FSBE “Aviamettelecom of Roshydromet”, North-Western Branch

CAeM Expert Team on
Communication, Coordination and
Partnership (ET-CCP) Meeting

Analysis of SIGMET Coordination between Neighbouring MWOs

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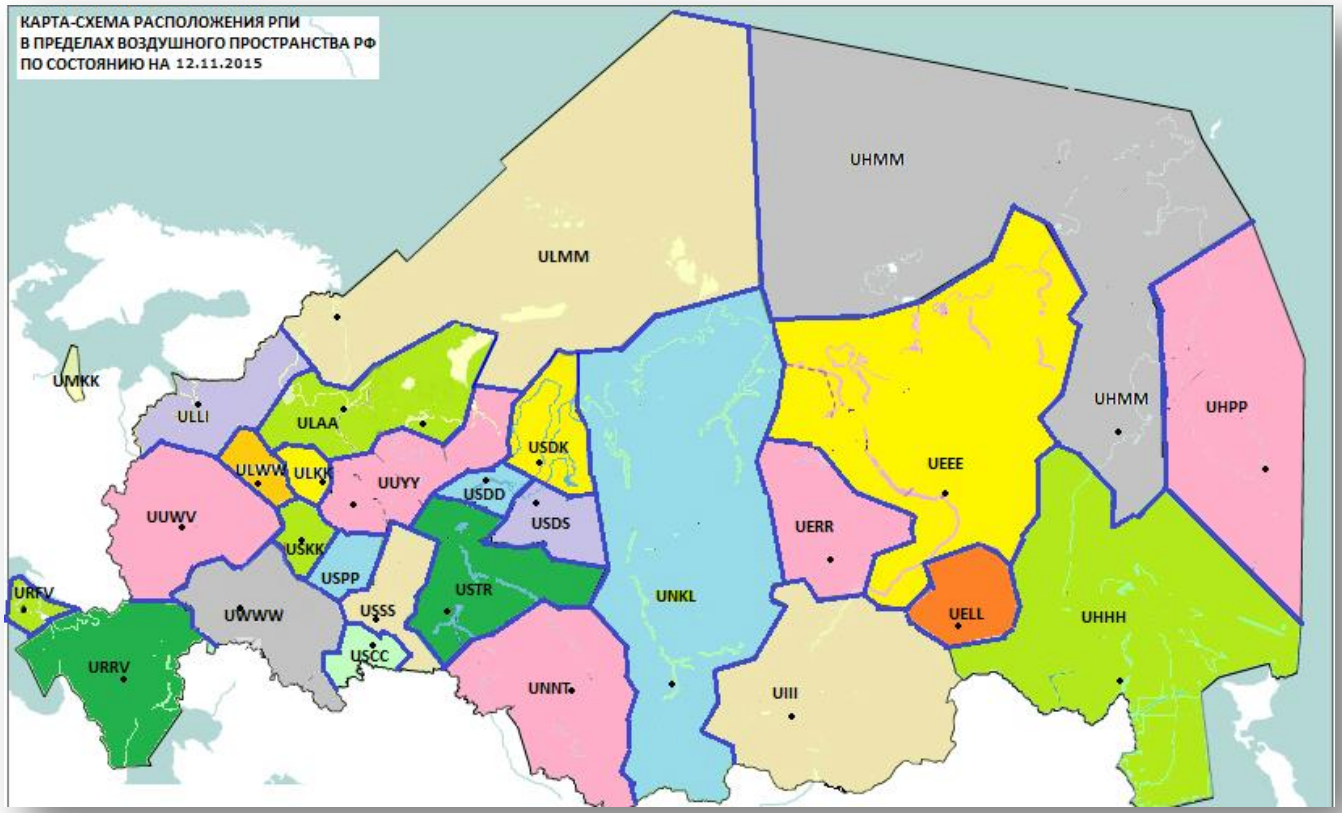
Russian Airspace

Russian Federation Unified ATM System basic features:

- Serviced area — **>26 million km²**
- Routes extent — **about 700 000 km**

This area is served by **29 MWOs** of the Russian Federation.



Russian Airspace

Russian airspace borders upon the following States, WG-4 and PT/EAST Members, airspace:
Azerbaijan, Belarus, Georgia, Kazakhstan, Latvia, Lithuania, Ukraine, Estonia

and other States:
Bulgaria, Iceland, China, Mongolia, Norway, Poland, Romania, the USA, North Korea, Turkey, Finland, Sweden, Japan.

Requirements for Forecasting Information Coordination in Russia

According to METG **Decision 25/3**, Russia has joined an ***Ad-hoc Group to study and review SIGMET coordination within the EUR Region**** (as the Coordinator of WG-4 and PT/EAST States).
(**hereafter referred to as **Ad-hoc group***)

Even before September 2015 various types of forecasts are being coordinated by Russian weather centers. For example, SIGMETs, GAMETs, or in some cases TAFs.

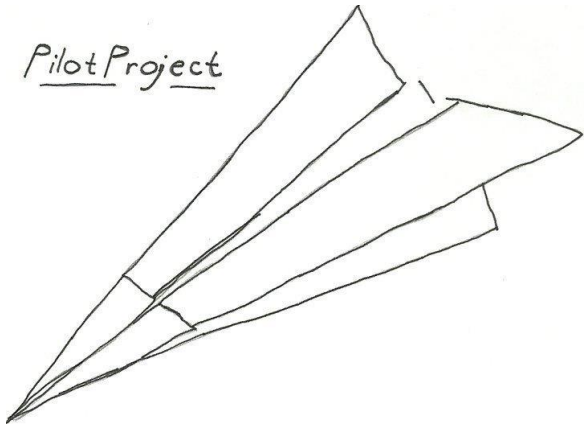
Information coordination control and revealing of inconsistencies is implemented within the QMS.

Pilot Project on SIGMET Coordination between Neighbouring MWOs

One of the requirements raised up by the international air navigation is ***to create a single seamless SIGMET-airspace***.

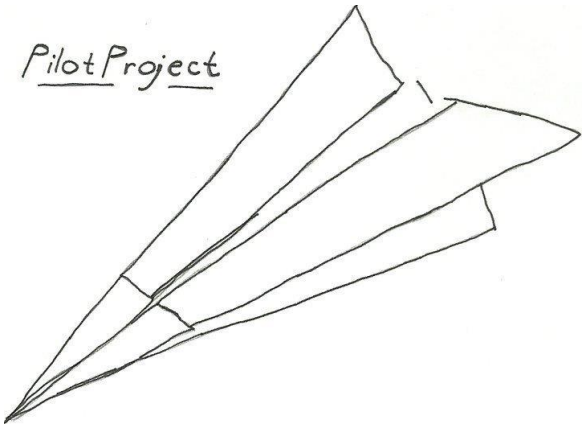
On behalf of ROSHYDROMET (FSBE "Aviamettelecom of Roshydromet") the **North-Western Branch** is nominated as **the coordinator of the Project** on SIGMET Coordination between Neighbouring MWOs

(**hereafter referred to as **Project***).

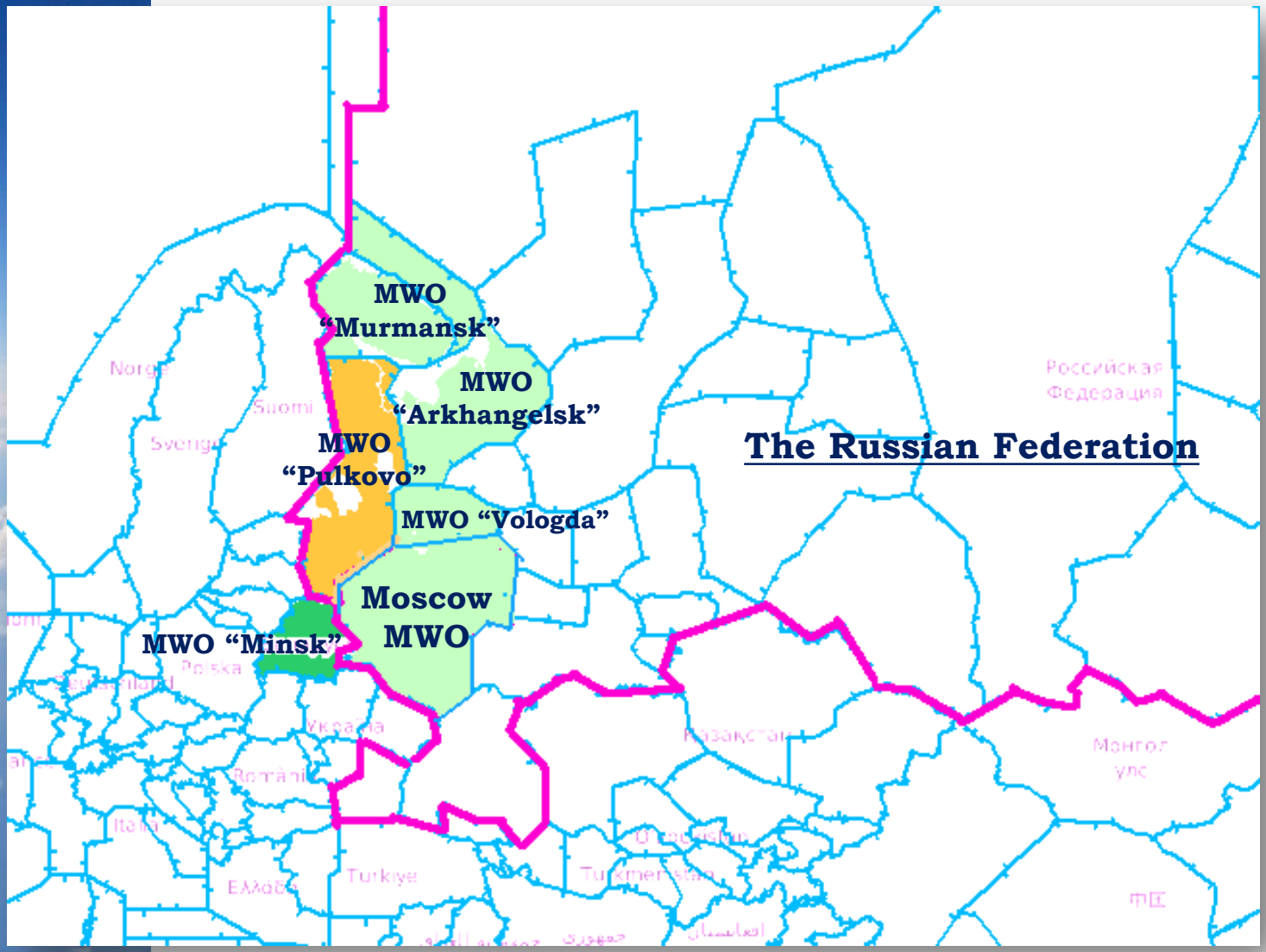


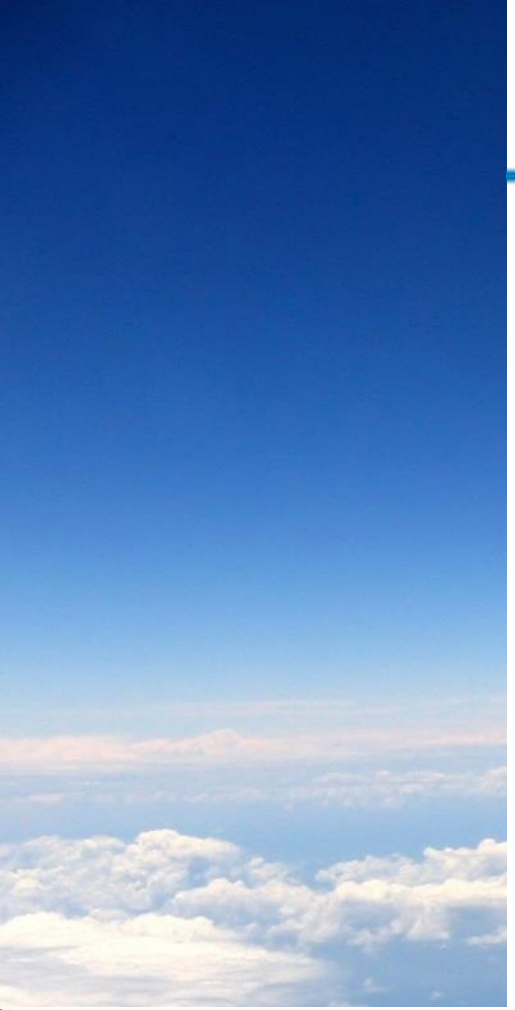
Project Stages

Since October 2015 monitoring of SIGMET information, issued by Russia and neighbouring MWOs, has been conducting.



Participating MWOs





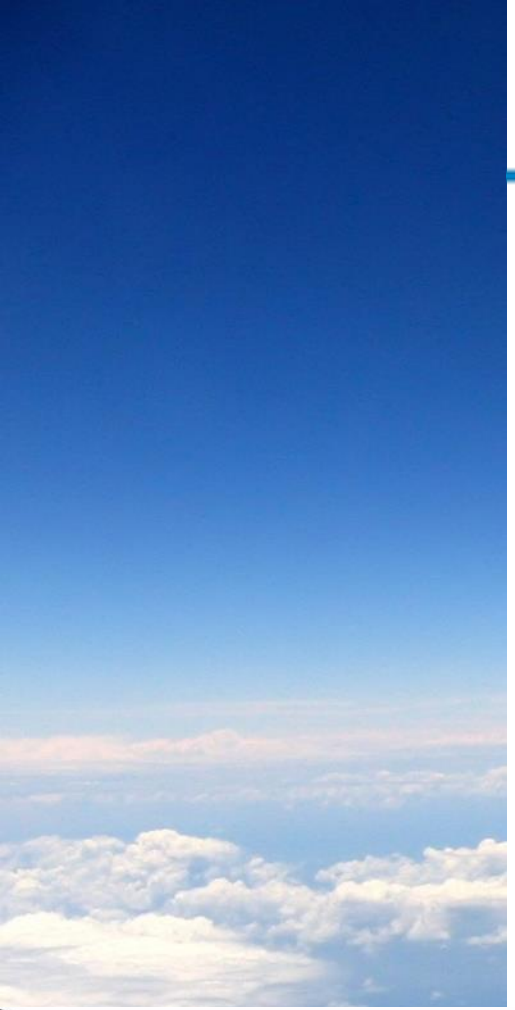
Pilot Project Aims and Tasks

Pilot Project Aims

To determine mechanisms of MWOs actions compliance in order to reach coordination of SIGMET information issued for adjacent FIRs.

Tasks

- To analyze coordination of SIGMETs issued by those MWOs involved in the Project;
- To find out the reasons for coordination lack in regard to SIGMET issued for adjacent FIRs;
- To work out recommendations for forecasters actions coordination while issuing neighbour SIGMET.



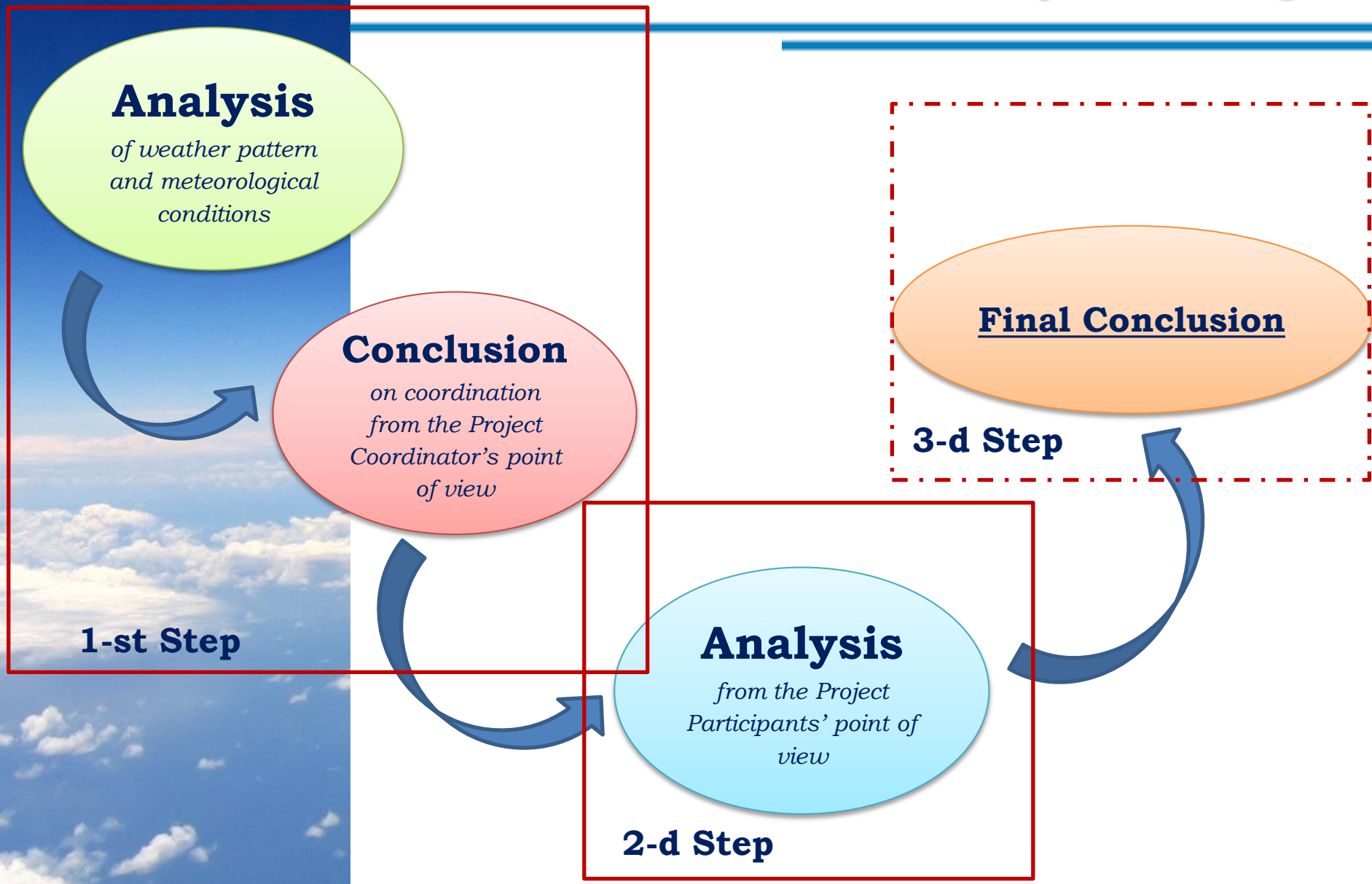
Task Solution

The following was analyzed:

- Weather situations and weather conditions;
- Calculated values of weather parameters (WAFS forecasts);
- Pilot reports.

On the basis of the analysis cases of either consistency or inconsistency of SIGMET issuance were considered.

Project Stages



Project Stages

1-st Stage

First Step: assessment of SIGMET issuance consistency from the Project Coordinator's point of view.

Second Step: assessment of SIGMET issuance consistency from the Project Participants' point of view.

Third Step

On the basis of the received data a conclusion on issuance consistency and/or inconsistency was made and the reasons for SIGMET inconsistency were revealed.

*In March 2016 preliminary results and further plans were sent to the Ad-hoc Group for **METG/26**.*

Preliminary results

- From 01.01 till 31.03.2016 a monitoring of SIGMET coordination (issued by MWOs participating in the Project) was conducted;
- Reasons for inconsistency of neighbouring MWOs actions were found out and analyzed;

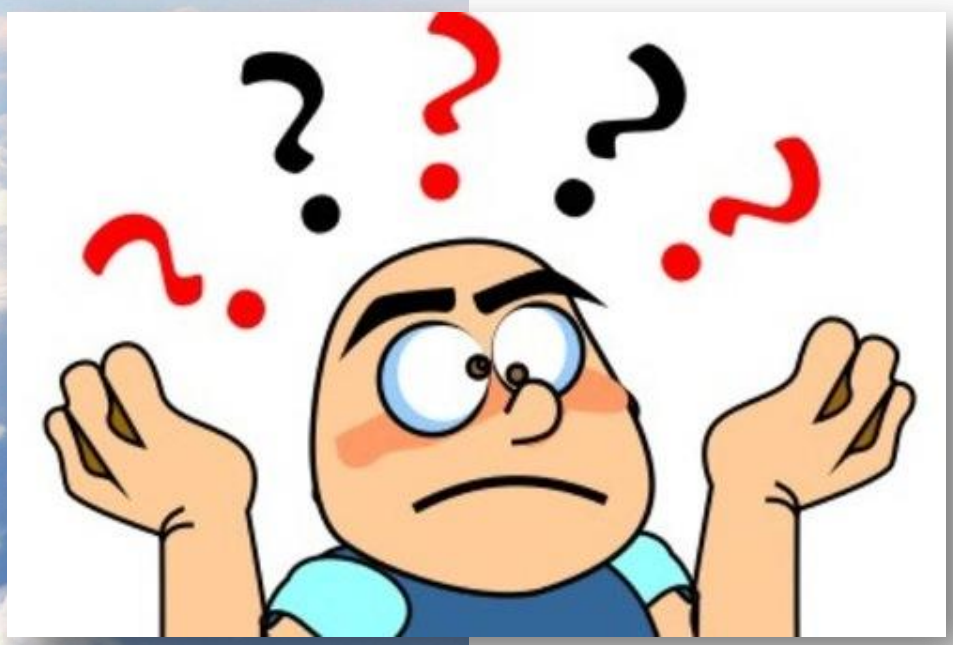
- Mistakes while SIGMET issuing were detected;
- A positive trend in forecasts' attitude to the given problem is marked;
- A conclusion is made: «**two-sided consultations are the positive step in SIGMET quality improvement**».

Problems and Solutions

The main problem is…

In case of similar weather situations and conditions forecasters of different MWOs sometimes came to different conclusions on the necessity of SIGMET issuance.

There is a solution!



Problems and Solutions

Problem Solution:

- To develop an algorithm of two-sided consultations between forecasters of different WMOs;

- To assess and choose the most effective NWP models and methods of calculation to implement them into operational work in order to unify and improve hazardous weather elements forecasting;

- To develop recommendations for assessment of hazardous weather occurrence risk and their implementation them into operational MWOs practice to issue consistent information

What Else is Needed?

Figure 12–2 Obtain a Thorough Weather Briefing

- Sufficient amount of aircraft observation data. For this purpose it is necessary to draw aviation community attention to the given challenge in order to guarantee flight safety.
- More exact definitions and criteria on SIGMET issuance.

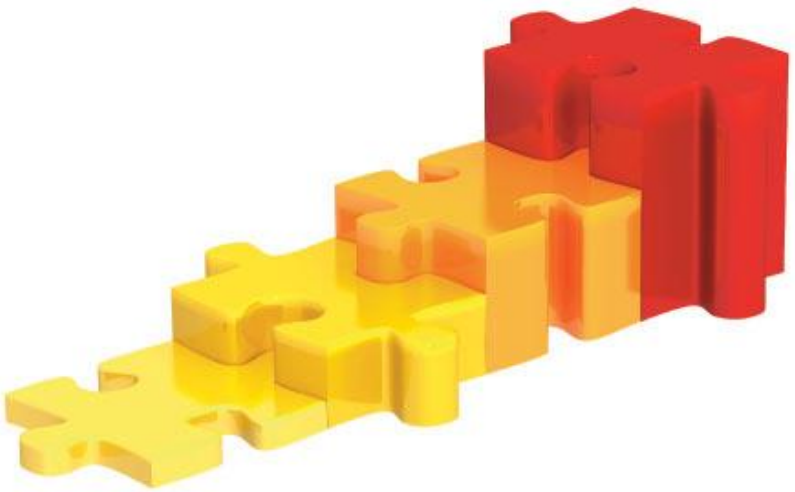
It is necessary to clarify some ICAO definitions and terms that have ambiguous interpretation.

Further Development of the Project

From 7 to 10 June, Yaroslavl will host a joint meeting of the WG-4, and PT / EAST. **The following will be presented**:

- Results of the 1st stage of the Project to familiarize participants with the problems posed and in order to make up a decision on joining the Project;
- Proposals on introduction of changes and amendments in ICAO documents;
- Question of improving the level of professionally-oriented English for consultations between the neighboring MWOs who communicate in English.

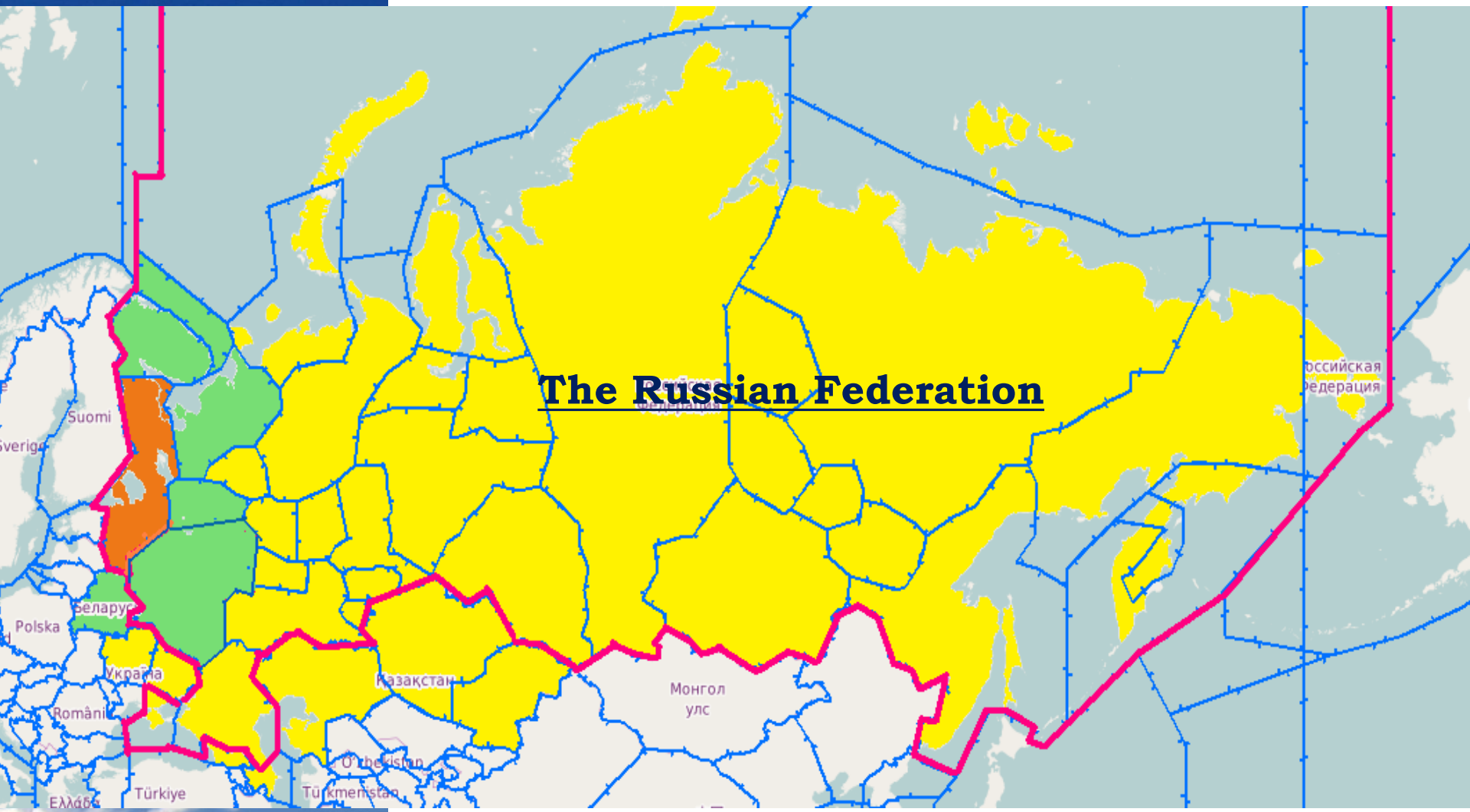
Future actions:



- To continue working on the Project with decreasing of the participants amount due to attraction of those MWOs that haven't yet joined the Project.
- To extent collaboration between adjacent States NHMS (WG-4 and PT/EAST Members):

  Discussing of actions aimed for collaboration on SIGMET coordination with the States having Russian as the working language: **Azerbaijan, Georgia, Kazakhstan, Ukraine.**

Further Cooperation Extent



- MWOs participating in the Project

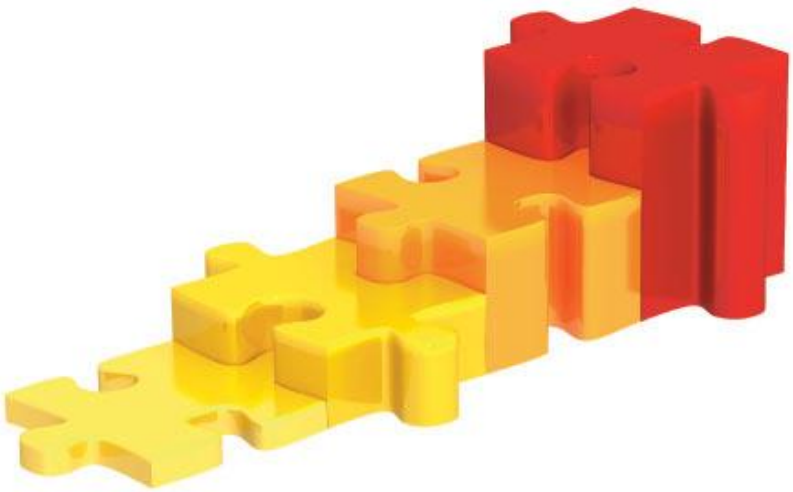
- MWOs that will join the Project

Further Development of the Project

In the frames of the future collaboration on Project implementation:

- To determine procedures of collaborative work;
- To solve the problems revealed during the 1-st Stage of the Project implementation;
- To choose the most effective NWP models;
- To determine algorithms of SIGMET issuance;
- To develop methods for different MWOs forecasters action in order to coordinate SIGMET issuance.

- To assess the necessity of single information space to exchange weather information and coordinate MWOs actions.



Regional Centers

In case of having certain technical capacity **Regional Centers functions include:**

- Preparing of advisory information that describes spatial and temporal distribution of areas where hazardous weather can occur on the basis of the existing data using advanced tools and forecasting systems.

Such advisories would be relevant when updating information in real-time or close to it.

- Function of operational control and conflict management in the assessment of hazardous weather risks.

Regional Centers

Creation of Regional Advisory Centers will contribute to solving the problem of consistency SIGMET at the borders of adjacent FIRs.

However SIGMET consistency problem at the borders of various Regional Advisory Centers will still be in place.

The decision of this problem can be found in the concept of regional coordination.

Thank you!