International Civil Aviation Organization
Twenty-Fifth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/25)
Video Teleconference, 27– 30 October 2020

Agenda Item 3: Reports from Asia/Pacific RMAs and EMAs

IDENTIFIED AIRSPACE RISK OCCURRENCES IN INDIAN FIRs

(Presented by Airports Authority of India)

SUMMARY

This paper presents the identified airspace risk occurrences in the four Indian FIRs as reported by ATC and RMA during the period 1st January to 31st December 2019. The paper also presents the various mitigation measures taken by India.

1. INTRODUCTION

1.1 BOBASMA as an EMA receives all reports of Large Lateral Deviations (LLDs)/ Large Longitudinal Errors (LLEs) filed by the states and FIRs for which it provides EMA services and as RMA Point of Contact for India, receives all Large Height Deviation reports (LHDs) filed by both Indian ACCs/OCCs and ACCs/OCCs adjacent to and having common FIR boundary with any of the four Indian FIRs.

1.2 BOBASMA has for the period 1stJanuary 2019 to 31stDecember 2019, received 10 reports of LLDs. BOBASMA also collected and submitted reports of 305 LHDs filed by Indian ACCs/OCCs and in turn received from RMA MAAR, reports of 76 LHDs filed by ACCS/OCCs adjacent to the four Indian FIRs.

2. DISCUSSION

2.1 Table 1 is a summary of the Large Lateral Deviations (LLDs) reported by the ACCs/OCCs in the four Indian FIRs during the twelve-month period, January to December 2019.

S. No	Area Control Centre	Number of LLD Reports	LLD Categories		
			A	E	I
1	Chennai	7	1	5	1
2	Mumbai	3	0	3	0
Total		10	1	8	1

Table1: Summary of LLD Reports.

2.2 Table 2 gives the categorization of the ten LLD reports received by BOBASMA during the period, January to December 2019.

Code	Deviation Description	No.
A	Flight Crew deviate without ATC Clearance	1
E	Coordination Errors in the ATC-unit-to-ATC-unit transfer of control responsibility.	8
I	Others	1
Total		**10**

Table 2: Category of LLD Reports.

2.3 Table 3 is a summary of the Large Height Deviations (LHDs) reported by the ACCs/OCCs in the four Indian FIRs and those adjacent to and having common FIR boundary with the Indian FIRs, during the period, January to December 2019.

S.No	Area Control Centre	LHD Reports Filed	LHD Categories			
			B	D	E	I
1.	Chennai	101	2	2	96	1
2.	Delhi	2	1	1	-	-
3.	Karachi	1	-	-	1	-
4.	Kolkata	21	-	-	21	-
5.	Kuala Lumpur	30	-	-	30	-
6.	Male	6	-	-	6	-
7.	Mumbai	181	-	6	174	1
8.	Muscat	10	-	-	10	-
9	Sanaa	2	-	-	2	-
10.	Yangon	27	-	-	27	-
Total		**381**	**3**	**9**	**367**	**2**

Table 3: Summary of LHD Reports for the period January to December 2019

2.4 Table 4 gives the explanation of the different Category of LHDs that occurred in the airspace of the four Indian FIRs along with the number of reports in the respective Category.

LHD Category	Definition	Number of Reports	Duration at Incorrect Flight Level in Minutes
B	Flight Crew climbing or descending without ATC Clearance	03	0
D	ATC system loop error; (e.g. ATC issues incorrect clearance or flight crew misunderstands clearance message.).	09	0
E	Coordination errors in the ATC to ATC transfer or control responsibility as a result of human factors issues (e.g. Late or non-existent coordination, incorrect time estimate/actual, flight level, ATS route etc., not in accordance with agreed parameters).	367	2147
I	Deviation due to turbulence or weather-related cause	02	0
Total		**381**	**2147**

Table 4: Details of different LHD Categories.

2.5 There were 3 CAT-B LHDs due to flight crew climbing/descending without ATC clearance and 9 CAT-D LHDs due to ATC System Loop Error causing breach of separation between aircraft.

2.6 Out of the 9 CAT-D LHDs, 6 were reported in Mumbai ACC, 2 in Chennai ACC and 1 in Delhi ACC

2.7 Of the 2 CAT-I LHDs, one CAT-I LHDsoccurred in in Mumbai OCCdue to an aircraft following weather deviation procedures and climbing by 300 Ft, the other CAT_I LHD occurred in Chennai OCC due to an aircraft following weather deviation procedures and climbing by 300 Ft.

2.8 A total of 367 CAT-E LHDs were filed of which 291 were filed by ACCs/OCCs within the four Indian FIRs and the rest, 76 were filed by external ACCs/OCCs having common FIR boundary with any of the four Indian FIRs.

2.9 Table 5 gives the details of the Category – E LHDs reported by the four Indian FIRs and six external ACCs/OCCs having common FIR boundary with an Indian FIR. The FIR boundary between Mumbai/Muscat, Chennai/Kuala Lumpur and Kolkata/Yangon are the major LHD hot spots where maximum numbers of CAT-E LHDs were reported.

Flight Information Region	**Number of CAT-E LHD Occurrence**	**Time Duration (Minutes)**	**Transferring Unit**	**Number of Occurrence**	**Time Duration (Minutes)**
Chennai	96	177	Kuala Lumpur	56	52
			Yangon	16	30
			Jakarta	6	36
			Colombo	10	50
			Mumbai	1	0
			Kolkata	7	9
Kolkata	21	0	Yangon	21	0
Mumbai	174	1906	Muscat	147	1574
			Mogadishu	9	47
			Sana	5	72
			Male	3	34
			Chennai	10	179
Karachi	1	0	Delhi	1	0
Kuala Lumpur	30	17	Chennai	30	17
Male	6	7	Chennai	2	0
			Mumbai	4	7
Muscat	10	0	Mumbai	10	0
Sanaa	2	40	Mumbai	2	40
Yangon	27	0	Kolkata	26	0
			Chennai	1	0

Total	**367**	**2147**		**367**	**2147**

Table5. CAT-E LHD Occurrence within Indian FIRs.

2.10 All but one of the Long duration CAT-E LHDs had occurred in the oceanic airspace of Mumbai due to coordination errors committed by ACCs/OCCs adjacent to Mumbai FIR. There were 18 LHDs in Mumbai FIR with duration ≥ 30 minutes. 9 of these had duration ≥ 60 minutes, 6 of duration ≥ 90 minutes and 1 of duration 120 minutes. There was 1 long duration LHD of 32 minutes in Chennai OCC.

2.11 The boundary between Mumbai and Muscat continues to remain a Hotspot and all efforts by Mumbai to implement AIDC message exchange with Muscat remains fruitless. Though Mumbai after initial testing of AIDC with Muscat had expressed its readiness to implement AIDC there is no progress on this front.

2.12 Testing of AIDC between Mumbai and Mogadishu for flights transiting over TCP, ORLID has commenced from August 2020. AIDC will be fully implemented between Mumbai and Mogadishu after an addendum to the LoA between Indian and Somalia is signed.

2.13 AIDC has been fully operationalized between Chennai and Kuala Lumpur from April 2020 and the revised LoA between India and Malaysia is set to be signed shortly.

2.14 After successful trial operations of AIDC message exchange between Mumbai and Male over the last two years it is now planned to fully operationalize AIDC between Mumbai and Male after revising the LoA between India and Male.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matters as appropriate.

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