

WORLD METEOROLOGICAL ORGANIZATION

AMDAR Panel-15/Doc.3.3.1

(12.X.2012)

**WMO AMDAR PANEL
(Fifteenth Session)**

(BOULDER, USA, 6-9 NOVEMBER 2012)

ITEM: 3.3

Original: ENGLISH ONLY

AMDAR PROGRAMME STATUS

Status Reports on National and Regional Programmes

AMDAR Programme Status Report for Australia

(Submitted by Michael Esler)

SUMMARY AND PURPOSE OF DOCUMENT

Provides a progress and activity report for the Australian AMDAR Programme.

ACTION PROPOSED

1. The Panel is invited to note the information contained in the document.
-

PROGRESS AND ACTIVITY REPORT

Current Status

1. The current Australian operational AMDAR fleet, as at September 2012, is shown in the table below. The Australian AMDAR fleet contributes around 12900 observations per day to Global AMDAR program.

Airline	Country of Airline	Aircraft Type (e.g. B737-400)	Number of Aircraft	AMDAR Software	Format On GTS (BUFR / FM42)
Qantas	Australia	B747-4nn	16	AAA v.1	FM42
		B767-336	7	AAA v.1	FM42
		B737-838	52	AAA v.3	FM42
Jetconnect	New Zealand	B737-838	8	AAA v.3	FM42
Jetstar Airways	Australia	A320	15	AAA v.3	FM42
Jetstar Asia	Singapore	A320	5	AAA v.3	FM42
Air Vanuatu	Vanuatu	B737-838	1	AAA v.3	FM42
SkyTraders	Australia	A319	1	AFIRS	FM42

Development & Other Activities

2. Fleet Expansion and Improved Data Coverage

Since the 14th Session the fleet has expanded from 72 to 105 aircraft, and the number of observations grown from 8000 to 12900 daily, approximately. This is due to (a) the addition of Jetstar Airways (Aust.) and Jetstar Asia (Sing.); (b) increase in the Jetconnect (NZ) fleet; and (c) increase in the Qantas B737-800 fleet flying within Australia. The addition of Jetstar has enabled the collection of observations from many Southeast Asian destinations, a relatively data sparse region.

3. WVSS-II Project

The Bureau has purchased three SpectraSensors WVSS-II units with a view to installing them on Qantas 737-800 aircraft. Together with Qantas and SpectraSensors we are developing a project to undertake the significant engineering and regulatory challenges this entails.

4. AMDAR Software Development

The project to upgrade the Qantas 747 and 767 fleets from AAA v.1 to AAA v.3 (thereby enabling uplinking and optimization) was ultimately unsuccessful. The older avionics on these airframes lacked the raw processing capacity to support the increased demands and functionality of AAA v.3. As the opportunity arises, these older aircraft will be phased out of the AMDAR fleet and replaced by their newer long-haul replacements, the A380 and A330.

5. Data Optimisation System

The Australian AMDAR Data Optimisation System (ADOS) had some refinements added to its

optimisation process which has delivered improved efficiencies. More significantly, a web based graphical user interface for ADOS, known as 'ADOSMon' has been developed by the Bureau. It provides a user friendly means of monitoring the AMDAR fleet and the operations of ADOS in real time. It also provides a range of diagnostic, analytical and reporting functions.

Future Plans

6. Uplinking to Jetstar Fleet

Although AAA v.3 software has been installed on the Jetstar A320 aircraft, uplinking and optimisation (with ADOS) has not yet been implemented. In 2013 we hope to work with Jetstar to establish the Bureau-to-aircraft comms channel required achieve this.

7. Cost-sharing for Data Collection in SE Asia

The Bureau has established routine AMDAR reporting from Jetstar aircraft in the SE Asian region, operating mainly from a Singapore hub. Some sort of cost-sharing arrangement with the Bureau will need to be implemented for this service to be sustainable in the longer term.

8. Increased AMDAR Reporting from Cyclone Areas

The Coral Sea, east of northern Australia is an important cyclone generating area. While flights to Fiji and Vanuatu bring some data, we hope to increase this by recruiting airlines that visit Papua New Guinea and the Solomon Islands, if possible. This data would be enormously valuable for cyclone monitoring if it included humidity.
