

*INTERNATIONAL CIVIL AVIATION ORGANIZATION***TWENTY-SECOND MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/22)****Bangkok, Thailand, 5-9 September 2011****Agenda Item 3: Performance Framework for Regional Air Navigation Planning
and Implementation****3.4 CNS/MET****ADS-B IMPLEMENTATION OVER THE SOUTH CHINA SEA
AND THE BAY OF BENGAL**

(Presented by CANSO)

SUMMARY

Working with IATA and regional ANSPs, CANSO has been promoting the implementation of ADS-B to enhance safety and efficiency in high traffic density airspace. With the initial focus on two trunk routes over the South China Sea, much progress has been made since then. This paper discusses the need for timely coordination of national plans as we expand cross-border cooperation to other high traffic density airspace that would benefit most from ADS-B implementation.

1. INTRODUCTION

1.1 In 2008 CANSO and IATA agreed to jointly promote the implementation of ADS-B in the Asia Pacific Region starting with two trunk routes over the South China Sea viz L642 and M771. The project involved installation of ADS-B stations on Matak and Natunas in Indonesia, Con Son in Vietnam and Singapore and the sharing of ADS-B data and VHF communications.

1.2 At the last ICAO ADS-B SITF/10 Meeting in Singapore in April 2011, Indonesia, Singapore and Vietnam jointly reported good progress in the project with the completion of several key milestones such as the conclusion of an ADS-B data and VHF sharing agreement between Indonesia and Singapore and a targeted date of end 2013 for ADS-B operations in exclusive airspace.

2. DISCUSSION

2.1 The benefits of ADS-B in enhancing safety, airspace capacity and efficiency are well known. A cost benefit study conducted by CANSO in 2009 for the initial two routes over the South China Sea showed significant savings and environmental benefits.

2.2 The project milestones for the two routes over the South China Sea based on a joint paper presented by Indonesia, Singapore and Vietnam at ADS-B SITF/10 in April 11 are shown below:

ADS-B Collaboration over the South China Sea
Tasks and Proposed Milestones

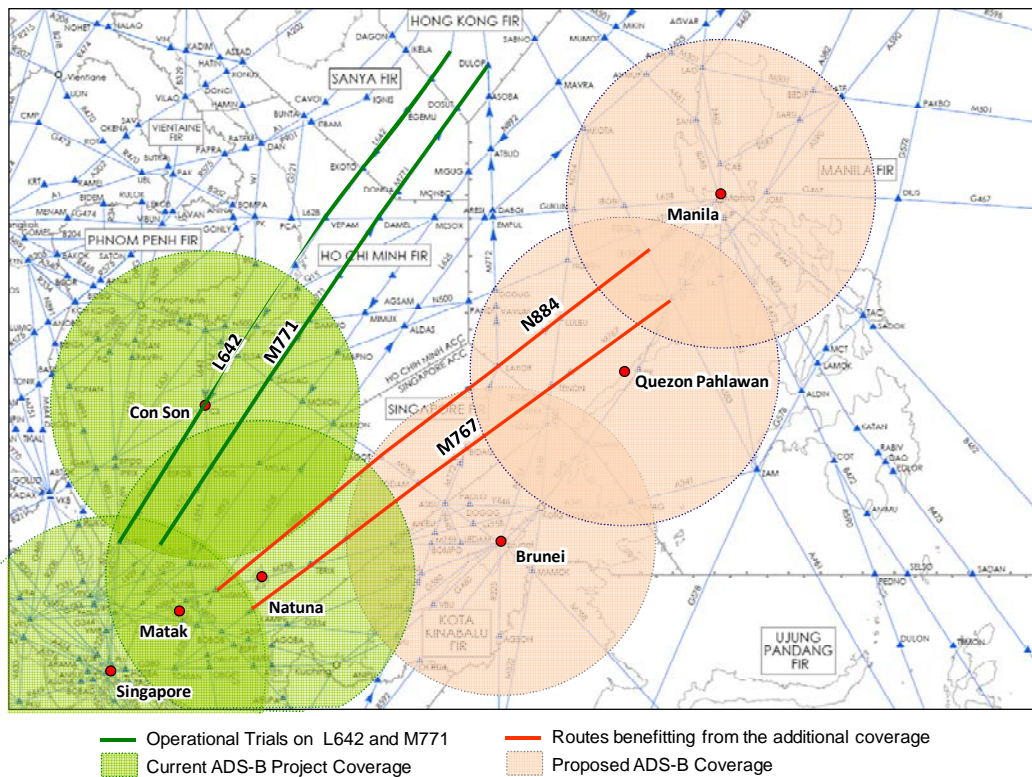
Item	Description	Status	Target Completion
A	Installation of ADS-B ground stations		
	i) Natuna and Matak	Completed	
	ii) Singapore	Completed	
	iii) Con Son	On-Going	2H2011
B	Installation of VHF station and links		
	i) Natuna and Matak	On-Going	2H2011
	ii) Conson	On-Going	2H2012
C	Signing of ADS-B data and VHF radio facility sharing agreement		
	i) Between Indonesia and Singapore	Completed	
	ii) Between Vietnam and Singapore		2H2011
D	Signing of ATS Operational LOA between Ho Chi Minh and Singapore ACCs		2H2011
E	Issue AIC on aircraft equipage mandate	Completed	
F	Technical Monitoring of ADS-B		2H2011
G	Operational trial and Implementation	Operational trial with priority 2H2012/ Implementation 2H2013	

2.3 With good progress and key milestones in place for the initial phase, it is timely to go beyond the initial phase and look at other high traffic density routes over the South China Sea. Another area with high traffic density routes that would benefit from ADS-B surveillance is the airspace over the Bay of Bengal.

2.4 For the other routes over the South China Sea, CANSO approached the Philippines and Brunei in 2010 to consider working together to enhance the benefits of ADS-B implementation. Fig 1 shows the first two trunk routes under 1st phase and the additional two trunk routes in the south that would benefit from ADS-B surveillance and data sharing among the ANSPs.

2.5 Subsequently CANSO conducted an ADS-B seminar in Manila for the Philippines in August 2010. The seminar discussed the Philippines' ADS-B master plan and the possibility of optimizing the ADS-B site in the south.

Fig 1 : Proposed ADS-B coverage for additional high density routes over the South China Sea

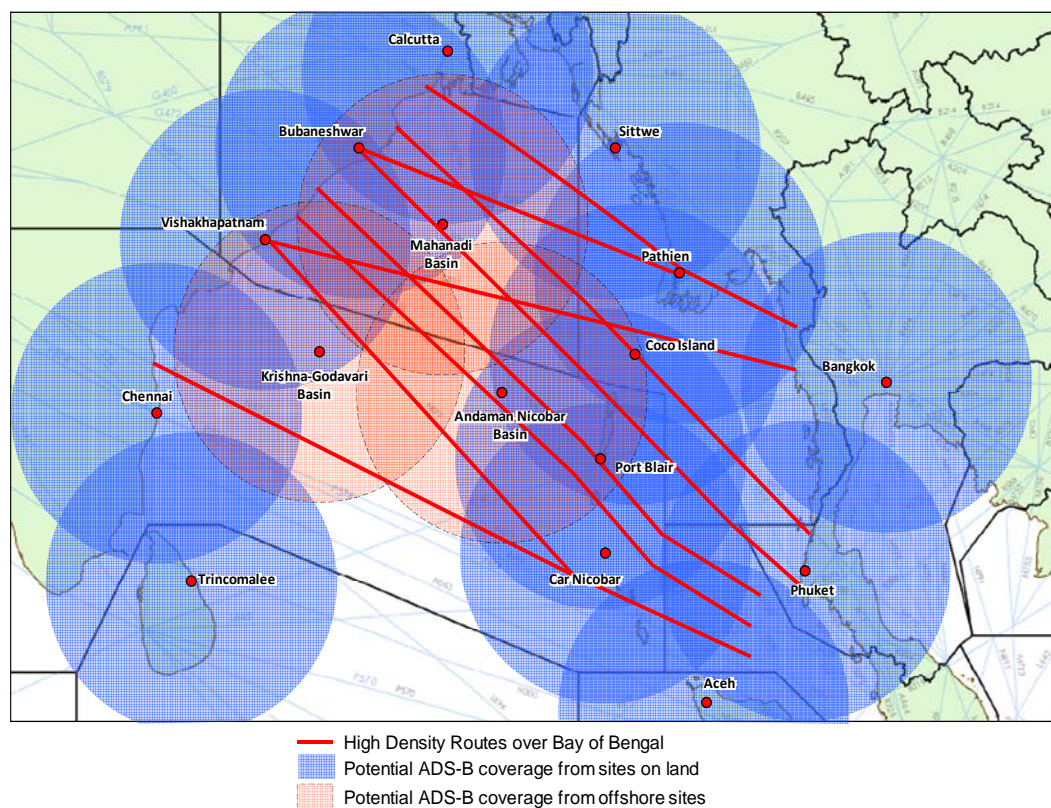


2.6 To get discussions going for the Bay of Bengal airspace, CANSO conducted an ADS-B seminar in Yangon for Myanmar in February this year. The seminar similarly discussed Myanmar’s ADS-B master plan which was later presented to the ICAO ADS-B SITF/10 meeting in April 11. The meeting discussed a potential ADS-B coverage plan for high traffic density routes over the Bay of Bengal. See Fig 2. There was keen interest shown by a number of relevant States and it was agreed that States concerned would provide more information on their national ADS-B plans at the next working group meeting to fine-tune the proposal.

2.7 It is evident from the above examples that States planning to implement ADS-B surveillance should collaborate closely with their neighbours to get the most out of the new technology. They should share their implementation plans and work closely together in a way that will bring the most benefits to the region as a whole.

2.8 Neighboring States need to harmonize their national plans early, in terms of implementation dates, ADS-B sites, regulatory approvals etc. Where overlapping surveillance coverage allows cross border sharing of ADS-B data and VHF communications this should be strongly encouraged to enhance air safety and capacity so that flights can transit seamlessly across national and airspace boundaries.

Fig 2: Potential ADS-B coverage for high density routes over Bay of Bengal



3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- (a) Note the ADS-B seminars conducted by CANSO in Manila and Yangon for the CAA of the Philippines and the DCA of Myanmar;
- (b) Note the need for States to work closely together to harmonise their ADS-B implementation plans to optimise overall benefits;
- (c) Urge States concerned to follow up on the proposed expansion of ADS-B coverage over the South China Sea; and
- (d) Urge States concerned to collaborate in ADS-B implementation for high traffic density routes over the Bay of Bengal.

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