



World Meteorological Organization
Organisation météorologique mondiale

Secrétariat

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Weather • Climate • Water
Temps • Climat • Eau

Our ref.: OBS/OSD/AMDAR

GENEVA, 3 April 2014

Annex: 1

Subject: WMO Members Cooperation in Expansion of the Global AMDAR Observing System

Dear Sir/Madam,

The Aircraft Meteorological Data Relay (AMDAR) observing system¹ for collection of meteorological observations by commercial aircraft has now been fully integrated into the WMO World Weather Watch Programme as a component of the Global Observing System (GOS).

Following the cessation of the activities of the WMO AMDAR Panel at its fifteenth session in November 2012, the AMDAR observing system is now under the joint responsibility of the Commission for Basic Systems (CBS) through its Expert Team on Aircraft-Based Observing Systems (ET-ABO) and the Commission for Instruments and Methods for Observation (CIMO) through its Task Team on Aircraft-Based Observations (TT-AO). Together these teams will continue to coordinate and assist Members in activities to ensure the maintenance, expansion and further enhancement of AMDAR and other aircraft-based observing systems under the new Aircraft-Based Observations Programme (ABOP).

The growth and success of the AMDAR observing system arises chiefly from the fact that the system provides high quality upper-air temperature and wind data, utilizing existing commercial aircraft sensors and avionics systems, therefore requiring a software deployment only to implement. The resulting vertical profile data is derived at only a fraction of the cost of comparative radiosonde data.

In response to the rapid growth² and demonstrated significant positive impact of AMDAR observations³, the recently approved CBS Implementation Plan for the Evolution of Global Observing Systems (EGOS-IP), published as WIGOS Technical Report No 2013-4, contains six global actions⁴ urging all Members to contribute to the further expansion and enhancement of AMDAR and aircraft-based observations. To assist Members in this development, the ABOP has developed the ABOP Strategy and Implementation Plan⁵ which will form the basis for more detailed planning, expected to be developed and coordinated regionally as part of the Regional WIGOS Implementation Plans (R-WIPs), for each of the six WMO Regions.

¹ The WMO AMDAR Observing System: http://www.wmo.int/pages/prog/www/GOS/ABO/AMDAR/index_en.html

² See: http://www.wmo.int/pages/prog/www/GOS/ABO/data/ABO_Data_Statistics.html

³ See: WIGOS Technical Report 2014-1, The Benefits of AMDAR Data to Meteorology and Aviation: http://www.wmo.int/pages/prog/www/WIGOS-WIS/technical_reports.html

⁴ See: http://www.wmo.int/pages/prog/www/GOS/ABO/ABO_EGOS-IP.html

⁵ See: http://www.wmo.int/pages/prog/www/GOS/ABO/ABO_Work_Program.html

To: Permanent Representatives (or Directors of Meteorological or Hydrometeorological Services) of Members of WMO (PR-6762)

This strategy and plan has been based to some extent upon the results of a recent WMO study coordinated by the ABOP: *AMDAR Coverage & Targeting for Future Airline Recruitment* (February 2013)⁶ and from which a comprehensive list of target airlines for recruitment to the AMDAR programme have been identified (see Annex).

The successful further development and implementation of the AMDAR observing system will depend on the collective actions of Members in collaboration and cooperation with each other and their national airlines. I am therefore requesting you to please undertake the following actions as appropriate and as resource availability allows.

All Members:

1. In line with the CBS EGOS-IP and taking into account the WMO study, *AMDAR Coverage & Targeting for Future Airline Recruitment*, assess national and regional requirements and capabilities for the development of new, and the expansion of existing AMDAR programmes; and,
2. Ensure that a valid and active national Focal Point on aircraft-based observations has been nominated to WMO⁷.

Members in the List of High Priority Target AMDAR Airlines (see Annex) to also:

3. Make contact with the target airline(s) and request that they undertake to complete and return the Avionics Survey that is available at:

<http://www.wmo.int/pages/prog/www/GOS/ABO/AMDAR/documents/Airlines%20AMDAR%20Compatible%20Systems%20Survey.doc>

Copies of returned surveys should be sent by e-mail to the WMO Scientific Officer on Aircraft and Remotely-Sensed Observations (SO/ARO) at: dlockett@wmo.int

4. Commence negotiations towards agreement with the airline(s) for participation in the AMDAR programme; and,
5. If necessary, contact SO/ARO for technical advice on AMDAR onboard software and other requirements.

Members are advised that:

- Standards and other resources related to AMDAR programme development are available from:

http://www.wmo.int/pages/prog/www/GOS/ABO/AMDAR/resources/index_en.html

- Guidance on *Requirements for the Implementation and Operation of an AMDAR Programme* (WIGOS Technical Report 2014-2) is available at:

http://www.wmo.int/pages/prog/www/GOS/ABO/AMDAR/publications/Requirements_Implementation_Operation_AMDAR_Programme.pdf

⁶ See: http://www.wmo.int/pages/prog/www/GOS/ABO/AMDAR/resources/AMDAR_Coverage_Recruitment_Study.html

⁷ See: http://www.wmo.int/pages/prog/www/CBS/Lists_WorkGroups/CBS/cross-cutting/amdar-fp

Your full support for the further development and implementation of the AMDAR observing system, providing demonstrated national, regional and global benefits, is strongly recommended, encouraged and appreciated.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'M. Jarraud', written over a light grey rectangular background.

(M. Jarraud)
Secretary-General

WORLD METEOROLOGICAL ORGANIZATION

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OBS/OSD/AMDAR, ANNEX

High Priority Target AMDAR Airlines, by WMO Region

Country	Airline
RA I	
Egypt	Egyptair
Ethiopia	Ethiopian Airlines
Kenya	Kenya Airways
Morocco	Royal Air Maroc
RA II	
India	Air India Express
	Air India Limited
	IndiGo Airlines
	Jet Airways
Kazakhstan	Air Astana
Saudi Arabia	Saudi Arabian Airlines
Thailand	Thai Airways International
United Arab Emirates	Air Arabia
RA III	
Argentina	Aerolineas Argentinas
Brazil	TAM Brazilian Airlines
Chile	LAN Airlines
RA IV	
Panama	Copa Airlines
RA V	
Indonesia	Garuda Indonesia
Malaysia	AirAsia X
	Malaysia Airlines
Philippines	Cebu Pacific
	Philippine Airlines
Singapore	Singapore Airlines Cargo
	Singapore Airlines
RA VI	
Russian Federation	S7 Airlines
	Ural Airlines