International Civil Aviation Organization

MIDANPIRG Air Traffic Management Sub-Group

Fourth Meeting (ATM SG/4)
(Amman, Jordan, 29 April – 3 May 2018)

Agenda Item 5:   **Airspace Management Issues**

CIVIL/MILITARY COOPERATION IN THE MID REGION

(Presented by the Secretariat)

<table>
<tr><td align="center">SUMMARY</td></tr>
<tr><td>This paper presents the outcome of the ACAC/ICAO Civil Military Workshop (26-28 March 2018) and proposes amendment to the elements of the ASBU B0-FRTO, for the meeting review.

Action by the meeting is at paragraph 3.</td></tr>
<tr><td align="center">REFERENCES</td></tr>
<tr><td>
-    MIDANPIRG/16 Report
-    MID Doc 002
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1.   INTRODUCTION

1.1   The ACAC/ICAO Civil/Military Workshop organized jointly by ACAC and ICAO (EUR/NAT and MID Regional Offices) was held in Algiers, Algeria, from 26 to 28 March 2018. The Workshop was kindly hosted by the Etablissement National de la Navigation Aérienne (ENNA)-Algeria. The Workshop was attended by 148 Participants from 14 States (Algeria, Egypt, France, Greece, Iran, Lebanon, Libya, Morocco, Palestine, Qatar, Sudan, Tunisia, Ukraine and United States of America) and 7 Organizations/Industries (ACAC, CQRENA, EUROCONTROL, GCC, IATA, IFALPA and IFATCA).

1.2   The main objectives of the Workshop were to provide an update on the latest ICAO provisions including the outcome of GANIS/2 related to civil/military cooperation, provide an overview of the new ICAO Doc related to CIV/MIL, and agree on Recommendation that would enhance civil/military cooperation and eventually foster the implementation of Flexible Use of Airspace (FUA).

1.3   The Recommendations emanating from the Workshop are at **Appendix A** and the Workshop documentation are available on the ICAO MID Website:
https://www.icao.int/MID/Pages/2018/ACAC-ICAO%20Civ-Mil%20WS.aspx

2.   DISCUSSION

2.1   B0-FRTO (Free-Route Operations) aims to improve operations through Enhanced En-Route Trajectories that allow the use of airspace, which would otherwise be segregated (i.e. special use airspace) along with flexible routing adjusted for specific traffic patterns. This will provide greater routing possibilities, reducing potential congestion on trunk routes and busy crossing points, resulting

in reduced flight length and fuel burn

2.2   For the purpose of performance monitoring and reporting, two (2) elements have been included in the MID Region Air Navigation Strategy: *Flexible Use of Airspace (FUA) and Flexible routing*. Performance Indicators/Supporting Metrics, Targets and status of their implementation are detailed in **Appendix A**.

Implementation Reporting/Monitoring

2.3   ATM Sub-Group was assigned by MIDANPIRG as the main Regional monitoring body for the collection of data related to the B0-FRTO implementation in the MID Region.

2.4   At the national level, ATM Focal Points are responsible for following-up the B0-FRTO implementation issues and forwarding necessary data on the implementation of B0-FRTO to the ICAO MID Office, as and when required.

Data Collection Mechanism

2.5   Detailed information on the monitoring of B0-FRTO is included in Volume III of the MID eANP, including necessary supporting enablers (i.e. tables, databases, etc.), in order to be used as planning tools for the measurement of the air navigation systems performance. The MID eANP Table related to the status of implementation of the different B0-FRTO elements is at **Appendix B**.

Challenges and Recommendations

2.6   The meeting may wish to note that the main step toward the successful implementation of the B0-FRTO is the identification of the segregated airspace to be released for civilian air operations in order to publish ATS routes over these airspaces in the AIP, with the aim for pre-flight planning by the airspace users.

2.7   It is to be highlighted that the MIDANPIRG/15 meeting urged States to take necessary measures to implement the provisions of the Resolution A38-12 and MIDANPIRG/14 Conclusions 14/12 and 14/13 and provide the ICAO MID Office with an update on the action(s) undertaken. The MIDANPIRG/16 meeting (Kuwait, 13-16 February 2017) noted with appreciation that the Flexible Use of Airspace Concept has been implemented by Bahrain and Jordan.

2.8   ICAO in collaboration with all Stakeholders upgraded the CIR 330 to a new ICAO Manual on Civil/Military Cooperation to provide more guidance on the implementation of civil/military corporation and Flexible Use of Airspace (FUA) Concept. This was presented to the GANSI/2 meeting (Montreal, Canada, 11-15 December 2017). The FUA in accordance with the ICAO provisions should be implemented into Three Levels:

- Strategic level – Level 1

- Pre-tactical level – Level 2

- Tactical level – Level 3

2.9   Based on the above, the Secretariat is proposing the amendment of the ASBU B0-FRTO to include the following elements addressing the three (3) Levels of the FUA:

2.10   In line with the above, the draft Monitoring Table to be used for the monitoring of the status of implementation of the main components of each level is at **Appendix C**, for the meeting review and approval to be inserted in the MID eANP Volume III. More detailed table(s) would be developed for the collection of data.

2.11   The meeting may wish to recalled that MIDANPIRG/15 meeting established the MID Civil/Military Support Team, with a view to expedite the implementation of the FUA Concept in the MID Region. Accordingly, the meeting encouraged States to benefit from the MID Civil/Military Support Team and coordinate with the ICAO MID Office for the conduct of a Support Team visit, which includes in its work programme a Civil/Military Cooperation Workshop.

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories					
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Status**	**Remarks**
Flexible Use of Airspace (FUA) Level **1** Strategic	All States	Indicator: % of States that have implemented FUA Level 1 Supporting metric*: number of States that have implemented FUA Level 1	50% by Dec. 2019		Inputs should be provided by States
FUA Level **2** Pre-tactical	All States	Indicator: % of States that have implemented FUA Level 2 Supporting metric*: number of States that have implemented FUA Level 1	60% by Dec. 2020		Inputs should be provided by States
FUA Level **3** Tactical	All States	Indicator: % of States that have implemented FUA Level 2 Supporting metric*: number of States that have implemented FUA Level 2	60% by Dec. 2022		

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) review and update the elements of the ASBU Module B0-FRTO taking into consideration the latest developments;

b) agree to the monitoring table of the B0-FRTO that should be included in the MID eANP Volume III; and

c) identify the list of States, in a prioritized manner, that would need the conduct of a Civil/Military Cooperation and FUA National Workshop, based on the users' needs.

APPENDIX A

ACAC/ICAO CIVIL/MILITARY Workshop
(Algiers, Algeria, 26-28 March 2018)

Recommendations

The Workshop emphasized the need to manage the airspace in a flexible and dynamic manner that should be shared between civil and military airspace users to cope with economic development as well as security and air defence aspects.

The Workshop encouraged States to take necessary measures to implement the ICAO provisions related to civil/military cooperation ensuring the effective implementation of the flexible use of airspace concept.

States were encouraged to:

a) establish necessary national legislative/regulatory framework for civil/military cooperation at the highest level;

b) develop National civil/military cooperation policy/principles and practices supported by national high-level commitment;

c) establish a high-level policy body, and the necessary civil/military committees and working groups of subject matters experts to address, among other things: identification of shared goals, airspace management principles, collaboration proccesses and procedures, technical considerations, sharing of information, and human factors, etc.;

d) review national provisions related to airspace management to accommodate the requirements of all airspace users (civil and military) to enhance major traffic flows and accommodate expected future growth of traffic;

e) develop/update and implement a National FUA Plan with clear procedures related to the application of the three FUA levels (strategic, pre-tactical and tactical) with due consideration to mutual understanding, trust and communication;

f) develop integrated plan for the use of technology in support of civil/military cooperation ensuring systems interoperability, effective data exchange, while addressing associated cyber security issues in a proactive manner;

g) establish key performance indicators to measure the performance/efficiency of the FUA implementation, where applicable;

h) organize workshops, seminars, meetings at national level related to civil/military cooperation and FUA (with the support of ICAO, ACAC and International Organizations);

i) share experience and best practices related to civil/military cooperation and FUA implementation;

j) participate in cross border initiatives to enhance the regional ATS route network, airspace management and Search and Rescue at regional and inter-regional levels; and

k) use the ICAO EUR Doc 032 (Interim Guidance material on Civil/Military Cooperation In ATM) in particular the guidance related to FUA over the high seas and the example for State aircraft operations under Due-Regard.

APPENDIX B

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories					
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Status**	**Remarks**
Flexible use of airspace (FUA)	All States	Indicator: % of States that have implemented FUA Supporting metric*: number of States that have implemented FUA	40% by Dec. 2017		Inputs should be provided by States
Flexible routing	All States	Indicator: % of required Routes that are not implemented due military restrictions (segregated areas) Supporting metric 1: total number of ATS Routes in the Mid Region Supporting metric 2*: number of required Routes that are not implemented due military restrictions (segregated areas)	60% by Dec. 2017		Inputs should be provided by States

B-2

Table B0-FRTO

EXPLANATION OF THE TABLE

Column

1	Name of the State
2	Status of implementation of Flexible Use of Airspace (FUA). The Implementation should be based on the published aeronautical information:
	FI – Fully Implemented
	PI – Partially Implemented
	NI – Not Implemented
3	Total Number of ATS Routes in the State.
4	Total number of required routes (through Regional Agreement) to be implemented through segregated areas
5	Number of routes that are NOT implemented in the State due military restrictions (segregated areas)
6	Remarks

Applicability State	FUA Implemented	Total number of ATS Routes	Total number of required routes to be implemented through segregated areas	Number of routes that are NOT implemented due military restrictions (segregated areas)	Remarks
1	2	3	4	5	6
Bahrain	FI	78	1 (UM430)	0	Time route
Egypt					
Iran					
Iraq	PI	15	0	2	P/UP975 closed btw SIDNA & MUTAG
Jordan	FI	12		1 (G662)	
Lebanon	PI	9	1 (M1)	M1 (KAD-LATEB)	
Libya					
Kuwait					
Oman					
Qatar					
Saudi Arabia	PI	153	1 (RC083)	0	
Sudan	PI	16	4	2	
Syria	PI	19	0	0	
Unite Arab Emirates	PI	41	3	4	
Yemen					
Total					
Percentage					

APPENDIX C

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories					
Elements	**Applic ability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Status**	**Remarks**
Flexible Use of Airspace (FUA) Level **1** Strategic	All States	Indicator: % of States that have implemented FUA Level 1 Supporting metric*: number of States that have implemented FUA Level 1	50% by Dec. 2019		Inputs should be provided by States
FUA Level **2** Pre-tactical	All States	Indicator: % of States that have implemented FUA Level 2 Supporting metric*: number of States that have implemented FUA Level 1	60% by Dec. 2020		Inputs should be provided by States
FUA Level **3** Tactical	All States	Indicator: % of States that have implemented FUA Level 2 Supporting metric*: number of States that have implemented FUA Level 2	60% by Dec. 2022		

C-2

Table B0-FRTO

EXPLANATION OF THE TABLE

Column

1	Name of the State
2	Status of implementation of Flexible Use of Airspace (FUA) Level 1-Strategic.
3	Status of implementation of Flexible Use of Airspace (FUA) Level 2-Pre-tactical
4	Status of implementation of Flexible Use of Airspace (FUA) Level 3-Tactical

Implementation should be based on the published aeronautical information:

FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented

5	ATS routes implemented as CDR
6	Remarks

Applicability State	FUA Level 1	FUA Level 1	FUA Level 1	CDR (1, 2, 3)	Remarks
1	2	3	4	5	6
Bahrain					
Egypt					
Iran					
Iraq					
Jordan					
Lebanon					
Libya					
Kuwait					
Oman					
Qatar					
Saudi Arabia					
Sudan					
Syria					
Unite Arab Emirates					
Yemen					
Total					
Percentage					

- END -