



International Civil Aviation Organization

The Sixth Meeting of the Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF/6) and the First Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/1)

Bangkok, Thailand, 19 – 23 September 2011

Agenda Item 3: Operational Issues

THE CURRENT STATUS OF MYANMAR FOR BOB-RHS PHASE II IMPLEMENTATION

(Presented by Myanmar)

SUMMARY

This information paper presents Yangon FIR 50NM Reduced Longitudinal Separation capability.

1. INTRODUCTION

1.1 The meeting would recall Phase 1 implementation of reduced horizontal separation from 10 minutes procedural separation to 50NM (RNP 10) effective on AIRAC June 2011 for routes P762 and N581 in the Bay of Bengal and Arabian Sea.

1.2 Myanmar actively participated in the implementation through submission of Gross Navigation Error data and summary of month traffic movement to the Bay of Bengal and Arabian Sea Monitoring Agency (BOBASMA) since the agreed monitoring date of 1 July 2010.

1.3 Due to low traffic flow, there has no opportunity to apply 50NM separation based on RNP 10 RNAV route P762.

2. DISCUSSION

2.1 Due to Remote Oceanic airspace on the Bay of Bengal within Yangon FIR is some limited VHF coverage, Myanmar provides ADS/CPDLC fully satisfying Direct Controller-Pilot Communications (DCPC) requirement for the implementation of 50NM longitudinal separation based on RNP 10.

2.2 Existing ADS/CPDLC system is operational, however some technical problem being occurred occasionally due to heavy workload in the system.

2.3 For achieving efficient and continuous DCPC, new ADS/CPDLC installation is in progress and it should be completed before the end of November.

2.4 Continental airspace within Yangon FIR is also fully serviced by Secondary Surveillance Radar (SSR) to satisfy monitoring requirements of the 50NM longitudinal separation.

2.5 Therefore, Myanmar prescribes detailed RNAV RNP10 routes with availability of communication means to implement reduced longitudinal separation from 10 minutes to 50NM (RNP 10) under Phase 2 for routes enumerated in **Attachment A** organized by ICAO Asia-Pacific Major Traffic Flows.

3. ACTIONS BY THE MEETING

3.1 The meeting are invited to note information regarding to Yangon FIR capability.

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**CNS Infrastructure Availability Checklist
Proposed Routes for Phase 2 BOB-RHS Implementation**

AR-4 Major Traffic Flow: South/Southeast Asia – Europe

Route: L507 (LIMLA- OTADA)						
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	VHF direct communications between ATC and pilots	RNP 10 Approval	Frequent position update by radar	Use radar to monitor RNP 10 operation	Yes	

Route: L507 (OTADA-TEBOV)						
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	CPDLC	RNP 10 Approval	Frequent position update by ADSC	Use ADS C to monitor RNP 10 operation	Yes, after completion of New ADC /CPDLC installation	

**CNS Infrastructure Availability Checklist
Proposed Routes for Phase 2 BOB-RHS Implementation**

AR-4 Major Traffic Flow: South/Southeast Asia – Europe						
Route: P646,N895	(BETNO-PTN)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	VHF direct communications between ATC and pilots	RNP 10 Approval	Frequent position update by radar	Use radar to monitor RNP 10 operation	Yes	

Route: P646	(PTN-IBITA)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	CPDLC	RNP 10 Approval	Frequent position update by ADSC	Use ADS C to monitor RNP 10 operation	Yes, after completion of New ADC /CPDLC installation	

Route: N895	(PTN-SAGOD)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	CPDLC	RNP 10 Approval	Frequent position update by ADSC	Use ADS C to monitor RNP 10 operation	Yes, after completion of New ADC /CPDLC installation	

Route: M770	(MEPAL-PADET)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	CPDLC	RNP 10 Approval	Frequent position update by ADSC	Use ADS C to monitor RNP 10 operation	Yes, after completion of New ADC /CPDLC installation	

Route: L515	(OBMOG-IKULA)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	CPDLC	RNP 10 Approval	Frequent position update by ADSC	Use ADS C to monitor RNP 10 operation	Yes, after completion of New ADC /CPDLC installation	

Route: L759	(LIBDI-TAVUN)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	CPDLC	RNP 10 Approval	Frequent position update by ADSC	Use ADS C to monitor RNP 10 operation	Yes, after completion of New ADC /CPDLC installation	

Route: M626	(BGO-EKAVO)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	Both VHF and CPDLC are direct communications between ATC and pilots	RNP 10 Approval	Frequent position update by radar/ADSC	Use radar/ADSC to monitor RNP 10 operation	Yes	

**CNS Infrastructure Availability Checklist
Proposed Routes for Phase 2 BOB-RHS Implementation**

AR-10 Major Traffic Flow: South/Southeast Asia – Middle East

Route: L301	(DWI-RINDA)					
FIR	RNP 10 Communications Requirement Direct Controller-Pilot Communication in voice / CPDLC	RNP 10 Navigation Requirement RNP 10 Approval	RNP 10 Surveillance Position Report at least every 24 minutes	Additional Information on current mode of Operation for Phase 2	Adequate for RNP 10 50/50 Operation?	Remarks
	Communication Means	Navigation Specification	Surveillance in Place			
Yangon FIR	Both VHF and CPDLCdirect communications between ATC and pilots	RNP 10 Approval	Frequent position update by radar/ADSC	Use radar/ADSC to monitor RNP 10 operation	Yes	As per LOA BKK ACC takes control segment between DWI/TANEK

Attachment B

**ESSENTIAL ITEMS TO BE COMPLETED BY STATES
BEFORE PHASE 2 IMPLEMENTATION OF BOB-RHS**

Item	Subject	Suggested Action	Completion Required by
1	Letters of Agreement (LOAs)	Changes and final agreement to present LOAs between adjacent ACCs. Present Status: To be completed by 15 Dec 2011	Before implementation on 15 Dec 2011
2	AIP Supplement	Where appropriate an AIP SUP describing operational changes. Present Status: AIP Supplement to be published with effect from 0000UTC on 20 Oct 2011	Published and distributed by 20 Oct 2011 (56 days before implementation)
3	ATC Training	a) Training in new procedures involving a reduced separation minimum or new procedure. b) Where appropriate, training in the use of ADS-C/CPDLC, including coordination requirements with adjacent ACCs Present Status: To be completed by 15 Dec 2011	Before implementation on 15 Dec 2011
4	Collection of data reference lateral and longitudinal deviations by aircraft	All data on deviations to be sent to the EMA for their evaluation	From implementation on 15 Dec 2011
5	Preparation of a Safety Case	Annex 11, para 2.27.5 – in addition to the quantitative Safety Case prepared by SEASMA in collaboration with BOBASMA, each State must prepare a Safety Case based on a qualitative assessment by ATM experts that identifies any safety risks, mitigations and controls Status: Safety case to be completed by 15 Dec 2011; no issue expected	Before implementation on 15 Dec 2011
6	ATS Systems	Confirm that ADS-C/CPDLC equipment or CPDC is operable to meet the requirements of 50NM longitudinal separation Status: VHF communications used for DCPC with radar monitoring and procedure used to transition to procedural environment	Before implementation on 15 Dec 2011
7	User Consultation	User Consultation with regard to Phase 2 of reduced longitudinal separation has taken place during all meetings of the BOB-RHS/TF	Before implementation on 15 Dec 2011