



International Civil Aviation Organization

**NINETEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION
AND SURVEILLANCE SUB-GROUP (CNS SG/19) OF APANPIRG**

Bangkok, Thailand, 20 – 24 July 2015

Agenda Item 9: Review status of CNS deficiencies (APANPIRG Deficiency List)

STATUS OF CNS DEFICIENCIES

(Presented by the Secretariat)

SUMMARY

This paper presents information on the progress in resolving the deficiencies identified by APANPIRG in the CNS fields. The deficiency list also includes long standing deficiency addressed by relevant meetings.

1. INTRODUCTION

1.1 Assisting States in resolving the safety related deficiencies is one of the most important tasks assigned to the PIRGs. The APANPIRG maintains an up-to-date List of Deficiencies in all the air navigation fields. It is also one item in the Terms of Reference for all APANPIRG Sub-groups. Therefore, the CNS Sub-group regularly reviews the status of deficiencies in the CNS fields and provides the necessary updates and guidance to the States.

1.2 The list of deficiencies in the CNS fields is provided in the **Attachment** for review by the Meeting.

2. DISCUSSION

2.1 The status of the deficiencies in the CNS fields was reviewed by APANPIRG/25 Meeting held in Kuala Lumpur in September 2014. The Secretariat has updated the deficiency list based on the limited information received from States and other sources.

2.2 Deficiencies in the CNS fields have been addressed as follows:

2.3 **The current situation of air-ground communications in Yangon FIR**
(Report updated in March 2013)

2.3.1 Based on earlier reports from operators, about 70% flights had normal air ground communication over Yangon FIR.

2.3.2 It is informed that the DCA Myanmar has been making efforts in close coordination with IATA and ICAO Regional Office. However, few concerned issues were recorded as follows:

- For HF communication, the administration installed 1 KW high power HF facilities but some problems still exist; and
- For ADS-C/CPDLC, the interface between ATM system and SITA was updated from X.25 communication protocol to IP protocol on 14 March 2013. IP connectivity was reported stable. However, the FANS system still exhibits some instability.

2.3.3 DCA. Myanmar is still working with IATA towards achieving a position whereby current IFBP requirements can be removed. Latest updates from airspace user are expected.

2.4 **Navigation Aids Performance deficiencies in Philippines** (First report in September 2009)

2.4.1 This deficiency has been removed from the list. The CAAP informed ICAO Regional Office on 21 November 2014 after successfully commissioning the new DVOR/DME at NAIA through flight calibration since 13 November 2014 after new ILS serving both runway 06 and 24 put into operation in early 2011. CAAP was appreciated for the remedial efforts in improving the air navigation facilities and service.

2.5 **Poor ground/ground communication between Afghanistan and Pakistan** (First reported in 2011)

2.5.1 Issues related to unreliability of AFS communication between Afghanistan and Pakistan was brought to the notice of APANPIRG/21. Lack of reliable communication infrastructure between Afghanistan and Pakistan, poor performance of Aeronautical Fix Service including data communication between Kabul and Karachi and ATS voice communication between Lahore and Kabul had become issues of concerns. Karachi – Kabul AFTN circuit was out of service from 31 August 2011 resulting from unserviceable VSAT system. AFS requirements as specified in the regional air navigation plan are not met. Administrations were urged to work out a remedial solution and improve AFS service.

2.5.2 A COM coordination meeting Afghanistan and Pakistan was held in Karachi, in June 2012 later met again in early 2015. The meetings developed and updated a remedial action plan.

2.5.3 For AFTN traffic temporary arrangement has been made via a VPN connection. For ATS Direct Speech circuits, arrangements have been made using IDD hot lines. However, some operational issues still exist. The COM coordination meeting developed a remedial plan with action times to be implemented:

2.5.2 Afghanistan has changed its VSAT communication service provider in end of February 2015. Experts from the service provider are expected to pay a visit to Pakistan site for a technical survey and provide remedial recommendations.

2.5.3 For long term solution by end of 2015, establish 2 MB dedicated landline connection with multiplexers between Afghanistan and Pakistan to support both data and voice communication between COM centres and ACCs. In this regard, PCAA recently contacted service provider M/s Pakistan Telecommunication Company Limited (PTCL) for provisioning of complete connectivity between Karachi-Kabul & Lahore-Kabul. Accordingly they have submitted a detailed proposal which is subject to further coordination with Afghanistan side.
The same proposal..

2.6 Ground to ground data communication between Myanmar and China
(First report in September 2009)

2.6.1 The AFTN circuit between Beijing and Yangon had been out of service since 14 July 2008 due to the CU board of the VSAT system being out of order. The AFTN traffic between China and Myanmar is exchanged via alternate routing via Bangkok. No other alternate routing available for Myanmar in case of the Yangon/Bangkok circuit becoming out of order. There was no immediate plan in place to get the failed CU board repaired to restore the circuit via VSAT.

2.6.2 The circuit is specified in the regional Air Navigation Plan - FASID Table CNS 1A. In addition to the normal AFTN traffic between Myanmar and Z AFS Routing Area, the circuit also plays a critical role as the alternate routing for Bangkok-Yangon circuit.

2.6.3 The prolonged outage status has to be resolved as it was considered important to avoid situation of single point of failure.

2.6.4 A COM coordination meeting in February 2014 developed two action items to rectify the deficiency as soon as possible with target date no later than October 2014 (revised to 2015). E1 (2 Mbytes) circuit was ordered by end of 2014 from service provider and the terminal equipment (Huawei) for fiber cable was also purchased in 2014. It is under end to end configuration testing. Further updates on this from Administrations concerned are expected.

2.7 ATS direct speech circuit between Pakistan and China
(First report in September 2014)

2.7.1 Air Traffic Transfer mistakes reported between Lahore and Urumqi Area Control Centers (ACCs) in 2010 was brought to the notice of Pakistan and China. These mistakes were initially found attributable to the dissatisfactory performance of ATS Direct Speech Circuit provided between the ACCs of the two States. The ATS direct communication operating via IDD was observed not stable. It has identified as one of concerned issues by APANPIRG/25 meeting that require further improvements and necessary remedial action. A COM coordination meeting was held between China and Pakistan with facilitation from ICAO Regional Office to develop remedial solutions. An action plan was developed by the coordination meeting in May 2015 by both States. A VSAT is planned to be installed at Lahore for ATS direct speech circuit with Urumqi ACC and an additional VHF station with VSAT link will be installed to cover the VHF gap at PURPA crossing point. States concerned are expected to provide updates in this connection.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review the deficiencies listed in the Attachment;
- b) update the list based on recent actions taken by States, if any;
- c) identify additional deficiencies, if any; and
- d) recommend actions for resolving the remaining deficiencies.

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirement	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action
Adequate and reliable VHF COM	Myanmar	Quality and reliability of RCAG VHF inadequate and unavailability of required coverage.	1998	Improvements in the quality of link to RCAG stations and power supply system at some remote stations are required.	An action plan was developed to upgrade equipment at RCAG stations, provide VSAT link at all RCAG stations, to improve power supply system.	DCA Myanmar	December 2015	A
		Improvement has been observed and pilot reports continued to indicate occasional communication difficulties.	Early 2008		ICAO missions were conducted.			
		Further improvement has been observed with occasional communication problems reported.	June 2011		DCA Myanmar has replaced equipments at all 6 RCAG sites with digital VHF system and has provided VSAT links and solar power supply system at all sites.			
		From 2 to 13 April 2012, a survey was conducted by IATA. 129 of 349 aircraft from 11 airlines reported problems of one sort or another (HF, VHF or Data Link) 50 reported no communication had been established.	April 2012		The installation of new high power HF with full associated equipment to be done at Yangon ACC by the end of year 2011;			
		In Flight Broadcast Procedure (IFBP) currently still in place	July 2014		The current VCSS (Voice Control Switching System) has already been upgraded since first quarter 2011			
					The interface between new ATM system and CSP was upgraded from X.25 to IP in March 2013. The connectivity was stable but ATM/FANS system exhibits some instability.			
					Further improvements need to be taken by the DCA Myanmar including both operational and technical arrangements			

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Requirement	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action
Adequate and reliable Nav aids and navigation service REMOVED	Philippines	Un serviceability of both the ILSs and the DVOR at Manila airport.	19 June 2010	A letter from CAAP informed that the ILS system with associated DME had been commissioned in January and April 2011 respectively. Arrangement for continuous DVOR/DME operation was made by temporarily relocating old DVOR/DME facilities from another place.	The significant breakdown of the services was considered a deficiency if remedial action was not taken. The Administration was requested to inform about the remedial action taken to avoid breakdown of power supply. Power supply module has been replaced; For DVOR/DME, a plan to replace temporary aging facilities with new system is in place which was expected to be completed in early 2012	Civil Aviation Authority of the Philippines (CAAP)	2014 Letter received from CAAP that this deficiency had been removed since November 2014. (successful installation of the new VOR/DME at NAIA having been commissioned through flight calibration since November 2014 after new ILS serving both runway 06 and 24 put into operation in early 2011)	A
Reliable ground to ground communication as specified in the regional air navigation plan (Doc.9673)	Afghanistan and Pakistan	Unreliability of AFS communication between Afghanistan and Pakistan was brought to the notice of APANPIRG/21. Lack of reliability in the AFS including data communication between Kabul and Karachi and ATS voice communication between Lahore and Kabul was identified.	September 2010	Follow-up letters from ICAO regional offices were sent to Administrations concerned in April 2010 and further follow- up in March 2011 A COM coordination meeting – Afghanistan and Pakistan was held in June 2012 in	In March 2012, initial discussion on improvement of AFS communication was held at a special ATS coordination meeting. The COM coordination meeting in June 2012 developed a remedial action plan which was further updated in February 2015. 1. Near-term by end of September 2012, fully utilize the VPN circuit operational since January 2012 for exchange of AFTN traffic, organize users' training if required; (status quo) 2. Mid-term by end of May 2015, harmonize VSAT terminal equipment	Ministry of Transport and Civil Aviation Afghanistan and CAA. Pakistan	December 2015	A

Identification		Deficiencies			Corrective Action			
Requirement	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action
				Karachi, Pakistan. Further follow-up was made in end of 2014 and early 2015. A Remedial action plan was updated. New proposal for using landline has also proposed to be established between two States.	and select common network service provider to recover the VSAT Links; (efforts being by PCAA replacing aging parts of VSAT. Afghanistan has successfully changed the service provider in February 2015. Site visit by expert from Afghanistan side is expected to Pakistan. 3. Long-term by end of end of 2015, establish a dedicated landline connection with multiplexers between Afghanistan and Pakistan to support both data and voice communication between COM centres and ACCs. A proposal has been received from Pakistan.			
Regional air navigation plan – FASID Table CNS 1A	Myanmar	AFS data circuit between Beijing and Yangon had been out of service since Mid. July 2008.	September 2008	The circuit serves exchanging traffic between Myanmar and Z AFS routing area and also plays a critical role as alternate routing for Bangkok-Yangon circuit.	A COM Coordination meeting in February 2014 developed an action item to rectify the deficiency as soon as possible. End of 2014, an E1 (2Mbytes) circuit was ordered by both States. the terminating equipment also purchased and under configuration and testing	DCA. Myanmar and ATMB	October 2015	A
Regional air navigation plan – FASID Table CNS 1D	China & Pakistan	Improvement of ATS Direct Speech circuit performance and A/G communication and surveillance coverage between China and Pakistan	May 2014 RASMAG/19	The ATS direct speech circuit via IDD between Urumqi and Lahore was observed not stable. Issues reported were in 2013	Remedial action plan was developed in May 2015 by both States through a COM coordination meeting. A VSAT is planned to be installed at Lahore for connection with Urumqi ACC and additional VHF station with VSAT link will be installed to cover the VHF gap at PURPA crossing point.	China ATMB and CAA. Pakistan	December 2015	A