



## DIRECTORS GENERAL OF CIVIL AVIATION - EUR/NAT REGIONS

### 2019 MEETING (EURNAT-DGCA/2019)

(Paris, France, 19 to 20 March 2019)

#### **Agenda Item 5: ICAO Business Plan and EUR/NAT Operating Plans for 2020-2022, including priorities for the ICAO EUR/NAT Regions**

##### **i. Aviation Safety and Air Navigation**

#### **EUR/NAT AIR NAVIGATION CAPACITY AND EFFICIENCY STATUS AND PROPOSED WAY FORWARD**

(Presented by the Secretariat)

#### **SUMMARY**

*This paper provides information on the status of Air Navigation Capacity and Efficiency (addressing also partially related air navigation safety and security aspects) within the EUR/NAT Regions, including the major activities and outcomes for the EUR and NAT Regions, and identifies proposed future actions requiring DGCA attention and support.*

### **1. Introduction**

1.1 The first Meeting of the Directors General of Civil Aviation – EUR/NAT Regions was held in Paris on the 5th of May 2017 (EURNAT-DGCA2017).

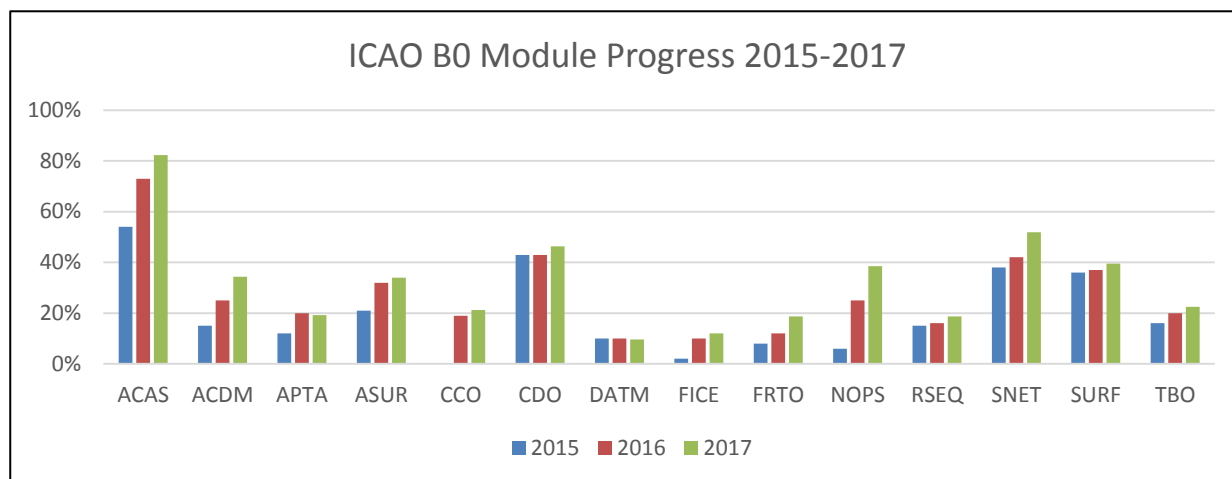
1.2 The Meeting recognized the work performed by the EUR/NAT Office to improve the regional aviation system and to support the regional implementation of the ICAO *Global Air Navigation Plan* (GANP). A number of conclusions and decisions addressed the resolution of regional air navigation deficiencies, the implementation of the EUR regional performance framework, the active support to both Regional Monitoring Agencies, civil-military cooperation activities and the support to crisis-related activities/exercises. The EURNAT-DGCA/2017 agreed on the priorities, including cyber security and inter-regional coordination, identified for the ICAO EUR/NAT Region and confirmed their support of the EUR/NAT Work Programme 2017-2019.

### **2. Discussion**

#### *Implementation of the ICAO Global Air Navigation Plan (GANP)*

2.1 Following the EANPG Conclusion 55/03 (European Air Navigation Planning Group, 55th Meeting, Paris, November 2013), a cooperative arrangement was established between the ICAO EUR/NAT Office and EUROCONTROL to support the ASBU (Aviation System Block Upgrades) implementation monitoring process. The arrangement encompassed, for reporting purposes, the utilisation of the EUROCONTROL ATM Master Plan Level 3/LSSIP (Local Single Sky Implementation) mechanism (for 41 States participating in that process) and a specific ICAO EUR ASBU questionnaire, aligned with the ATM

Master Plan Level 3 (the former ESSIP) implementation objectives, to be used by the remaining ICAO EUR States. This has been a successful example of using combined efforts and existing resources from EUROCONTROL and the ICAO EUR/NAT Office to avoid unnecessary duplication of reporting. Over the last 4 years, the ASBU Implementation Monitoring Report had been evolved so that it includes the updated progress/status of implementation of ASBU Block 0 modules from all 55 States in the EUR Region (available at the EUR/NAT webpage: <http://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx>).



2.2 As the *Global Air Navigation Plan* requires States to report the status of their ASBU implementation, this report is a key document for the EANPG to monitor and analyse the ASBU implementation within the EUR Region and a companion document of the *European Air Navigation Plan* (eANP, Vol. III). A similar document has also been developed for the NAT SPG, which includes the former *NAT Service Development Roadmap* (NAT Doc 009).

#### *Implementation of the ICAO EUR Regional Performance Framework*

2.3 Following the implementation of the Regional Performance Framework in 2017, it must be highlighted that the 2018 report represented a more detailed view with 30 participating States. The report showed the aggregation of performance results, recalling that the aim of the activity was not the benchmarking of States' performance, but rather to support States to implement the performance-based approach principles and the identification of areas where improvements were most needed. It should also be noted that, with the aim to avoid duplication of efforts, the coordination process for the development of the 2018 EUR performance report involved ICAO, European Commission, EASA and EUROCONTROL.

#### *Crisis related activities and exercises*

2.4 The involvement of the ICAO EUR/NAT crisis coordination activities and exercises is multifaceted and includes the following areas.

2.5 The Regional Office is increasingly involved in the inter-regional coordination of airspace contingency issues with adjacent States from the Middle East (MID) and Asia/Pacific (APAC) Regions and directly supports Crisis Coordination Teams (CCT) in the interface areas (e.g. Afghanistan, I. R. Iran, Iraq, Syria, DPRK).

2.6 VOLCEX is a volcanic ash exercise conducted once per year of a volcano located in Iceland (every other year) and a volcano in Italy and Portugal (rotating every other year). VOLCEX exercises the *Volcanic Ash Contingency Plan* (VACP) for the EUR and NAT Regions (EUR Doc 019, NAT Doc 006, Part II). The Network Manager of EUROCONTROL plays an active role in VOLCEX in exercising and evaluating the crisis coordination between various stakeholders through the EACCC (European Aviation Crisis Coordination Cell) and the AOCCC (Aircraft Operator Crisis Coordination Cell). The main issue identified in VOLCEX18 was that some national procedures were not in accordance with the VACP for the

EUR/NAT Regions. However, many States are updating their procedures accordingly which will further harmonize the Safety Risk Assessment approach in the EUR/NAT Regions. Conformance to the *Volcanic Ash Contingency Plan* in the EUR/NAT Regions will reduce the number of Danger Areas and unnecessary NOTAMs while improving the issuance of SIGMET (Significant Meteorological Information) particularly providing harmonization at the Flight Information Region boundaries and improve reporting and dissemination of special air-reports on volcanic ash.

2.7 VOLKAM is a similar volcanic ash exercise conducted once per year of a volcano located in Kamchatka and/or Kurile Islands in the Russian Federation. This exercise also exercises the VACP for the EUR and NAT Regions. The Main ATM Centre in Moscow plays an active role in VOLKAM in coordinating with Air Navigation Service Providers (ANSP) and operators on accepting re-routes into Russian Federation airspace based on exercise contingency routes and operators' needs. The main issue identified in VOLKAM18 was the complication of managing two eruptions simultaneously as this was a significant workload to all stakeholders. For operators, managing reroute information without automatically sending this information from Area Control Centre (ACC) to ACC would have resulted in diversions and cancelled flights in a real event. The test of providing reroute information from the airline to the ACC via Controller-Pilot Data Link Communications (CPDLC) was successful between United Airlines and Magadan ACC. The next exercise will test providing reroute information to ACC Anchorage who will send to ACC Magadan automatically via ATS Interfacility Data Communications (AIDC) and then from ACC Magadan to ACC Khabarovsk via On-Line Data Interchange (OLDI). This will ease the workload of operators and ACCs as well as reduce the risk of error in passing the reroute information. By 2020, this should be achieved amongst the following ACCs: Edmonton, Anchorage, Magadan, Khabarovsk and Fukuoka.

2.8 The EUR/NAT Office is also active in practicing the IAEA's Joint Radiation Emergency Management Plan of the International Organizations conducted approximately every 3 years.

2.9 The CAPSCA (Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation) EUR was established in 2011 and includes the following activities:

- a) CAPSCA EUR TRAINING POLICY GROUP (TPG). CAPSCA EUR has established a dedicated Training Policy Group (2015), to develop (2016-2018) an ICAO Training Package (ITP) in cooperation with WHO (World Health Organization) and JAA TO (Joint Aviation Training Organisation) and an ICAO Regional Training Centre of Excellence (RTCE). This ITP, developed by CAPSCA EUR, will be available to all ICAO regions through the CAPSCA global programme, in order to standardize the training of the CAPSCA technical advisors performing technical assistance missions during both preparatory and crisis periods.
- b) Cooperation with Network Manager (NM) – European Aviation Crisis Coordination Cell (EACCC) NM/EACCC has organised a crisis management exercise entitled 'PANDEMIC19' in cooperation with ICAO CAPSCA. The exercise focused on the coordination and communication of the European response in case of a Pandemic, including information required for coordination and sharing through EACCC in order to reduce uncertainty for aviation in general and ATM in particular. For that purpose, coordination with other relevant international organizations is considered instrumental. ICAO CAPSCA is enhancing the continuous cooperation with all relevant organizations and builds the necessary networks for efficient response during crisis periods.
- c) Annual CAPSCA EUR meetings: CAPSCA EUR is organizing an annual meeting addressing matters of crisis management and communicable diseases, involving both aviation and public health authorities and other relevant organizations (e.g. WHO, European Commission (EC), NM/ EACCC, European Centre for Disease Prevention and Control (ECDC), etc.)

#### *Airspace enhancements and ATS route network improvements*

2.10 The improvement of the ATS route network, the enhancement of the airspace structure and the implementation of new concepts within the whole EUR Region have been managed by the

EUROCONTROL Route Network Development Sub-Group (RNDSG) of the Network Operations Team (NETOPS) for the ECAC area and the ICAO Route Development Group Eastern part of the EUR Region (RDGE). Both groups work in close cooperation to ensure regional interconnectivity and interoperability of the European route network within the ICAO EUR Region and with adjacent ICAO Regions. The established processes are based on frequent meetings focused on airspace design, airspace utilization, flight efficiency and enhancing the capacity of the whole European airspace structure. Over 225 ATS route improvements and 12 major airspace projects in the RDGE area and 155 Free Route Airspace projects and airspace optimization measures within the RNDSG area have been implemented during 2018.

#### *Aeronautical Information Management (AIM)*

2.11 Further to the introduction of the new *Procedures for Air Navigation Services (PANS)–Aeronautical Information Management (PANS-AIM, Doc 10066)* and Annex 15, several activities have been initiated by the ICAO EUR/NAT Office to assist States with the implementation of the new AIM provisions, in particular the implementation of digital datasets, including, a successful Interregional EUR/MID Workshop on PANS AIM (Paris, 10-12 July 2018) and the development of the compliance checklists for the PANS AIM and Annex 15. The following activities are planned for the period 2019-2022:

- a) TOD Workshop (Algeria, 29-31 October 2019) (with support of ACAO, EUROCONTROL and DGCA France);
- b) Interregional AIM Seminar to address Digital Datasets & AIXM Implementation (2020-2021);
- c) AIM Go-Team missions to address AIM implementation (Proposal: 5 States over 2020-2022); and
- d) Joint ICAO/ACAO AIM Go Teams & National AIM Implementation Workshops (Tunisia, Algeria, Morocco) (2019-2021).

#### *System-Wide Information Management (SWIM)*

2.12 The ICAO EUR/NAT Office in close cooperation with EUROCONTROL is actively supporting the EUR/NAT Regions in planning and implementation of SWIM, one of the cornerstones of the future ATM Concept of ICAO. The EUR SWIM Project Team is currently developing SWIM prerequisites as well as a needs and capabilities matrix and plans to develop a SWIM implementation roadmap as well as work with adjacent Regions to assure harmonization of the implementation of SWIM.

#### *Performance-Based Navigation (PBN)*

2.13 The ICAO EUR/NAT Office in close cooperation with EUROCONTROL, EASA, IATA is actively supporting the implementation of ICAO GANP priorities of Performance-Based Navigation (PBN), CDO and CCO. This joint effort resulted in the increased PBN implementation level - 54 EUR/NAT States have developed PBN implementation plans which included also CDO and CCO. Currently, the ICAO PBN Consolidation Task Force is assisting States in the implementation of Circular 353 (*Transition planning for the Instrument Flight Procedure Chart Identification from RNAV to RNP*). The PBNC TF, in conjunction with EUROCONTROL Navigation Steering Group (NSG) has been tasked to develop a Regional Transition Plan for the implementation of the new PBN Charts naming convention in 2019. The objective is to fully implement the requirement by the end of 2022.

#### *Search and Rescue (SAR)*

2.14 The EUR/NAT Office assists States in the implementation of SAR and GADSS SARPs. The EUR Region SAR Plan has been developed with the objective to provide a framework to assist EUR States to meet their SAR needs and obligations per Annex 12 and improve cooperation between aeronautical and maritime SAR services, within their area of responsibility and across other ICAO regional boundaries, where applicable.

2.15 As a follow up of the 13th Air Navigation Conference (AN-Conf/13) *Recommendation 4.4/1 – Search and rescue (SAR) and the Global Aeronautical Distress and Safety System (GADSS)*, the EUR/NAT Office will organize a Regional SAR workshop combined with a SAREX (Search and Rescue Exercise), in September 2019 in Belgrade, Serbia, to facilitate implementation of the GADSS. This event will be an excellent opportunity to invite the appropriate expert groups in the EUR Region to provide advice on the implementation of GADSS.

*Operation of non-compliant/non-approved aircraft in RVSM Airspace*

2.16 The EANPG/60-RASG/07 (November 2018) noted information and presented their views regarding potential supplementary mechanisms that could be developed to improve the resolution of reduced vertical separation minima (RVSM) approvals and compliance anomalies. Following the discussions, the meeting agreed to a number of actions which include:

- a) organise a review of the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) data with regards to EUR States' compliance with ICAO RVSM approvals provisions and associated procedures on managing RVSM non-approved and non-compliant aircraft, and provide further recommendations, including potential Mandatory Information Requests (MIR) and inclusion on the EUR list of air navigation deficiencies, to the next European Aviation System Planning Group (EASPG) meeting;
- b) request EUROCONTROL, in conjunction with the EURASIA Regional Monitoring Agency (RMA), on behalf of the EANPG and RASG-EUR, to investigate possible solutions in coordination with other non-Integrated Initial Flight Plan Processing System (IFPS) area States to implement additional measures to filter, potentially leading to rejection, flight plans for aircraft intending to operate in the RVSM airspace and included on the RMAs' lists of RVSM non-approved and non-compliant aircraft; and
- c) coordinate with EUR and EURASIA RMAs additional measures to improve awareness among States on the access and usage of RMA bulletins as regional best practices.

*Key Activities in Air Navigation Capacity and Efficiency in 2020-2022*

2.17 Considering the goal of this ICAO Strategic Objective (*implementing a fully-harmonized global air navigation system which is built on modern performance-based procedures and technologies*) and taking into account the GANP as well as the identified regional priorities, 8 key activities have been identified for the ICAO 2020-22 timeframe, which include:

- a) Assist States in the implementation of policies and provisions to optimise aerodrome and TMA (terminal control area) operations;
- b) Assist States in the implementation of policies and provisions on CNS (communications, navigation and surveillance) enablers;
- c) Assist States in the implementation of policies and provisions on information management (IM) and SWIM;
- d) Assist States in the implementation of policies and provisions on MET (meteorology);
- e) Develop and measure progress against regional Air Navigation priorities through regional air navigation plans and Planning and Implementation Regional Groups (PIRGs);
- f) Assist States in the implementation of policies and provisions to improve efficiency of en-route operations through the availability of user preferred routing;
- g) Coordinate and implementation assistance on the ICAO Trust Framework; and
- h) Support the rapid and coordinated response to crisis, contingencies and other situations requiring urgent assistance.

2.18 These key activities have been further refined for all the Performance Improvement Areas (PIA) and Air Navigation Services with deliverables, measurable indicators & targets and detailed description in the Regional Office operating plan 2020-2022.

2.19 Among new key activities is the integration of Unmanned Aircraft Systems (UAS)/Remotely Piloted Aircraft Systems (RPAS)/Drones into the aviation system in a harmonized way which requires support to States in the development/implementation of their regulatory and operational systems, which also includes the sharing of best practices in regional workshops/events.

2.20 During the last Air Navigation Conference (AN-Conf/13, October 2018) the integration of new entrants (e.g. Autonomous UAS, Commercial Space Operations and Supersonic Aircraft Operations), as well as the implementation of new operational concepts (operations below 1000ft/UTM, operations above FL 600, formation flights) into the current aviation system was discussed and several recommendations were prepared for consideration at the 40th ICAO Assembly. Pending the outcome of the discussions at the next Assembly, there could be an impact on the ICAO EUR/NAT operating plan if these Assembly Resolutions have to be implemented by 2022.

2.21 The support to States in ATM cyber activities and the implementation of the ICAO Trust Framework have also been included as key activities for the next years.

#### *Challenges and future areas of impact*

2.22 The ICAO EUR/NAT Regions remain a highly complex and unique, with diverse and sometimes conflicting requirements from all aviation stakeholders. The focus areas include the Core Western European area (EU-EUROCONTROL-EASA States), the geographically challenging Eastern part of the EUR Region, the NAT Region interface, the Mediterranean area with the interface to the SAT (South Atlantic area), and the interface areas with MID and APAC Regions. This level of complexity does not exist in other ICAO Regions. With the evolution of traffic flows, the regional and inter-regional cooperation has become an increasingly important factor.

#### *Conclusions*

2.23 Based on the foregoing, the following is proposed:

### **Draft EURNAT-DGCA Decision 2019/1 – Air Navigation Capacity and Efficiency activities for 2020-2022**

That the EURNAT-DGCA:

- a) support the key EUR/NAT 2020-2022 activities in the area of Air Navigation Capacity and Efficiency; and
- b) support the proposal for the management of RVSM non-compliant/non-approved aircraft operations with the EUR/NAT Regions as shown in paragraph 2.16.

### **3. Action by the Meeting**

3.1 The meeting is invited to:

- a) note the information provided; and
- b) endorse the proposed draft Decision.

— END —