



Agenda Item 2&3: Implementation of 50NM horizontal separation

BACKGROUND AND SOME OPERATIONAL ISSUES

(Presented by the Secretariat)

The purpose of this working paper is to present the background to the implementation of 50NM horizontal separation in the Indian, Pakistan and Afghanistan airspaces and to update the meeting on the ATM capabilities of the involved States, and some of the operational issues.

This paper relates to –

Strategic Objectives:

- A: *Safety – Enhance global civil aviation safety*
- C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:

- GPI-1 Flexible use of airspace
- GPI-3 Harmonization of level systems
- GPI-6 Air traffic flow management

1. INTRODUCTION


1.1 At the BOB-RHS TF/1 meeting held from 2-6 November 2009, the meeting endorsed the following Objective as part of its Terms of Reference:

In collaboration with the affected stakeholders and ensuring inter-regional harmonization, develop and implement strategic, benefits driven plans to improve en-route airspace efficiency by means of the implementation of reduced horizontal separation (lateral and longitudinal) based on the ICAO RNAV10 (RNP10) and RNP 4 PBN navigation specifications within the Bay of Bengal area and the Oceanic area of the Mumbai FIR.

1.2 However, later work by the Task Force expanded to include the continental airspace of Afghanistan, Pakistan and India. At the conclusion of the final meeting BOBRHS TF7, it was agreed that air traffic separation service for a number of routes across the FIRs in the 3 States would be no more than 50NM provided they were RNAV10 capable.

2. DISCUSSION

2.1 Implementing 50 NM horizontal separation in an airspace should be a fairly routine matter, given that many airspaces in the region has already done so years before, even in airspace without surveillance (see Fig 1). There should also not be a need to implement it on a route by route basis.



Summary of the Twenty Sixth Meeting of the
Informal South Pacific Air Traffic Services Coordinating Group
(ISPCG/26)

Appendix B
Capacity Enhancement Table
Page 2 of 7

| Capacity Enhancement | Action With | Estimated Completion Date | Date Completed | Notes |
|---|--------------|---------------------------|----------------|--|
| Implement 50NM Lateral Separation | | | | |
| Australia | Airservices | | Dec-98 | |
| Chile | DGAC - Chile | | TBD | ADS aircraft only |
| Fiji | AFL | | Aug-03 | |
| New Zealand | Airways | | Dec-98 | |
| PNG | ASL of PNG | | | Planned with RNP10 |
| Solomon Islands | | | | See Australia |
| Tahiti | SEAC Tahiti | May 2012 | | ATCO Training in progress |
| United States | FAA | | Dec-98 | |
| Implement 50NM Longitudinal Separation | | | | |
| Australia | Airservices | | Jul-00 | 50 NM Longitudinal implemented in AGGG FIR in July 2001 |
| Chile | DGAC - Chile | | TBD | ADS aircraft only |
| Fiji | AFL | | Aug-03 | ADS aircraft only Will provide updated timelines for NON-ADS aircraft by Q3 2012 |
| New Zealand | Airways | | Jul-00 | ADS aircraft only |
| PNG | ASL of PNG | | | Planned with RNP10 |
| Solomon Islands | Airservices | | Jul-01 | |
| Tahiti | SEAC Tahiti | May 2012 | | ATCO Training in progress |
| United States | FAA | | 17 Oct 05 | |
| Implement 30NM Lateral Separation | | | | |
| Australia | Airservices | | 20 Jan 05 | Oceanic airspace only |
| Fiji | AFL | | Jan-05 | |
| New Zealand | Airways | | 20 Jan 05 | |
| PNG | ASL of PNG | | | No identified plans |
| Solomon Islands | Airservices | | 20 Jan 05 | See Australia |
| Tahiti | SEAC Tahiti | | | No identified plans |
| United States | FAA | | 13 Mar 07 | All Oakland Sectors |

Fig 1

2.2 A major issue in the implementation of 50NM horizontal separation appear to be the concern that the separation requirement cannot be met. It should be noted that apart from Kabul FIR, full radar surveillance is available in all the continental airspace in Pakistan and India. Furthermore, flights in these airspaces are already routinely provided the standard surveillance separation for this phase of flight. The availability of surveillance provides ample opportunity and flexibility for ATC to make the necessary adjustments to flight profiles of the westbound flights to enable them to cross into Kabul FIR with the requisite 50NM longitudinal separation. Eastbound flights from Kabul FIR cross into Pakistan airspace with no less than 50NM longitudinal separation and should pose no problems given that Pakistan and India both have surveillance should the 50NM longitudinal separation requirement be unattainable for whatever reasons.

2.3 Radar surveillance coverage is available over the entire Lahore and Karachi FIRs (see Fig 2)

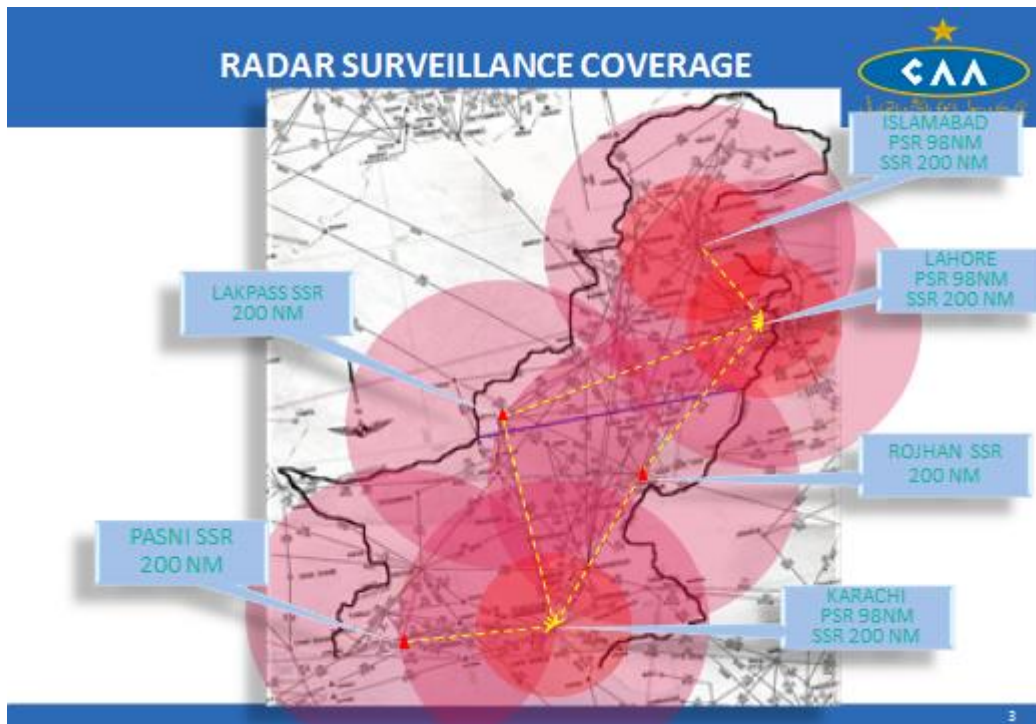


Fig 2

2.4 The entire continental airspace of India is also covered by ADS-B, SSR or ADS-C.

2.5 India also practices surveillance separation using 5NM up to 60NM from the radar head, and 10NM beyond (see extract below). Where ATS surveillance is provided, the expectation is for transfer of radar control, to ensure uninterrupted provision of ATS surveillance service.

Airports Authority of India

Manual of Air Traffic Services– Part 1

“8.16 Separation minima based on ATS surveillance systems

The following horizontal radar separation minima shall be applied:

- a) 5 NM horizontal radar separation up to 60 NM from radar
- b) 10 NM horizontal radar separation beyond 60 NM from radar head.

8.17 TRANSFER OF RADAR CONTROL

8.17.1 *Where ATS surveillance service is being provided, transfer of control should be effected, whenever practicable, so as to enable the uninterrupted provision of ATS surveillance service.”*

2.6 Surveillance cover is not a requirement for the provision of 50NM horizontal separation. However, it is expected that in due course, the entire Kabul FIR will also have surveillance cover, at which time surveillance separation should be applied across the entire flight path through Kabul, Pakistan and Indian continental airspace, subject to the appropriate safety assessments.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) Note the information in the paper
- b) Agree to implement 50NM horizontal separation in the entire airspace of Afghanistan, Pakistan, and India.
- c) Discuss any other issue relating to the above.

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