



International Civil Aviation Organization

**SIXTEENTH MEETING OF THE
COMMUNICATIONS/NAVIGATION/SURVEILLANCE AND
METEOROLOGY SUB-GROUP (CNS/MET SG/16) OF APANPIRG**

Bangkok, Thailand, 23 – 27 July 2012

Agenda Item 17: Review of deficiencies in the CNS and MET fields:

- 1) 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. This paper also brings out the issues which have been raised by the user agencies in the recent past.

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: All GPIs

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. In order to assist the work of APANPIRG, the CNS/MET 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/22 Meeting held in Bangkok in September 2011. The Secretariat has updated the deficiency list based on the information received from States and other sources.

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

2.3 **The current situation of air-ground communications in Yangon FIR**
(First reported in 1998 and later in April 2012)

2.3.1 A report was received from IATA in April 2012 on the performance of VHF, HF and ADS-C/CPDLC communications in Yangon FIR. It was noted that about 63% reports from pilots had indicated they had normal air ground communication over Yangon FIR.

2.3.2 The survey conducted was from 2 to 13 April 2012. Total 349 aircraft from 11 airlines participated in the survey with 50 reporting no communication established at all and a further 129 with problems of one sort or another (HF, VHF or Data link). 170 aircraft established contact with no reported problem.

2.3.3 It is informed that the DCA Myanmar has been making efforts in close coordination with IATA and ICAO Regional Office. However, it was recognized that:

- For VHF communication, some limitation area still exists;
- For HF communication, the administration has installed 1 KW high power HF facilities but some problems still exist; and
- For ADS-C/CPDLC, although new ATM system has been installed, it could not be used because of need to coordinate with CSP - SITA to upgrade the interface from X.25 communication protocol to IP protocol which is still under discussion.

2.3.4 DCA. Myanmar is working with IATA towards achieving a position whereby current IFBP requirements can be removed.

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

2.4.1 Disruption of Air Traffic Services in Manila FIR was reported on 13 September 2009 for about two hours. It was reported that standby power supply source failed to take over the load when the main power failed. The navigations aids including ILS 06/24 and DVOR/DME at Ninoy Aquino International Airport (NAIA) had been out of service caused by typhoon “Ondoy” on 26 September 2009. It was considered a deficiency in CNS field subject to remedial action by the Civil Aviation Authority of Philippines.

2.4.2 It was informed that the new CNS/ATM project was expected to be operational by 2013. The interim project of replacement of EUROCAT ATM system was still going on and was due for validation. The replacement with new ILS Thales 420 and associated DME Thales 415 co-located with GP for both runway 06 (Frequencies 109.1/331.4 MHz) and runway 24 (Frequencies 109.9/333.8 MHz) were commissioned in January and April 2011 respectively. Arrangement for continuous DVOR/DME operation was made by temporarily relocating the DVOR/DME facilities from other place to Ninoy Aquino International Airport. A plan is in place to replace these aging facilities with new system with a target date in early 2012. The power supply module has been replaced. IATA expressed concern about the discontinuation of CPDLC trial due to some technical problem.

2.4.3 With respect to the identified deficiency on nav aids performance, a letter to ICAO Regional Office from CAAP regarding new commissioned ILS at NAIA had been received. Therefore deficiency on ILS elements should be removed from the list of deficiencies. The CAAP was urged to inform ICAO Regional Office again to completely remove the deficiency from the list once the new DVOR/DME being put into operation in early 2012.

2.5 Poor ground/ground communication between Afghanistan and Pakistan

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. The objective of the meeting was to develop a common understanding on the identified air navigation deficiency and to make all efforts to address the issues from technical and operational aspects through development of 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 three action times to be implemented in three phases:

- Action Item 1: Near-term by end of September 2012, fully utilize the VPN circuit operational since January 2012 for exchange of AFTN traffic and organize training for users if required;
- Action Item 2: Mid-term by end of March 2013, harmonize VSAT terminal equipment and select common network service provider to recover the VSAT Links; and
- Action Item 3: Long-term by end of June 2014, establish 2 MB dedicated landline connection with multiplexers between Afghanistan and Pakistan to support both data and voice communication between COM centres and ACCs.

2.5.4 The meeting is invited to review these remedial actions and make further recommendations.

2.6 ATS direct speech circuit between Pakistan and China

2.6.1 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. Both the States were requested to review the current operating status. It was reported that a special coordination meeting was held in Karachi in 2011 with LOA renewed. It was informed that normal communications had been resumed.

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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.

Attachment C to Report on Agenda Item 4 – APANPIRG22 Meeting

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 | Revised target date is end of 2012 This deficiency will be removed from the list upon receipt of official report providing full details of action taken by Myanmar and confirmation by the airspace users. Further improvements need to be taken by the DCA Myanmar including both operational and technical arrangements. | A |
| | | Improvement has been observed and pilot reports continued to indicate occasional communication difficulties. | Early 2008 | | ICAO missions were conducted. 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. | | | |
| | | Further improvement has been observed with occasional communication problems reported. | June 2011 | | The installation of new high power HF with full associated equipment at Yangon ACC was completed; The current VCSS (Voice Control Switching System) has already been upgraded since first quarter 2011 | | | |
| | | 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 | | Initiated an action to integrate a new ADS-C/ CPDLC system into the new ACC displays (EUROCAT-C) at the Yangon ACC. Interface with CSP needs to be upgraded from X.25 to IP based protocol as the new ATM system had been upgraded. Replacement of new communication equipments such as head set, inter-com system and DSC line configuration have already been completed since the end of May 2011; | | | |

Attachment C to Report on Agenda Item 4

| 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 Nav aids and navigation service | Philippines | Un-serviceability of both the ILSs and the DVOR at Manila airport | 19 June 2010 | <p>A letter from CAAP informed that -the ILS system with associated DME had been commissioned in January and April 2011 respectively.</p> <p>Arrangement for continuous DVOR/DME operation was made by temporarily relocating old DVOR/DME facilities from another place.</p> | <p>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.</p> <p>Power supply module has been replaced;</p> <p>ILS on both ends of the runway with associated DME was commissioned on 4 and 6 April 2011.</p> <p>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.</p> | Civil Aviation Authority of the Philippines (CAAP) | Sep. 2012 | 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 | <p>Follow-up letters from ICAO regional offices were sent to Administrations concerned in April 2010 and further follow-up in March 2011.</p> <p>A COM coordination meeting – Afghanistan and Pakistan was held in June 2012 in Karachi, Pakistan. A Remedial action plan was developed.</p> | <p>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 with three action items:</p> <ol style="list-style-type: none"> 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; 2. Mid-term by end of March 2013, harmonize VSAT terminal equipment and select common network service provider to recover the VSAT Links; 3. Long-term by end of June 2014, establish 2 MB dedicated landline connection with multiplexers between Afghanistan and Pakistan to support both data and voice communication between COM centres and ACCs. | Ministry of Transport and Civil Aviation Afghanistan and CAA. Pakistan. | July 2014 | A |