International Civil Aviation Organization

MIDANPIRG CNS/ATM/IC Sub-Group (CNS/ATM/IC SG)

Seventh Meeting (Cairo, Egypt, 07-09 October 2013)

Agenda Item 5: Regional Air Navigation Planning and Implementation Issues

OUTCOME OF THE ATMM TF/1 MEETING

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the First Meeting of the ATMM Task Force

Action by the meeting is at paragraph 3.

REFERENCES

- ATMM TF/1 Report

1. INTRODUCTION

1.1 The First Meeting of Air Traffic Management-Measurement Task Force (ATMM TF/1) was held at ICAO Middle East Regional Office in Cairo, Egypt, 8-9 September 2013.

1.2 The meeting was attended by a total of Fifteen (15) participants, including experts from Five (5) States (Bahrain, Egypt, Jordan, Kuwait and Saudi Arabia).

2. DISCUSSION

2.1 The ATMM TF/1 meeting recalled that Operational improvements are a key strategy that can be applied to deliver tangible reductions in aircraft fuel consumption. The Global Air Navigation Plan (Doc 9750) and the Operational Opportunities to Minimize Fuel Use and Reduce Emissions (Circular 303) are among several documents providing guidance regarding operational improvements being implemented to improve efficiency of the ATM System.

2.2 Implementation of operational improvements will generally have benefits in areas such as improved airport and airspace capacity, shorter cruise, climb and descend times through the use of more optimized routes and an increase of unimpeded taxi times. These improvements have the potential to reduce fuel burn and lower levels of pollutants.

2.3 The meeting noted that ICAO Fuel Savings Estimation Tool (IFSET) was developed to assist States to estimate and report fuel savings consistently with the models approved by ICAO's Committee on Aviation Environmental Protection (CAEP) and aligned with the Global Air Navigation Plan.

2.4 The IFSET, as well as instructions on its use, can be accessed at: http://www.icao.int/environmental-protection/Pages/Tools.aspx. It was highlighted that ICAO is committed to update the tool based on the feedback received from all stakeholders. In this respect, the meeting noted the feedback provided by Egypt.

2.5 The meeting recalled that Environmental Protection represents one of the ICAO strategic objectives. It was highlighted in this respect that ICAO is introducing regional 'Performance Dashboard' homepages for every public website of the ICAO Regional Offices. These dashboards will illustrate the regional implementation status relating to the strategic objectives on Safety, Air Navigation Capacity and Efficiency, and Environmental Protection. The First Air Navigation Report is expected to be released in March 2014.

2.6 The meeting noted with concern that only Egypt sent a Draft IFSET Report to the ICAO MID Regional Office, in accordance with MIDANPIRG Conclusion13/35. Accordingly, the meeting agreed to the following Draft Conclusion to supersede MIDANPIRG Conclusion 13/35:

DRAFT CONCLUSION 1/1: ESTIMATING ENVIRONMENT BENEFITS

That, in order to follow-up the implementation of the ATM operational improvements and estimate the fuel savings accrued from the corresponding improvements on regional basis:

a) States be urged to:

i) *identify the operational improvements which have been implemented within their FIR and/or international aerodromes;*

ii) *collect necessary data for the estimation of the environmental benefits accrued from the identified operational improvements;*

iii) *use IFSET to estimate the environmental benefits accrued from operational improvements; and*

iv) *send the IFSET reports/the accrued environmental benefits to ICAO on bi-annual basis.*

b) IATA to:

i) *encourage users to support the ATM-M TF in the development of the MID Region Air Navigation Environmental Reports; and*

ii) *consolidate users' inputs and report the accrued environmental benefits to the ICAO MID Regional Office on bi-annual basis.*

2.7 The meeting noted with appreciation the work undertaken by Egypt to generate the First IFSET report and thanked Egypt for sharing their experience including the detailed IFSET User Manual (Arabic version), which was distributed to all the participants.

2.8 The meeting emphasized that what is required is an **estimation** of the environmental benefits accrued from **implemented** operational improvements and not the determination of the exact amount of fuel saving or CO_2 Emission, which would require more advanced model/tool to capture all the operational elements needed to calculate the environment benefits.

2.9 The meeting noted with concern the difficulties related to the collection/provision of required data for the generation of the IFSET reports such as the number of movements for the old and new scenarios, aircraft categories, Flight Levels and the reporting frequency/period. The meeting underlined that coordination between the different Departments/Units within the States is very important for the generation of more realistic estimation of Fuel Savings reports.

2.10 The meeting questioned about the period to be used for the development of the IFSET reports (i.e: previous year, 2 years, 5 years, etc) as well as the format of the Regional Air Navigation Environmental Report and recognized that if the period was to be just 1 year, this might limit the number of implemented operational benefits. Accordingly, the meeting agreed that for the First MID Air Navigation Environmental Report, the following periods would be considered as follows:

a) 2009-2011 (just a listing of the operational improvements which have been implemented during this period and which had environmental benefits) as in **Appendix A** to this working paper;

b) 2012-2013: period to be used for the generation of the First Regional IFSET Report as in **Appendix B** to this working paper;

c) 2014 and beyond (listing of planned operational improvements which will have environmental benefits) as in **Appendix C** to this working paper.

2.11 The meeting emphasized that future ATM plans should consider the environmental benefits and urged States to inform the ICAO MID Regional Office of all initiatives/programmes which will have positive impact on the environment.

2.12 The meeting noted the following users' requirements to be considered by States as a priority in the planning of future operational improvements:

- Alexandria/Borg El-Arab Intl (HEBA), RWY 14;
- Shiraz/Shahid Dastghaib INTL (OISS), RWYs 11L and 11R
- Al Najaf (ORNI), RWY 10;
- Tripoli INTL (HLLT), RWY 09; and
- Benghazi/Benina INTL (HLLB), RWYs 15R and 33L

2.13 Due to the low level of inputs received from States and Users, the meeting agreed that the First MID Region IFSET Report would be consolidated by the Secretariat and presented to the CNS/ATM/IC SG/7 (Cairo, 7-9 October 2013). In this respect, the ICAO MID Regional Office received inputs from the following MID States (Bahrain, Egypt, Jordan, Lebanon and UAE). The IFSET Report consolidating all the inputs received is at **Appendix D** to this working paper.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) endorse Draft Conclusions in para 2.6; and

b) review the MID Region IFSET Report at **Appendix D** and provide inputs/comments, as appropriate.

APPENDIX A

State	Implemented Operational Improvement 2009-2011	Remarks
Bahrain	1- New Eastern Apron established for 9 code E aircraft or 19 code C. This apron Ramp services are all underground such as APU etc. 2- Reducing the final approach separation to 3NM, due to newly established rapid. TWY D. 3- Using EUROCAT system. 4- New ATS & NOTAM Management System Installed and operational. 5- eAIP is available on Web. 6- Full Airport aeronautical Survey was done up to annex 15 Ch 10 requirements. 7- ISO 9001:2008 certified. 8- New VISALA automatic weather observation system (Aerodrome station). 9- New weather radar system. 10- Climate database upgrade CLDB. 11- Terminal area forecast TAF verification. 12- New massages switch (Moving Weather). 13- Competency Assessment System for Aeronautical Meteorological Personnel (CAS). 14- Radar winds and temperature profiler system. 15- First weather radar link interface between Bahrain and UAE. 16- New VISALA automatic weather observation system Backup (Aerodrome station).	
Egypt	1- Ban of air traffic over Sidi Krair and P18 & P19 is cancelled 2- Ban of air traffic over Ras El Hekma P20 is cancelled. 3- Ban of air traffic between FYM & CVO via R778 is partially suspended. 4- Restrictions regarding landing on 05L and departure on 23R are cancelled 5- Establishing route Q680 between DBA & SALUN 6- Traffic between Cairo and Arish via V602-ISM-V606 is permitted. 7- Establishing route L315 between CVO & HGD	
Iran		
Iraq	1- RVSM Implementation 2- implementation of ATS route UP975 to increase the trafflic flow capacity from Turkey to the Gulf through Baghdad FIR.	
Jordan	1- METZA- MAZAR-ZELAF (UM690) 2- GRY-BUSRA-DAM (G662) 3- ZELAF DCT QAA (A412) 4- GRY DCT QAA (UN318)	
Kuwait	SIDs and STARs implementation	

Lebanon	RNAV STARs implementation	
Libya	New ATS Routes Implemented	
Oman		
Qatar		
Saudi Arabia		
Sudan		
Syria		
UAE	RNAV1/5 SID/STARs, PBN routes	
Yemen		

APPENDIX B

State	Identified Operational Improvement 2012-2013	Nr. of Movements Per Month	Total Fuel Saving Per Month
Bahrain	UN318 ( )	4285	
	UL604 ( )	7013	
	UL308 ( )	9456	
	UP559 ( )	6323	
	UL602 ( )	10817	
Egypt	NABED-KATAB (T55)	1800	396000
	TBA-NWB-KITOT (UL550-N697) via Saudi Arabia	1170	330000
Iran			
Iraq			
Jordan	End of 201: Implementation of RNAV SIDs, STARs and Approach Procedures at OJAI, OJAM and OJAQ.	N/A	N/A
Kuwait	No Operational Improvement implemented		
Lebanon	No Operational Improvement implemented		
Libya			
Oman			

Qatar			
Saudi Arabia	UM449 ( )		
	UM318 ( )		
	UM863 ( )		
	UL564 ( )		
	UM430 (SALWA-HAS)		
	UL681 ( )		
	UP517 ( )		
	UL550 ( )		
	UB411 ( )		
	R652 ( )		
Sudan			
Syria			

UAE	L308	5343	
	P559	3720	
	M557	5865	
	N571	4448	
	P699	2340	
	N318	2389	
	L604 / N685	4041	
	L305	1049	
	Arrival Manager (AMAN) implemented (1 min flight time saved/arrival to OMDB)		
	RNP-AR STARs at Abu Dhabi		
Yemen			

APPENDIX C

State	Planned Operational Improvement 2014 and beyond	Planned Year	Remarks
Bahrain	1- RNAV1 SIDs and STARs. 2- Introducing new RNAV1 AWYs with Kuwait FIR. 3- Installation of Ground radar which will be used during CAT 2 operations and during LVP. 4- We are planning for ASMGCS for the TWR to be used at the airport. 5- DCL system in test. 6- Upgrading ILS CAT 1 to CAT 2. This is under study. 7- Special producer for A380 handling at Bahrain airport. 8- IAPs will be reviewed and republish to reflect the new Airport Survey results. 9- We are planning to open Clearance Delivery Position (CDP) at the TWR to release TWR GMC workload and frequency congestions. 10- Also, planning to have ADM 270 degree simulator to train them on all emergencies and different abnormal situations to enhance the efficiency of our TWR operations. 11- New automatic weather observation system three stationary and one portable station for Bahrain. 12- Second weather radar link interface between Bahrain, UAE and Kuwait. 13- Third weather radar link interface between Bahrain, UAE, Kuwait and Riyadh. 14- Fourth weather radar link interface between Bahrain, UAE, Kuwait, Riyadh and Oman. 15- Link common meteorological system with other GCC in order to enhance the cooperation (Integrated GCC automatic weather observation system).	2014	
Egypt	PBN Implementation at HECA	2016	
Iran			
Iraq	SIDs, STARs and RNAV Approach at ORBI	2014	
Jordan	1- Airway between METZA and MDB 2- airway between PASIP and METSA 3- airway between PASIP and METSA 4- Expansion of GNSS	2014	
Kuwait			
Lebanon	1- Planning for shorter RNAV SIDs and STARs 2- Direct routing between boundary points for over flight traffic.		

Libya	SIDs, STARs at HLLT	2014	
Oman			
Qatar			
Saudi Arabia			
Sudan			
Syria			
UAE	1. Advanced AMAN/DMAN 2. PRISMA system updates additional ATS Routes Civil/Military cooperation 3. Seamless ANS provision throughout the UAE 4. PBN route structure throughout the UAE 5. Flight procedures optimised for CCO/CDO 6. Airport infrastructure that maximises throughput and minimises congestion 7. Interoperable ATM systems in the UAE 8. Cost effective service provision. 9. ANSP facilities accommodate the needed number of operational positions, support equipment, and personnel. 10. ATM systems have sufficient capacity and functional capability to meet operational needs. 11. Sufficient capacity without routine delays. 12. Stakeholders are afforded a collaborative active role. 13. Aviation policy development. 14. Strategic planning. Tactical decision making. 15. Routine and frequent communications among stakeholders, ANSP, and governmental organisations. 16. Best Capable – Best Served during peak periods. 17. Ground-Based Augmentation System (GBAS) for major airports	2014/2030	
Yemen			

APPENDIX D

IF SET REPORT

Scenario	Old Climb Fuel in Kg	New Climb Fuel in Kg	Climb Savings in Kg	Old Descend Fuel in Kg	New Descend Fuel in Kg	Descend Savings in Kg	Old Level Fuel in Kg	New Level Fuel in Kg	Level Savings in Kg	Old Taxi Fuel in Kg	New Taxi Fuel in Kg	Taxi Savings in Kg
NADEB-KATAB	0	0	0	0	0	0	3187200	2793700	-393500	0	0	0
TBA-KITOT	0	0	0	0	0	0	916900	614300	-302600	0	0	0