WORLD METEOROLOGICAL ORGANIZATION

ET-AIR-3 and AMDAR Panel-14/Doc.4.7.2

(26.X.2011)

JOINT MEETING:
CBS EXPERT TEAM ON AIRCRAFT BASED OBSERVATIONS
(Third Session)
AND
AMDAR PANEL
(Fourteenth Session)

ITEM: 4.7

Original: ENGLISH ONLY

(QUEBEC CITY, CANADA, 2-4 NOVEMBER 2011)

PROJECTS, PLANNING AND WORK PROGRAMME

AMDAR Planning

AMDAR Long-Term Plan to 2025

(Submitted by the Secretariat)

SUMMARY AND PURPOSE OF DOCUMENT

To provide guidance and background towards the development of a long term plan for the AMDAR Programme.

ACTION PROPOSED

1. The Joint Meeting is invited to note the information contained in the document.
2. The Joint Meeting to consider the recommendations made in the document.

References:

1. Vision for the GOS: http://www.wmo.int/pages/prog/www/OSY/WorkingStructure/documents/CBS-2009_Vision-GOS-2025.pdf
2. Draft Implementation Plan for Evolution of Global Observing Systems: ftp://ftp.wmo.int/Documents/PublicWeb/www/gos/egos-ip/

LONG-TERM PLANNING CONSIDERATIONS

1. Definitions:

Aircraft Observing System – is a sub-system of the Global Observing System under the World Weather Watch Programme that encompasses management of all automated meteorological observations made from an aircraft platform and transmitted on the GTS. It currently includes those data derived from the AMDAR Observing System, TAMDAR data, ICAO ADS, Mode S and automated AIREP observations.

A National AMDAR Programme – is an aircraft observations programme in which the operation of the programme is specified and managed by a WMO Member NMHS in cooperation with partner airlines. A National AMDAR Programme can be referred to as the [Name of nation] AMDAR Programme, e.g. the South African AMDAR Programme.

An Regional AMDAR Programme – is an aircraft observations programme in which the operation of the programme is specified and managed by an organization or a group comprised of WMO Member NMHSs in cooperation with partner airlines. A Regional AMDAR Programme can be referred to as the [Name of organization or region] AMDAR Programme, e.g. the E-AMDAR AMDAR Programme.

AMDAR Programme – encompasses the collection of National and Organization AMDAR Programmes.

2. **Recommendation 2**: The following Core Activities are suggested for consideration by the Joint Meeting to be addressed in formulating a long term plan for the Aircraft Observing System:

1) Enhancement of AMDAR Observing System Coverage.

2) Extension of the AMDAR System.

3) Research and Development of New Aircraft Observations Technologies.

4) Development and Maintenance of the Aircraft Observations System Quality Management System.

5) Aircraft Observing System Training and Outreach.

6) Management and administration of the Aircraft Observing System programme

3. The following activities are suggested for consideration by the Joint Meeting to be addressed in formulating a long term plan for the Aircraft Observations Programme:

Core Activity	Long-term Activities	Priority
1	1. Extend Global AMDAR coverage, particularly over upper air data sparse and developing areas. 2. Address the requirement for national, regional and global optimization. 3. Extend AMDAR Programme to GA aircraft and coverage of regional airports.	
2	1. Implement water vapour sensing measurement. 2. Implement turbulence measurement. 3. Implement icing indication.	
3	1. Manage risks and opportunities associated with new and developing technologies in avionics, communications and metrology.	
4	1. Implement a Quality Management Framework for AMDAR that incorporates standardization across national programmes, taking into account: • Data management; • Metadata management; • Quality control for metrological systems; • Systems and data monitoring and evaluation. 2. Develop a National and Global Aircraft Observations Data Management Framework. 3. Standardise AMDAR software and sensors across avionics systems and aircraft manufacturers. 4. Manage sources of data (for GTS transmission) other than AMDAR, including ICAO (ADS).	
5	1. Develop systems and material for promoting Aircraft Observations and the AMDAR Programme; 2. Conduct training and outreach activities in support of Core Activities.	
6	1. Conduct meetings of members; 2. Coordinate planning activities; 3. Monitor and evaluate the Aircraft Observations Programme.	

4. **Recommendation 3**: It is recommended that the table structure in Appendix 1 is used to define the long-term plan for the AMDAR Programme. An example of its use is provided.

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APPENDIX 1 – AMDAR LONG-TERM PLAN TEMPLATE

Core Activity	Long-term Activity	Description	Activities	Outputs	Outcomes/Impact	Justification	Priority (1-3)	Timeframe
1	1	Extend Global AMDAR Coverage, particularly over upper air data sparse and developing areas.	1. Regional and national workshops; 2. Training and Outreach; 3. Liaison with NMHSs, Airlines and Avionics service providers; 4. Liaison with stakholders and data users; 5. Studies on data coverage and airline capabilities; 6. Assessment and use of impact studies.	1. Extension of AMDAR expertise; 2. AMDAR training materials.	1. More airlines recruited; 2. More national AMDAR programmes; 3. Better AMDAR global data coverage; 4. Significant, positive impact on applications and for Data Users.	WMO-ER-4	1	Ongoing to 2025