



ICAO

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Monitoring Advisory Group (RASMAG/26)**
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Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

SUMMARY REPORT OF IDENTIFIED AIRSPACE RISK AND MITIGATIONS

(Presented by Singapore)

SUMMARY

This paper presents mitigations to reduce Large Height Deviation (LHD) and Gross Navigation Error (GNE) occurrences.

1. INTRODUCTION

1.1 This information paper provides the analysis of the contributory factors to airspace deviation errors (LHDs and GNEs) in the Singapore Flight Information Region (FIR) and its associated mitigations for the period of January to December 2020.

2. DISCUSSION

Airspace Deviation Errors

2.1 Singapore has seen a further decline in airspace deviation errors (LHDs and GNEs) of 70% in 2020 when comparing year-on-year. The total number of LHD has reduced from 40 reports in 2019 to 12 reports in 2020.

2.2 Similarly, there was also a decrease in GNEs of more than 70% from seven reports in 2019 to two in 2020. This could be attributed to the effective use of surveillance data that allows controllers to detect any anomalies of the aircraft early, seek verification from our adjacent FIRs and to resolve any potential issues prior entering Singapore FIR.

2.3 The top LHD error category is category 'E' error (ATC to ATC coordination errors as a result of human factors) has seen a significant reduction of more than 75% from 2019 to 2020. The main contributory factor human factors was identified as lapses (forgotten actions).

Mitigations

2.4 People-related. Proactive steps are taken to strengthen and raise the safety awareness among controllers. This is one of the key measures to address lapses related to memory-based errors concerning human factors. By leveraging on the well-developed safety officers network, safety officers from ATC operations are able to effectively reach out and provide the monthly LHD analysis briefings to controllers to share the lessons from previous occurrences so as to reduce human errors.

2.5 Process-related. Moreover, as part of our continual effort and drive to improve safety, a safety culture survey was conducted with the aim to understand the organisation's safety culture maturity and areas of improvement. In addition, focus groups discussions with a diverse representation across the organization were held to discuss and examine safety topics in greater length such as safety reporting. To further perpetuate a positive and proactive safety culture, staff are encouraged and empowered to report LHD occurrences. When staff takes ownership of safety, a better reporting culture and environment is achieved, and this also contributes towards the organisation's learning culture where lessons learnt are shared more readily and frequently.

2.6 Equipment-related. To further enhance the situation awareness of the controllers and reduce errors related to human factors, the visual aid drawing of an arc on the ATC air situation display which served as a reminder, has been expanded to all sectors with Singapore FIR to prevent recurrence of lapses due to non-revision and non-transfers errors.

Conclusion

2.7 The airspace deviation errors within the Singapore FIR has reduced significantly.

2.8 Singapore continues to monitor actively on any adverse trends, emerging issues, and develop timely and appropriate mitigations to address them.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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