



ICAO

International Civil Aviation Organization

**Tenth Meeting of the Air Traffic Management Sub-Group
(ATM/SG/10) of APANPIRG**

Video Teleconference, 17 – 21 October 2022

Agenda Item 6: ATM Coordination (Meetings, Route Development, Contingency Planning)

ENHANCING UTILIZATION OF ATS ROUTE L644

(Presented by Singapore)

SUMMARY

ATS routes L644 and M772 had been established on 20 January 2005 to improve the traffic flow between Jakarta to Hong Kong China and beyond. As the volume of traffic increases, it is timely to review the utilization of L644 to improve flight and ATM efficiencies, as well as to optimise the airspace capacity. This paper presents Singapore's plans to enhance the flight utilization of L644.

1. INTRODUCTION

1.1 Following the South China Sea route structure review in 2001, ATS Routes L644 and M772 were established on 20 January 2005 to improve flight efficiency for flights operating between Hong Kong China and Jakarta.

1.2 While the two ATS routes was intended originally to serve flights between Jakarta and Hong Kong, China, and beyond, it was envisioned that these routes could eventually also accommodate other traffic in the future. To this end, at the Ninth meeting of the South China Sea Traffic Flow Review Group (SCSTFRG/9) in June 2021, Singapore presented a paper to review the flight planning restrictions on L644 to improve flight and ATM efficiencies. This was similarly echoed by Indonesia in their working paper for the Tenth Meeting of the South China Sea Traffic Flow Review Group (SCSTFRG/10) to optimise air traffic operations on L644.

1.3 This paper presents an overview of the plans to enhance flight utilization of L644, starting with the removal of flight planning restriction.

2. DISCUSSION

2.1 As air traffic starts to recover following the COVID-19 pandemic, it is essential for airspace users to be able to plan the most efficient flight path to optimise the airspace capacity as well as maximize flight efficiencies. The phased enhancement of operations and utilization of L644 would help to provide airspace users the added option and flexibility in planning the most optimal flight paths. This would in turn maximize route capacity and reduce fuel burn, translating to cost savings and lowered carbon emissions.

Phase 1 – Removal of flight planning restriction

2.2 Singapore had engaged affected States (Indonesia, Vietnam, and the Philippines) to remove the flight planning restriction on L644 where it previously only served flights to Jakarta from Hong Kong China and beyond. The removal of the flight planning restriction had been effective since 8 September 2022. This had enabled traffic departing from more airports in the region to plan their flight routes more efficiently and reduce the reliance and capacity constraint on other heavily used ATS routes.

Phase 2 – Progressive reduction of longitudinal separation

2.3 L644 is designated as an RNP10 route with a longitudinal separation minima of 10 minutes (80NM) using Mach Number Technique. There are plans to review the longitudinal separation, to implement 50NM longitudinal separation based on a pair of RNP10 approved aircraft.

2.4 As L644 is within surveillance and direct controller-pilot communications coverage in the Singapore FIR, Singapore is looking into further reducing the longitudinal separation to 20NM in the future to improve route utilization and enhance operational efficiency. Singapore would work with the relevant States and their Area Control Centers (ACCs) on this next phase of reviewing the longitudinal separation on L644.

Phase 3 – Expansion of flights utilizing segments of L644

2.5 Arising from feedback from airspace users, future phases of enhancements for L644 include allowing flights to join L644 from other ATS routes within Singapore FIR. For example, flights from Bangkok to Bali on ATS Route N875 would have the option to join L644 at waypoint OMLIV, providing a more direct route compared to planning via N875 until PNK (please see **Chart 1** below). This would not only provide airspace users with flexibility in flight planning, but also help to improve and optimise flight efficiencies and trajectories.

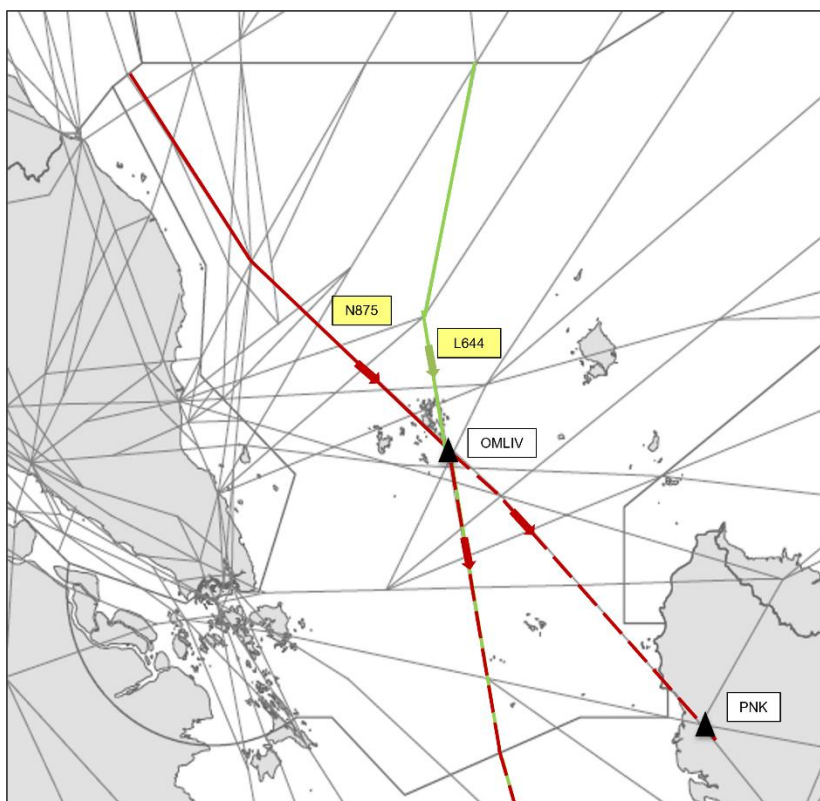


Chart 1: Alternate Route Option for N875 joining L644.

2.6 COVID-19 had greatly impacted the aviation industry in the past 2 years. It is essential that the civil aviation industry work together to help all parties, in their recovery, and build towards a more sustainable aviation globally.

2.7 States are encouraged to take the time to review and discuss options to maximize airspace capacity and enhancing flight and ATM efficiencies which could be restricted by various factors, which would help to contribute to optimized flight trajectories, overall fuel savings and reduction in carbon emission.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss on Singapore's phased approach to enhance the use of L644;
- c) discuss on potential enhancements for other regional routes within the Asia Pacific region; and
- d) discuss any relevant matters as appropriate

.....