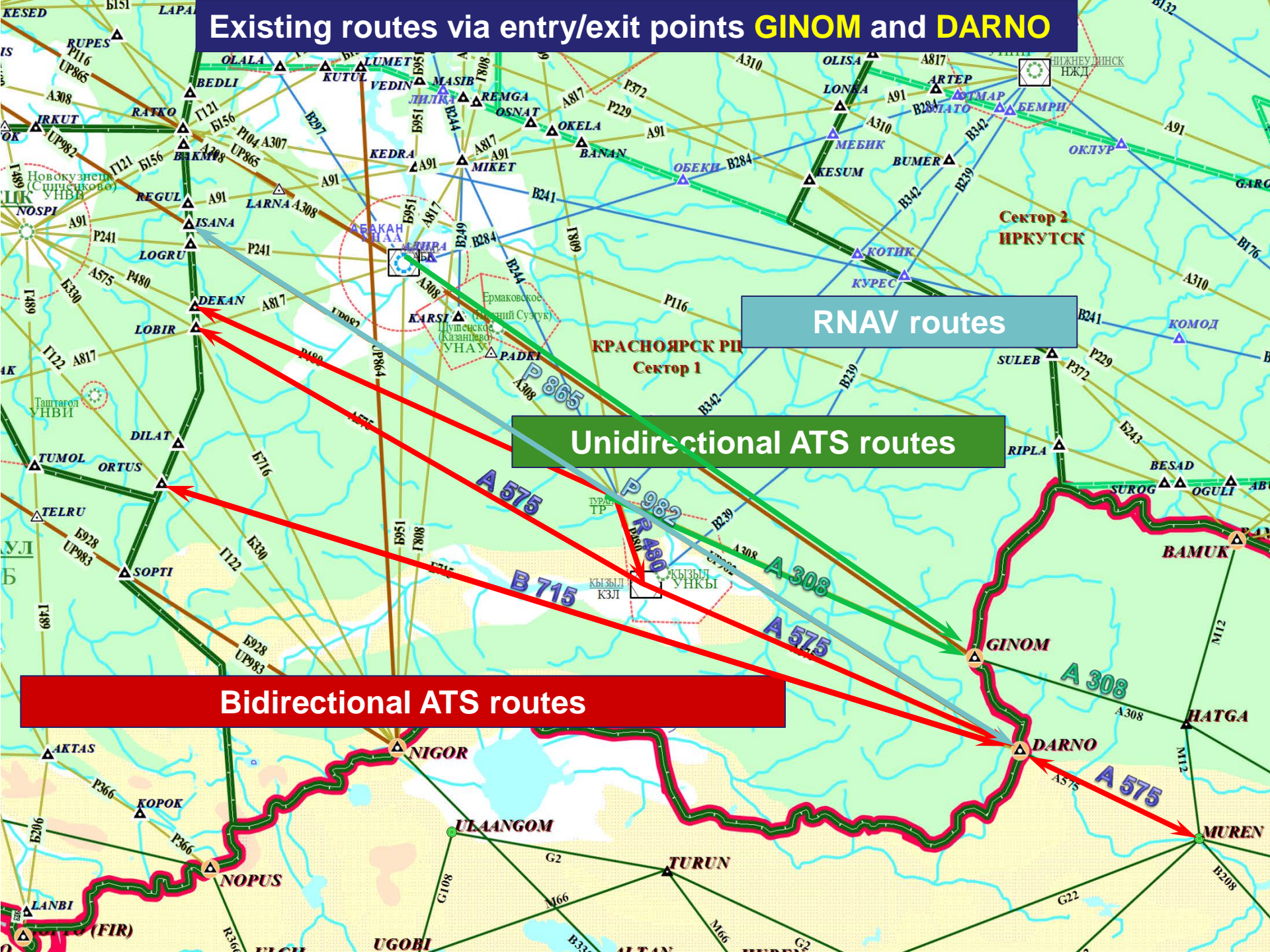
The existing airspace structure in Russia/Mongolia interface ensures safe ATS. The current number of international routes (25) and entry/exit points crossing the Russian-Mongolian border meets the needs of domestic and international airlines.

- At the same time, the difference between vertical separation systems utilized by Russia and Mongolia predetermines the existing buffer areas, prevents pilots from operating aircraft at the same level and increases controllers' workload. Mongolia has not yet carried out a transition to the **feet separation system**.
- Implementation of **unidirectional ATS routes** in the Russia/Mongolia interface (in order to increase the capacity of Krasnoyarsk ACC Sector 1).

The proposed airspace structure changes would allow streamlining traffic flows and uniformly distribute the workload between ATS units when crossing the Russian border.

**Russian and Mongolian dualized ATS route  
segments  
Proposals of  
the Central Siberia Air Navigation Branch**

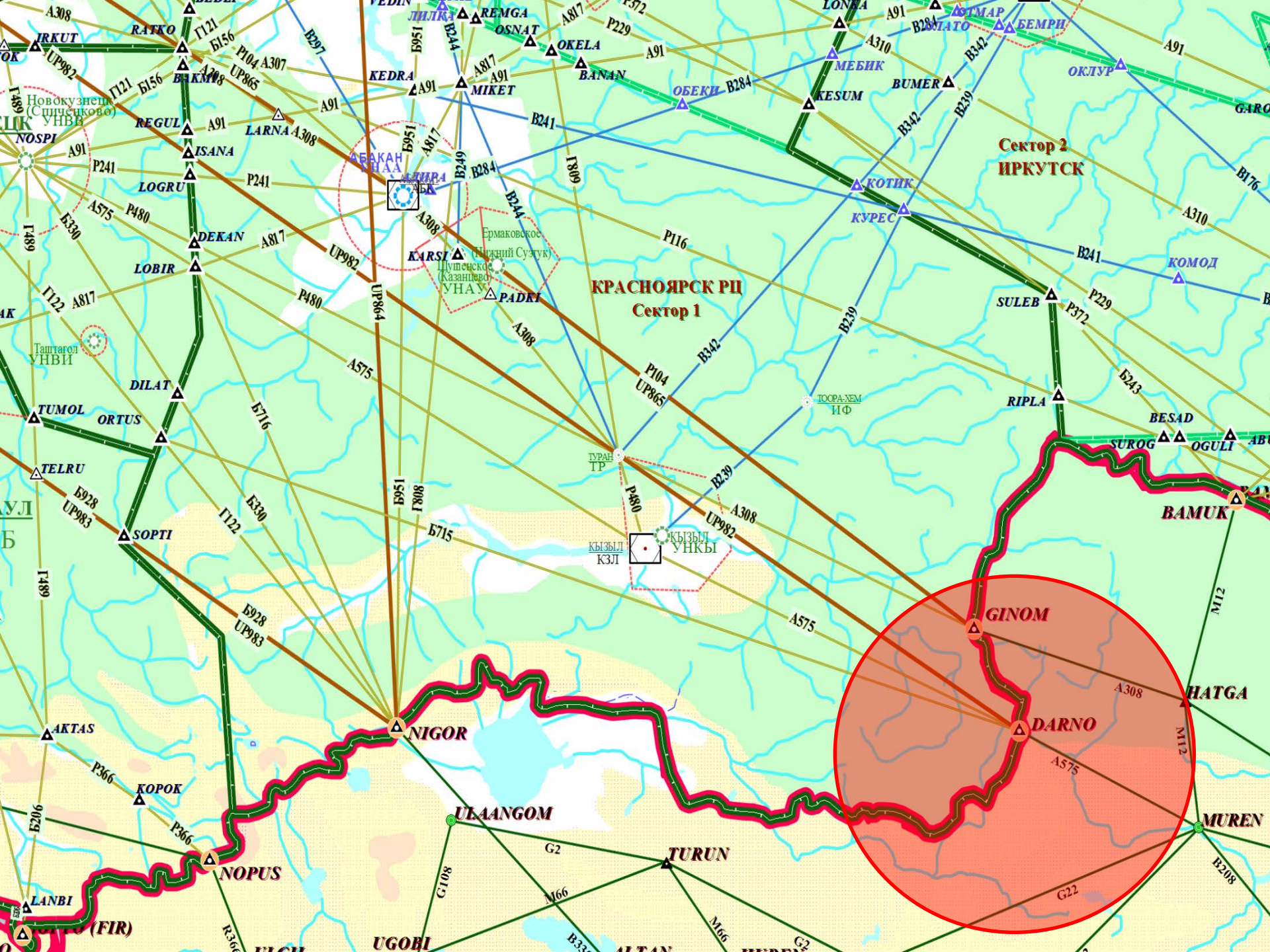
# Existing routes via entry/exit points **GINOM** and **DARNO**



RNAV routes

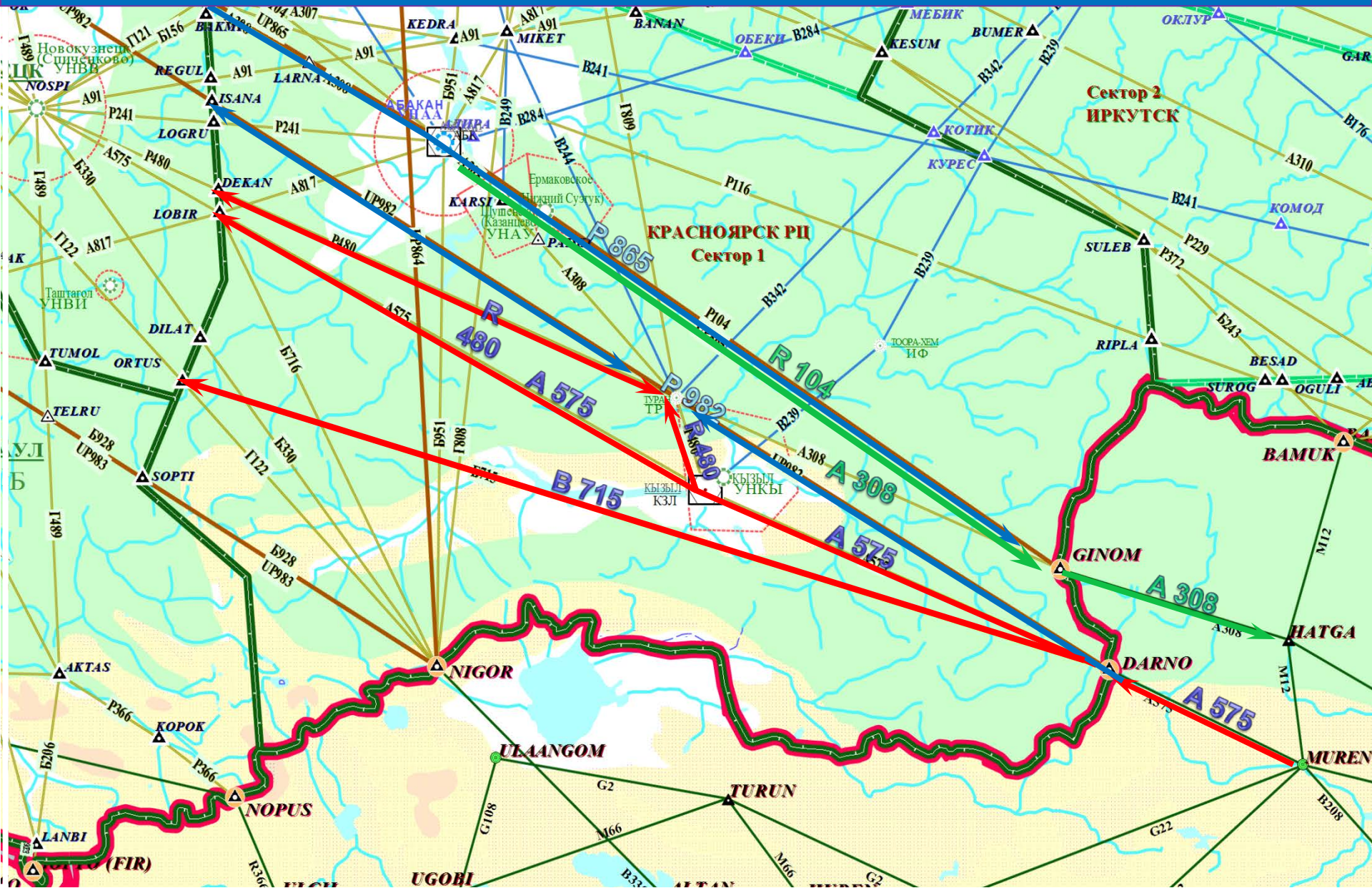
Unidirectional ATS routes

Bidirectional ATS routes

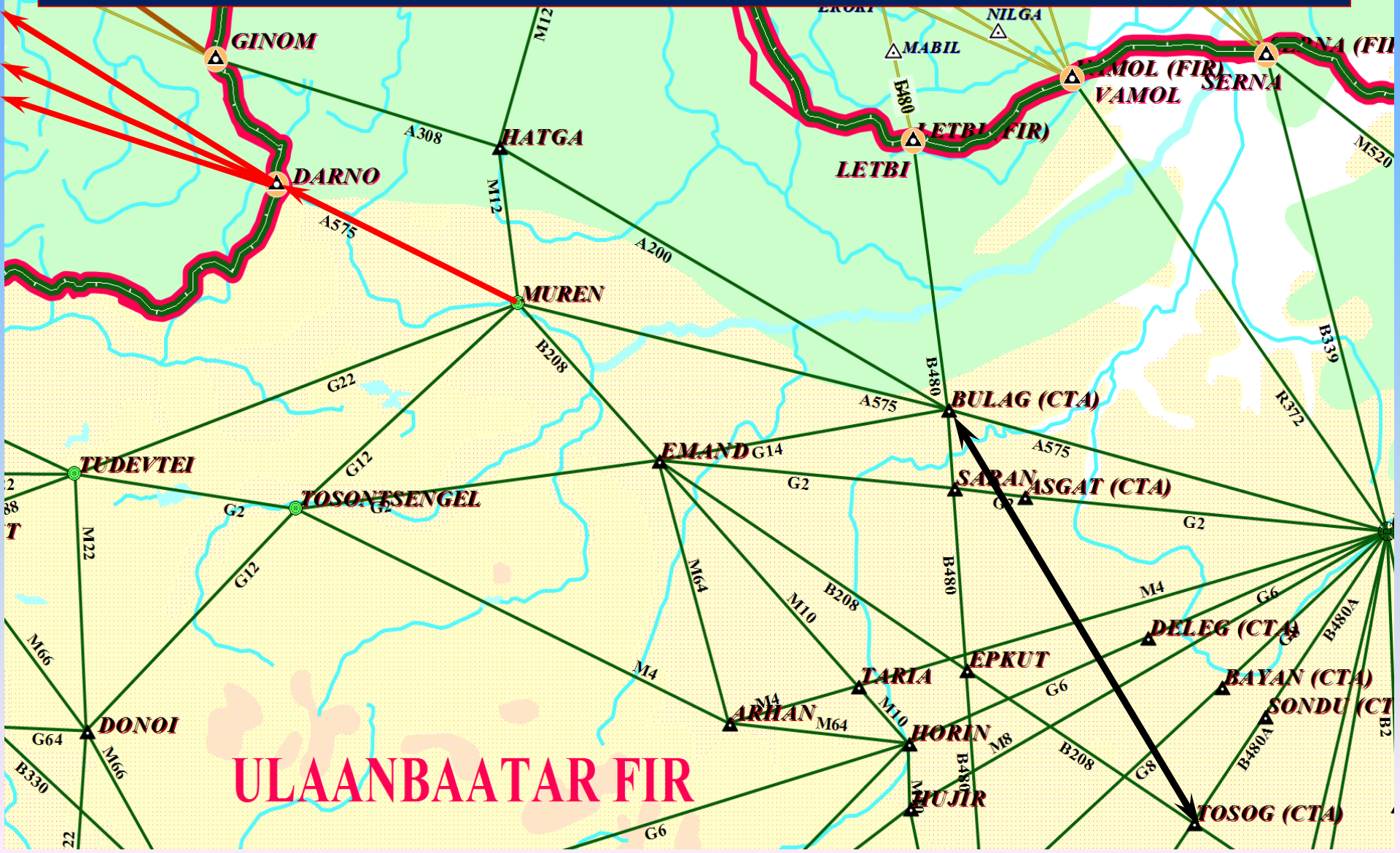




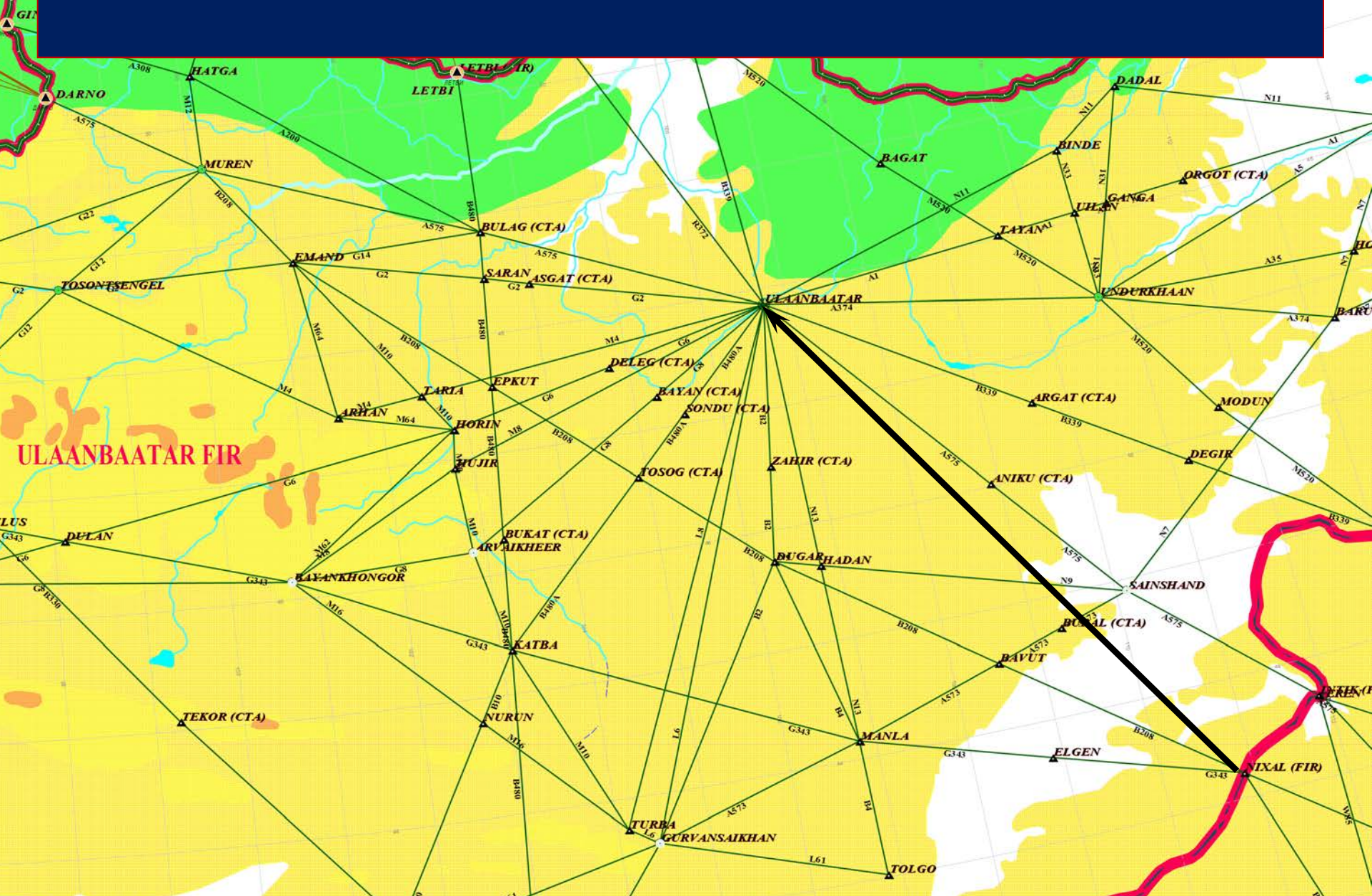
Proposal to establish a **unidirectional segment DARNO – TURAN** of the RNAV route P982 with **westbound cruise level** with an altitude range of **8550 to 14350 (FL280 – FL470)**



Establishment of an international route segment from **BULAG** to **TOSO** in Mongolia's territory in order to keep the existing air traffic flows



# Establishment of a westbound international route segment in Mongolia's territory from **NIXAL** to **ULLAANBAATAR**.



## **With Kazakhstan**

The distance of the Russian-Kazakh border is **7 512,8 km** and **85,8 km** along the Caspian Sea. The number of entry/exit points is **29**.

- There are no ATS route-related problems in Russia/Kazakhstan interface.

**Thank you for your attention**