

(26.X.2011)

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**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 Planning

*(Submitted by the Secretariat)*

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**SUMMARY AND PURPOSE OF DOCUMENT**

To provide background information on the requirements and the aspects to be addressed in the AMDAR Programme planning process

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**ACTION PROPOSED**

1. The Joint Meeting is invited to note the information contained in the document.
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## **BACKGROUND**

1. From January 2011, the AMDAR Panel will no longer be required to financially support the services of a Technical Coordinator role, whilst WMO will provide technical support to the AMDAR Panel through half the role of the Scientific Officer, Aircraft and Surface-based Remotely-sensed Observations (SO/ARO). This means that the AMDAR Panel Trust Fund (TF) might be utilized more widely to support the furthering of Panel and ET-AIR objectives.
2. To make the best and most efficient use of Member finances submitted to the TF and to ensure that Members continue to support the objectives of the programme through contribution of resources, it is important to ensure that plans are developed, documented and maintained on a routine basis. Whilst the Panel and ET-AIR have been diligent in this respect, it is recommended that a more structured approach is taken to this aspect of the programme as it becomes more fully integrated into WIGOS and the activities of the Panel are gradually transferred to ET-AIR.

## **PLANNING CONSIDERATIONS**

3. It is recommended that the planning process and programmes of the Panel and ET-AIR should take into account the following aspects:
    - The Purpose and Terms of Reference of the Panel (see document 5.3).
    - The Terms of Reference of ET-AIR (see document 6.1).
    - The evolution of WIGOS through the activities and plans of ET-EGOS, taking into account the Vision for the GOS and the Implementation Plan for Evolution of Global Observing Systems (see INF.4.7.1(1) and INF.4.7.1(2)).
    - The Expected Results and Resolutions of Congress for the World Weather Watch Programme and the GOS (see Appendix 1 and WMO Strategic Plan (2012-2015) and WMO-wide Operation Plan, as approved by Cg-XVI).
    - The Resolutions of the Executive Council.
    - The gradual transition of the work programme from the Panel to ET-AIR as agreed between the Panel and WMO and its Commissions.
    - Use of the Trust Fund and the decision regarding its future.
    - Guidance and advice of scientific and associate experts within the Panel and ET-AIR.
  4. It is recommended that the Joint Meeting commences the development of a planning document structure that incorporates 3 chief timeframes:
    - 1) A long-term plan, that focuses on the outcomes and impacts for the programme responding to the EGOS-IP that is based on the Vision for GOS in 2025.
    - 2) A medium-term plan, aligned with the WMO Strategic Plan (2012-2015) and the WMO-wide Operating Plan (2012–2015) that focuses on the broader and high level outputs and outcomes for the AMDAR Programme.
    - 3) A short-term annual plan and work programmes for both the Panel and ET-AIR that focuses on the tasks and activities over the next 12 months in alignment with the outputs and outcomes of the long and medium-term plans.
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### Congress Documents and Excerpts Relevant to Aircraft Observations Planning

SIXTEENTH CONGRESS, Cg-XVI/PINK 3.1(1)

Annex to paragraph 8.1.2 of the general summary

*(NOTE: text in the table is from Cg-XVI/Doc. 8.1(1), REV.1 (for Expected Results), with corrections proposed by delegates and from Cg-XVI/Rep. 8.2, APPENDIX, pp. 2-34 (for WMO Programmes/Technical Commissions/Responsible Departments))*

Expected Results	WMO Programmes	Constituent Bodies	Responsible Departments
1. Enhanced capabilities of Members to deliver and improve access to high-quality weather, climate and water and related environmental predictions, information, warnings, and services in response to users' needs and to enable their use in decision-making by all relevant societal sectors.	AeMP*, AgMP*, ERA*, MMOP*, , PWSP*, WWW/GDPFS*, GFCS*	CAeM CAgM CBS JCOMM EC RAs	WDS*, CLW*
2. Enhanced capabilities of Members to reduce risks and potential impacts of hazards caused by weather, climate and water and related environmental elements.	DRR*, TCP*, WWW/GDPFS*, HWRP*, AgMP	CBS, EC/WG DRR, CHy, CAgM, EC	WDS*, CLW*
3. Enhanced capabilities of Members to produce better weather, climate, water and related environmental information, predictions and warnings to support in particular disaster risk reduction, climate impact and adaptation strategies.	WCP/WCDMP, WWW/GDPFS, AgMP, WCP*, HWRP*,	CBS, CAgM, CCI, CHy	OBS, WDS, CLW*,
4. Enhanced capabilities of Members to access, develop, implement and use integrated and interoperable Earth- and space-based observation systems for weather, climate and hydrological observations, as well as related environmental and space weather observations, based on world standards set by WMO.	SAT, WCP*, WWW/GOS, WWW/IMO*, WWW/WIGOS*, WWW/WIS*, GCOS	JCOMM, CBS, CIMO, CCI, EC	OBS*, GCOS*
5. Enhanced capabilities of Members to contribute to and draw benefits from the global research capacity for weather, climate, water and the related environmental science and technology development.	WCRP*, WWRP*, GAW*	CAS	WCRP*, RES*
6. Enhanced capabilities of NMHSs, in particular in developing and least developed countries, to fulfill their mandates.	RP*, LDCP, TCP*, AgMP, AeMP, ETRP*, HWRP*, WCP*, WCP/WCDMP*, WWW/GDPFS*	CAgM, CCI, CAeM, EC Panel on ET, CHy, CBS, EC Panel on Gender, RAs	DRA*, CLW*, WDS*, OBS*,
7. New and strengthened partnerships and cooperation activities to improve NMHSs' performance in delivering services and to increase the value of the contributions of WMO within the United Nations system, relevant international conventions and national strategic issues.	AeMP, AgMP, WCP*, , HWRP, OC*, RP, IPA*	CAeM, CAgM, CHy, CCI, EC	WDS, CLW, EM*, IPCC*, DRA, CER
8. An effective and efficient Organization.	PMO*, OC, LCP*		EM*, LCP*, IOO, REM

\*Programmes + Departments that are significantly contributing to the Expected Results

(list of acronyms will be added at the stage of editing the final report)

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#### *WORLD WEATHER WATCH PROGRAMME*

##### *Global Observing System*

##### *Report to Plenary on item 3.1*

3.1.1.8 Congress noted the increased importance of aircraft-based observations for a cost effective GOS, especially after implementation of reliable water vapour sensor into AMDAR sensor suite. Together with GPS Radio-occultation techniques, this would allow optimizing the upper-air observing network. In this regard, Congress appreciated that the WMO Secretariat took over the responsibility for technical coordination of AMDAR activities, through a staff position currently supported predominantly from the AMDAR Trust Fund. It requested Members to continue providing support to the AMDAR Trust Fund and the Secretary-General to consider, in future, funding this activity from the WMO Regular Budget.

Urges Members:

- (1) To give all possible support to the implementation of national observational programmes contributing to the GOS;
- (2) To ensure sustainable operation of the GOS and encourage activities with respect to the optimization of observing elements and development and deployment of the advanced composite system, the priority should be given to projects in the following order:
  - (a) Projects aiming at restoring and improving the existing, and building the new upper-air observational capabilities, of the RBSN/RBCN, with emphasis on GSN/GUAN stations, especially the activation of silent upper-air stations and the improvement of coverage over data-sparse areas;
  - (b) Projects aiming at extending AMDAR coverage to developing countries, LDCs and SIDS to supplement scarce upper-air observations or to provide a cost-effective alternative to countries that cannot afford costly upper-air sounding systems;
  - (c) Projects related to the improvement of data quality, regularity and coverage of surface observations of the RBSN/RBCN;
  - (d) Projects related to the introduction and/or use of new observing equipment and systems including, where cost-effective, surface-based remote sensing systems (weather radars and wind profiles), AWSs, AMDAR, ASAP and drifting buoys;
- (3) To follow guidelines and recommendations contained in the Implementation Plan for Evolution of Space and Surface-Based Sub-systems of the GOS (EGOS-IP), published as WMO/TD-No. 1267 and nominate/update a national point of contact responsible for reporting progress and plans in their country related to EGOS-IP;

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(4) To continue providing contributions to the AMDAR Trust Fund for the support of technical developments and capacity building related to AMDAR;

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Requests the Secretary-General:

(1) To assist Members, within the budgetary resources available, in the implementation of the GOS Programme during the sixteenth financial period;

(2) To keep the Members informed of progress and developments in the planning and implementation of the GOS;

(3) To consider in future the funding of AMDAR activity from the WMO Regular Budget.

### *BUDGET PROPOSAL FOR THE SIXTEENTH FINANCIAL PERIOD*

*(2012–2015)*

#### *Report to Plenary on item 8.3*

**8.3.4** Congress decided to fund additional activities from the regular budget at an estimated cost of 1,200,000 Swiss francs. This includes the cost of the staff support for AMDAR coordination at an additional cost of 370,000 Swiss francs, increase support for radio frequency activities by 150,000 Swiss francs, and Global Cryosphere Watch (GCW) by 350,000 Swiss francs under Expected Result 4. In addition, support for the GFCS management unit is increased by 330,000 Swiss francs under Expected Result 1. Of the additional amount required, 600,000 Swiss francs are to be accommodated within the regular budget in the course of budget implementation. Furthermore, an amount of 600,000 Swiss francs are to be released from the budget of the support departments through additional efficiency measures.

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#### *Executive Council*

#### *Sixty-second session*

#### *Geneva*

*8–18 June 2010*

#### **Aircraft observations**

3.4.7 The Council noted with interest the progress to date on the development of suitable aircraft based water vapour sensor. It requested CBS and CIMO to further promote the inclusion of a suitable humidity sensor with a generic software and hardware solution for all major aircraft types and models.

3.4.8 Taking into account the cost-effectiveness of AMDAR observations and the potential to provide a better distribution of profile data, the Council requested Members to collect AMDAR data also from outside their national territories, in compliance with national laws and regulations, and to exchange these on the GTS. The Council further requested Members to enhance the cost effectiveness of AMDAR observations by implementing a data optimization system.

3.4.9 The Council noted that some AMDAR Trust Fund donors will not be able to support aircraft observations' activities as of 2011 and requested the Secretary-General to explore the possibility of including AMDAR activities into the WMO regular budget proposal for the sixteenth.