

**61ST CONFERENCE OF
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AGENDA ITEM 4: AIR NAVIGATION

**PROGRESS UPDATE ON DIRECT ROUTE OPERATIONS
(DRO) IMPLEMENTATION INITIATIVE IN MALAYSIA**

(Presented by Malaysia)

INFORMATION PAPER

SUMMARY

This paper provides an update on Malaysia's implementation of the Direct Route Operations (DRO) within the Kuala Lumpur and Kota Kinabalu FIRs as part of Malaysia's ongoing efforts to improve airspace efficiency, enhance operational performance, and contribute to sustainable aviation outcomes.

PROGRESS UPDATE ON DIRECT ROUTE OPERATIONS (DRO) IMPLEMENTATION INITIATIVE IN MALAYSIA

1. INTRODUCTION

1.1 The aviation industry continues to seek opportunities to improve operational efficiency while maintaining the highest levels of safety and environmental sustainability. In line with these objectives, Malaysia has undertaken various airspace optimisation initiatives to support more efficient utilisation of available airspace and air traffic management resources.

1.2 Malaysia commenced the phased implementation of Direct Route Operations (DRO) in 2025 under the broader Free Route Operations (FRTTO) framework. The implementation roadmap is supported by the [Air Navigation Services Implementation Plan \(ANSIP\) for FRTTO in the Kuala Lumpur FIR \(KL FIR\) and Kota Kinabalu FIR \(KK FIR\)](#), which outlines the progressive development of route flexibility and airspace efficiency initiatives.

1.3 The initiative aims to support more efficient flight trajectories by enabling aircraft operators to utilise direct routings where operationally feasible. Such initiatives may contribute towards reduced track miles, more efficient fuel use and potential reductions in aviation-related emissions, subject to actual operational usage and traffic conditions.

2. DISCUSSION

Implementation of DRO in Malaysia

2.1 The initial implementation of DRO was introduced on selected portions of the KL FIR and KK FIR following operational assessments, stakeholder consultation and safety evaluations. The implementation adopted a phased approach to allow operational experience to be gained while ensuring that safety and air traffic management performance are maintained.

Date	Milestone
Apr 2025	Publication of National FRTTO Framework
Jun 2025	DRO trial implementation
Sep 2025	Trial completion
Sep 2025+	Permanent DRO implementation
Jun 2026	Additional KL FIR DRO implementation
Future	Potential cross-boundary DRO and UPR development

2.2 Following the initial implementation phase, Malaysia continued engagement with aircraft operators and industry stakeholders to identify additional opportunities for further route optimisation.

2.3 As a result of these engagements, five additional direct routing opportunities were identified within the KL FIR:

Original FPL Routes	Proposed Additional DRO Routes	Track Miles Reduction
VPL Y503 RINBA Y507	VPL DCT ANBIK Y507	7 NM
BOGUK Y507 VBA G582 VPK	BOGUK DCT ANBIK DCT ADNUT G582 VPK	32 NM
VPK G582 BILIK Y506 GORVU	VPK DCT ATIMU Y506 GORVU	12 NM

Original FPL Routes	Proposed Additional DRO Routes	Track Miles Reduction
SALAX DCT BATAR A464 ARAMA	SALAX DCT TOPOR A464 ARAMA	1 NM
IGARI R208 VKR Y346 PULIP	IGARI R208 IKUKO DCT LASOB Y346 PULIP	10 NM

2.4 These enhancements were subsequently implemented following the completion of the required operational coordination, aeronautical information publication processes, and stakeholder notification activities.

2.5 The implementation process involved close collaboration between operational, planning and aeronautical information management functions within Malaysia, together with engagement of relevant industry stakeholders. This collaborative approach enabled the implementation activities to be completed within the planned timeframe while maintaining the required level of operational oversight.

Future Direction

2.6 Malaysia continues to assess opportunities to further enhance the DRO concept through engagement with airspace users and neighbouring Air Navigation Service Providers (ANSPs). Potential future initiatives include additional direct routing opportunities and the exploration of cross-boundary airspace optimisation concepts where operationally appropriate. Any future implementation will remain subject to operational feasibility, safety assessment, stakeholder consultation and inter-State coordination requirements.

2.7 Malaysia also considers DRO a progressive step toward the longer-term FRTTO vision outlined in the national implementation framework. Future developments will continue to be implemented incrementally based on operational readiness and regional harmonisation considerations.

3. ACTION BY THE MEETING

3.1 The Conference is invited to note the information contained in this Paper.

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