



**Seventh ATS Coordination Meeting of Bay of Bengal, Arabian Sea
and Indian Ocean Region (BOBASIO/7)
New Delhi, India, 18 - 19 September 2017**

AGENDA ITEM 5: Airspace Safety

2017 PRELIMINARY BOBASIO AIRSPACE RISK ANALYSIS

(Presented by the Monitoring Agency for Asia Region)

SUMMARY

This paper presents a preliminary airspace risk analysis for BOBASIO, which covers the period of January – June 2017. The accumulated risk over the period of 6 months exceeds the annual target level of safety. The western boundary of Mumbai FIR remained a hotspot in the region, contributing 79% of operational risk in the region. Risk near the TCPs along Kolkata-Chennai and Yangon-Kuala Lumpur FIRs, earlier identified as a hotspot, significantly decreased when compared to the same period of 2016. Due to continuing problems of LHDs, States/ANSPs are encouraged to conduct further investigation, provide further LHD analysis, identify and implement mitigations. Since BOBASIO has undertaken a responsibility of a scrutiny group of the region, the MAAR proposed that BOBASIO States inform the MAAR, through proposed forms in attachment 2 and 3, of analysis of LHDs and action taken to reduce risk. The MAAR will compile the information and report to appropriate bodies including BOBASIO and Regional Airspace Safety Monitoring Advisory Group (RASMAG).

1. INTRODUCTION

1.1 Every year, the Monitoring Agency for Asia Region (MAAR) assesses airspace risk in Bay of Bengal, Arabian Sea and India Ocean based on the monthly Large Height Deviations (LHDs) data and Traffic Sample Data (TSD). This paper presents the result of an interim risk assessment for January – June 2017.

2. DISCUSSION

2.1 The airspace risk analysis can be found in attachment 1 of this paper.

2.2 Due to the continuing prevalence of LHDs, the RASMAG emphasized the importance of States' involvement in solving LHD problems in term of analysis and action taken to reduce risk. Various bodies including RASMAG and RASMAG Monitoring Agency Working Group (MAWG) have expressed their concerns regarding LHD mitigation measures taken by States or lack of actions taken to solve the problems; hence, the RASMAG/22, held in July 2017, agreed to the following decision :

[Decision RASMAG/22-11] *That, States are urged to provide to each RASMAG a summary report of the identified airspace risk occurrences as analysed by the State, and any safety mitigation measures and their effectiveness that have been introduced as a result of that analysis.*

2.3 Since the missing element now is what can only be uncovered and/or acted on by the involved States, the MAAR proposes **Form A – LHD Analysis** in attachment 2 and **Form B - LHD Preventive/Mitigation Measures** in attachment 3 to capture such actions.

2.4 **Form A - LHD Analysis** – Form A is to collect LHD analysis conducted by States. States are encouraged to conduct further investigation and provide in-depth analysis of LHDs, especially those induced by their responsible ATS units. The purpose is not to put blames on any States or organizations but to understand the underlying causes in order to develop the appropriate mitigations. In case of significant occurrences such as long duration LHDs, the MAAR encourages States to provide an analysis for each occurrence. In case of small occurrences, States can choose to provide an analysis of a group of similar occurrences to identify common causes instead of individual analyses. Please note that the requested analysis is not meant to replace the macroscopic risk assessment and analysis conducted on a regional basis by the MAAR.

2.5 **Form B - LHD Preventive/Mitigation Measures** – Form B is to collect information on the actions that are being planned and already taken to prevent LHD occurrences or mitigate LHD risks, including the progresses of those actions. Apart from these progresses, it is also important that States share with the MAAR any difficulties they experience implementing mitigation actions, as the MAAR may be able to help resolve any issues or collaborate with ICAO Regional Offices.

2.6 Since BOBASIO agreed to undertake the responsibility of a scrutiny group of the region, the MAAR would like to request States to submit Form A and Form B biannually. The MAAR will then consolidate the information and report to concerning bodies including BOBASIO and RASMAG. The proposal is as followed:

Proposal:

1. All States are requested to report details analysis of some LHDs through **Form A** if requested by the MAAR or as deemed appropriate by States.
2. States involving in areas identified as hotspots are requested to inform the MAAR of actions taken to mitigate LHD problems through **Form B**.
3. **Form A** and/or **Form B** should be submitted to the MAAR biannually in April and August of every year. Information from April submission will be incorporated in safety report to RASMAG typically held in June. Information from August submission will be reported to RASMAG MAWG, typically held in December, and BOBASIO typically held in September-October. Regarding submission of both forms, the MAAR will communicate through LHD Point-of-Contacts (POCs) of each States or, for India, through the Bay of Bengal Arabian Sea Indian Ocean Safety Monitoring Agency (BOBASMA).
4. In addition to **Form A** and **Form B**, States may also report directly to the RASMAG.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) note RASMAG decision in 2.2; and
- c) review, comment and endorse the proposed conclusion in 2.6

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FORM A - LHD ANALYSIS

Due to the continuing prevalence of LHDs, States are encouraged to conduct further investigation and provide in-depth analyses of LHDs, especially those induced by their responsible ATS units. The purpose is not to apportion blame on any organizations but to understand the underlying root causes in order to develop safety mitigations to prevent reoccurrence. In case of significant occurrences (such as long duration LHDs), States are encouraged to provide an analysis for each occurrence. For other occurrences, States can provide analysis of a group of similar occurrences. **Please, return the filled form to maar@aerodhai.co.th.**

1. Organization:

2. Date of Analysis:

3. If it is a single occurrence - Please provide occurrence date, call sign*, and location:

4. If it is a group of occurrences – Please describe the nature of occurrences:

5. Details of the analysis: Please provide detailed description of the followings

Description of Occurrence(s)	
Contributing Factors and Mitigations	
-Contributing factors/causes: Please describe <u>all</u> factors leading to such occurrence(s)	
-Mitigations/controls/barriers: Please describe any measure which could be used to <u>prevent/detect</u> LHD occurrence(s), or <u>reduce</u> their duration. Also, please describe existing barriers which could be improved.	
Procedures/LOAs –which could be non-existent, inappropriate, not strictly adhered to, or needed review	
Contributing factors/causes	Mitigations/controls/barriers
Human Factor Issues –ex. fatigue, workload, competency, English proficiency, teamwork, situational awareness	
Contributing factors/causes	Mitigations/controls/barriers
Systems/Equipment –ex. equipment failures, unserviceability, usability, reliability, poor design	
Contributing factors/causes	Mitigations/controls/barriers
Other Factors – ex. training, staffing, clearly defined roles and responsibilities, workplace condition, weather	
Contributing factors/causes	Mitigations/controls/barriers

*This information is used for reference by the MAAR only. Sensitive information will later be de-identified.



FORM B - LHD Preventive/Mitigation Measures

Due to the continuing prevalence of LHDs, States are urged to provide a list of measures planned or taken to minimise LHDs (including detection of LHD occurrences and actions taken to reduce LHD duration). Please list all actions planned or taken by your organization, including comments on their effectiveness and *return the completed form to maar@aerothai.co.th*.

1. Organization:

2. Date of analysis:

3. Hotspot/Area (example: eastern boundary of FIR A):

4. Please provide detailed description of the followings:

No.	Preventive/mitigation measures planned/taken	Target/actual effective date	Progress/difficulties	Comments on the effectiveness of the measures
1				
2				
3				
4				
5				
6				

5. Is there anything the RMA/RASMAG/ICAO can assist with related to LHDs? :