METEOROLOGICAL SERVICES FOR CIVIL AVIATION – OPPORTUNITIES & RISKS ARISING FROM THE GANP/ASBU IMPLEMENTATION

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Framework for future aeronautical meteorological services

Transition to the global ATM system, based on the regional, sub-regional and State level meteorological information in globally interoperable digital formats and offering global interoperability that will enhance operational efficiency and aviation safety.
Recommendations, defining the improvements in the aeronautical meteorological service provision over the period to 2028 and beyond were approved.
Implementation

GANP

ASBU

(MET/14)

WMO Strategic Plan
AeMP

Regional projects
Subregional projects
National projects

Including the establishment of:

- Global/Regional Space Weather Centres (SWXCs);
- Radioactive Release Advisory Centres (RRACs);
- Regional Hazardous Weather Advisory Centres (RHWACs).
In the B0-AMET timeframe (2013-2018) the Russian Federation aims to establish two regional centres:

- Regional Space Weather Centre (SWXC);
- Regional Hazardous Weather Advisory Centre (RHWAC).
The Action Plan to meet the Recommendations adopted by ICAO MET/14/WMO CAeM-15 in support of Block 0 (2013-2018) of the Aviation System Block Upgrades (ASBU) methodology includes the establishment of two Regional centres by 2018.
The CIS Interstate Council for Hydrometeorology Working Group – 4 – *Meteorological Services for Civil Aviation* (CIS ICH WG-4) sets an example of subregional cooperation and collaboration.
The Working Group - 4 was set up by the decision of the Commonwealth of Independent States Interstate Council for Hydrometeorology (CIS ICH) in 1992 and proved to be one of the most significant working bodies under the CIS ICH. The balanced approach to service delivery in the CIS countries was underpinned by the long-standing practice, harmonizing the process of making observations, generating forecasts, exchanging meteorological information, maintaining data banks, verifying aviation forecasts, developing quality management systems, liaising with aviation users, certifying meteorological tools and equipment, etc.
Taking into account that some of the National Meteorological Services (NMSs) in the CIS countries are not meteorological service providers (MSPs), the WG/4 maintains a close liaison with a wide array of air navigation offices in the Members of the subregion which comprise aeronautical meteorological stations.
To date, the WG-4 has already produced tangible results in the CIS airspace, carrying out functions similar to those peculiar to the Northern Europe Aviation Meteorology Consortium (NAMCon).

**CIS ICH WG-4 & ICAO METG PT/EAST:** the Commonwealth of Independent States Interstate Council for Hydrometeorology Working Group - 4 - *Meteorological Services for Civil Aviation* & the ICAO Meteorology Group Project Team for the States in the Eastern part of the European Region, including Central Asia.

**MET service providers:** NMS, aeronautical bodies, FAA

- Russian Federation
- Belarus
- Kazakhstan
- Kyrgyzstan
- Armenia
- Azerbaijan
- Tajikistan
- Uzbekistan
- Georgia

**Uniform technologies**

**QMS**

**AMP**

**CA**

**TAF Verification**

**SWIM**

**Coordination**
Since 2012 the WG-4 together with ICAO METG PT/EAST have addressed the following issues:

- International education and training standards in meteorology;
- Development of new technologies in support of aeronautical meteorological services;
- Implementation of WMO/ICAO Standards and Recommended Practices in aeronautical meteorological services;
- AMP competence assessment;
- Actions towards an improved quality management system, incorporating safety management system elements;
Job competence requirements, concerning English language proficiency for AMP;
Future SWIM-enabled environment for aeronautical meteorological services;
Actions towards the improved regional exchange of MET information, including terminal and flight forecasts, SIGMET, AIRMET and GAMET.
The WG-4 and PT/EAST recognized the need to align aeronautical meteorological practices available in NMHSs with ICAO/WMO International Standards, WMO Strategic and Operating Plan, ICAO Global Air Navigation Plan and to foster regional cooperation in the interests of CIS countries. It was decided to develop a joint Implementation Plan for the CIS countries to meet the requirements for enhanced MET service delivery from the GANP/ASBU strategies.
The benefits from the WG-4/PT/EAST activities in the CIS area will evolve over time to meet the needs in a coordinated effort to facilitate participation in implementing the WMO Strategic and Operating Plan and ICAO Global Air Navigation Plan.
Risks associated with MET services

**Risk** is the possibility or probability of occurrence of adverse events arising from certain decisions or actions. Risks occur when an expected event has great practical significance and affects the interests of at least one State.

**Categories of risks:**
- Operational
- Information
- Professional
- Economic

Risk management for making optimal decisions
Operational risks
Arise as result of information generation and issue, using various tools, equipment, information systems & software.
Information risks

The future SWIM environment incorporated into the ATM system envisages the transition from point-to-point data exchange to system-wide data representation and the provision of access to achieve functional compatibility. Risks are associated with possible events arising from data deletion, corruption, disclosure, breach of IT security through unauthorized actions.
Professional risks

Arise from the lack of staff education and training in aeronautical meteorological services in line with uniform standards. Enhancement of the WMO Regional Training Centres, undertaking training in meteorology, hydrology and related sciences to meet the needs of the Region & using an on-line education resource – distance learning.
Economic risks

Associated with the lack of an appropriate cost recovery mechanism.
Activities aimed at the avoidance or reduction of economic risks can be underpinned by uniform principles for establishment of a financial and economic model to recover costs for generation and distribution of aeronautical meteorological information worldwide, including financial responsibilities between the NMSs and service providers.
Focus should be on development & adoption of some documents on relations among the States in MET service provision, with the following highlights:

- Members’ obligations to inform, through the WMO Secretariat, of those government departments that are responsible for meteorological services to aviation;
- Need to publish a list of meteorological service providers;
- Conditions on the exchange of aeronautical meteorological data between the Members;
- Provision of access to basic meteorological data and products;
- Access control to information systems;
- Commitments to supply of meteorological and related data and products;
- Conditions related to the exchange of aeronautical meteorological information compliant with Supplements to Resolution 40 (Cg-XII) – WMO policy and practice for the exchange of meteorological and related data and products.
The fast is that civil aviation commercial organizations provide MET services at costs not adequately recovering the expenses incurred. Further steps are necessary to persuade the commercial sector to refrain from the practice in future, resulting for the officially recognized service providers in financial losses and disruption of the entire meteorological infrastructure.
International commitments are a prerequisite to any successful solution to global aeronautical meteorology issues which span national borders.

Strong regional partnership will help to meet the ICAO GANP and ASBU related developments.
Thank you!