

WORLD METEOROLOGICAL ORGANIZATION

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**REGIONAL ASSOCIATION II
(ASIA)**

ITEM: 7

**WORKING GROUP ON PLANNING AND
IMPLEMENTATION OF THE WWW IN REGION II**
Fifth Session

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FUTURE WORK PROGRAMME

(Submitted by the Secretariat)

SUMMARY AND PURPOSE OF DOCUMENT

This document provides a summary of an issue to be considered by the group in preparing its future Work Programme.

ACTION PROPOSED

Take note of the mentioned items and in the preparation of its future work programme. The group is also expected to review the WG/PIW Terms of reference and make relevant proposals to XIV-RA II.

References:

1. Final Report from the Fourth Session of the CBS Implementation Coordination Team on Integrated Observing Systems, Geneva, 11 -15 September 2006;
2. Abridged Final Report with Resolutions of the Thirteenth Session of the Regional Association II (Asia), WMO-No. 981.

FUTURE WORK PROGRAMME

Regional Aspects of the Global Observing System (GOS)

1. The group is invited to initiate action in reviewing the *Manual on the Global Observing System* (WMO-No. 544), Volume II, Regional Aspects to incorporate changes and developments in the GOS performance in RA II taking into account new elements including a) the use of objective criteria regarding the arrangements and the procedures of revising, updating and amending the RBSN; b) the use of in situ observing systems (AMDAR, AWSs, etc.); c) the composition and the best practices of the GCOS stations (GSN and GUAN); d) the concept and the composition of the RBCN; e) the space-based subsystem and the migration to MSG and f) the instruments and methods of observation programmes (IMOP). Updates accomplished by RA I, RA V and RA VI in their respective regional entry for the *Manual on the GOS*, Volume II, and the existing RA II version are available on the website at http://www.wmo.int/pages/prog/www/OSY/Manuals_GOS.html.

RBSN and RBCN

2. The group is invited to review recommended procedures for formulating RBSN and RBCN developed by the CBS Implementation Coordination Team on Integrated Observing Systems (ICT-IOS-3) during its third session, Geneva, Switzerland, September 2004 and revised by the ICT-IOS-4, Geneva, Switzerland, September 2006 (Annex I).

3. The group is also invited to clarify further the Arrangements and procedures for updating and amending the RBSN and RBCN (see Manual on the GOS, Volume II, paragraph 2.1.4), especially as concern the definition of "minor" changes to the RBSN/RBSN.

RA II WG-PIW

4. The Thirteenth Session of the Regional Association II (Asia) decided on the establishment of the Working Group on Planning and Implementation (WG-PIW) of the WWW in region II and approved the TOR of its rapporteurs (Annex II). The WG-PIW may wish to review the TOR taking into account the evolving needs of the Region for the consideration by the Fourteenth Session of the RA II.

AMDAR Observations

5. The following AMDAR activities should be taken into account by the WG-PIW:

- The second field test of the WVSSII water vapour sensors, installed on UPS B-757 freighter aircraft, was completed in late 2006. The preliminary finding showed that the performance of the WVSS-IIV3 units was improved resolving the dry bias caused by condensation on descent and removed trapped moisture in the sample chamber. The results from this field test also detected a drift in the error bias. The cause of this error bias has been attributed to the WVSS-II laser not being properly "burned in" prior to installation and that some of the capacitors used in the sensor had large error allowances which could result in larger mixing ratios. An additional USA based field test has been scheduled with the new revised version of WVSS-II for August 2007 using coincident radiosonde flights. It is expected that once the third WVSS-II field is completed a final report will be published. The E-AMDAR Programme is also conducting a test of the WVSS-II water vapour sensor in Europe on 3 Lufthansa A319 aircraft. Results from this trial should be made available at the 2007.
- The AMDAR Panel works on the software and hardware solutions and certifications for different aircrafts. The AMDAR Panel through WMO sought to acquire additional

contributions from WMO Members to help fund the development of generic software package for use on any aircraft model and type. Unfortunately this strategy proved unsuccessful. It has been identified that the future work programme of the AMDAR Panel must include developing a strategy to implement a standard suite of AMDAR software solutions that could be made available to all NMHS. As part of this future work programme the AMDAR Panel will also continue to work closely with all aircraft manufactures and related industries to assist in the development of AMDAR software.

- The AMDAR Panel together with Global Systems Division (GSD) NOAA are developing a stand-alone AMDAR Data Visualization tool for those countries that do not have sufficient bandwidth to view locally taken AMDAR data by accessing the GSD database.
- AMDAR Workshops have been formally requested by the Russian Federation, Malaysia and informally by India. The Panel will take this into account in the future planning.
- The AMDAR Panel can provide the assistance needed to liaise and negotiate with the national/regional airlines and other relevant organizations to help implement or expanding national or regional AMDAR Programs. The AMDAR Panel can also provide assistance with training and technical support.
- The CBS Management has discussed the next steps towards a fuller integration of the ADMAR programme into the GOS, in particular the questions of optimization of the observing system.

Marine Observations

6. The following Marine Observations' activities should be taken into account by the WG-PIW:
 - Working closely with the Data Buoy Cooperation Panel (DBCP), the International South Atlantic Buoy Programme (ISABP), the Global Drifter Programme, and Argo for providing deployment opportunities for drifting buoys and profiling floats in data sparse areas.
 - The DBCP has established a DBCP drifter Iridium Pilot Project to evaluate the Iridium satellite data telecommunication system for use with drifting buoys. The Pilot Project is targeting the deployment of about 50 units in the world oceans in the period 2007/2008. Similarly, the Ship Observations Team (SOT) has also engaged in the evaluation of the Iridium system for use from VOS ships. Iridium, which is a global system, provides potentially the cost-effectiveness, telecommunication bandwidth and the timeliness needed for applications of ocean data. Iridium could also potentially solve the problem of transmitting in real-time high vertical resolution Automated Shipboard Aerological Programme (ASAP) soundings to shore.

Satellite Observations

7. The following Satellite activities should be taken into account by the WG-PIW:
 - The so-called Integrated Global Data Dissemination System (IGDDS) initiative includes the dissemination of data via commercial satellites using DVB-S technology operated by various operational meteorological satellite agencies. The data content of each of these (regional) ADM sub-systems is made up of data originating from the satellite agency itself plus data and products acquired through exchange agreements with other similar agencies. The WG-PIW is requested to consider the issue of gathering regional data requirements for RA II that should be addressed by these systems and to respond to the request for the definition of such requirements.

Regional Aspects of the Global Data-processing and Forecasting System (GDPFS)

8. The following GDPFS activities should be taken into account by the WG-PIW:

- To be finished by the rapporteur at the session.....

Regional Aspects of the Public Weather Services (PWS)

9. The following PWS activities should be taken into by the WG-PIW:

- Continuing coordinating with Hong Kong, China and WMO Secretariat for inclusion of warnings regarding tropical cyclones, heavy rain and thunderstorms on the WMO web site of Severe Weather Information Centre (SWIC);
- Possibility of inclusion of severe weather warnings in cities in the World City Forecasts on the World Weather Information Service (WWIS);
- Support to the RA II project, which has the participation of Hong Kong China, Japan and the Republic of Korea to provide site specific forecasts in the medium-range to the developing countries within the region;
- Continuous development in the use of Internet for communication and presentation of data, warnings and related information and products, and as a tool for communication between NMHSs and the public, state administration, and the media at both national and international levels.

Procedures in formulating the RBSN and RBCN

The Rapporteur on the regional aspects of the GOS, in close cooperation with Members concerned, reviews and makes proposals regarding the design of observing systems in the Region, in particular the RBSN and the RBCN in the context of the WWW Programme in the WMO Long-term Plan.

For the purpose of the exercise of the composition of the RBSN and RBCN, it is recommended to use the objective criteria developed by the WG on Planning and Implementation of the WWW in RA VI for inclusion and exclusion of stations. It is noted that the RBCN includes the GCOS network.

The Rapporteur in consultation with the Secretariat, submits the proposed lists of stations to be included in the RBSN and RBCN to the WG PIW in his Region for review and approval. The Secretariat on the recommendation of the WG PIW in the Region circulates the proposed lists of stations to Members for review and any amendments.

The Secretariat compiles the feedback and the amendments made by Members to their lists of Stations in the RBSN and RBCN and a draft proposal is submitted to the Regional Association (which meets once in 4 years) for consideration and inclusion in the RBSN and RBCN.

The Secretariat on the recommendation of the Regional Association circulates once again to Members the final draft of the proposed lists of stations to be included in the RBSN and RBCN for review and any amendments within a reasonable time frame.

The lists of stations on the RBSN and RBCN for the Region are then finalized by the Secretariat as an annex to the respective Resolutions of the Regional Association. Certain minor changes in the RBSN and RBCN that do not affect the data requirements of the Region as a whole are inevitable from time to time. To provide a simple and rapid means of effecting changes proposed by the Members concerned, the following procedures shall be followed:

- (a) The Regional Association authorizes the President of the Association to approve, at the request of the Member concerned and in consultation with the Secretary-General, minor changes to the RBSN and RBCN without a formal consultation of the Members of the Association, it being understood that any change of substance, i.e. one adversely affecting the density of the network or proposing a change in observational hours, would still require the formal agreement of Members through the adoption of a resolution by postal ballot;
- (b) The Secretary-General shall notify all Members of WMO by circular letter of changes agreed with the president of the Association.

The RBSN and RBCN are reviewed and revised at each session of the Association by adopting a Resolution containing the current RBSN and RBCN networks. This Resolution is included in the report of the most recent session of the Association.

RESOLUTION 1 (XIII-RA II)
WORKING GROUP ON PLANNING AND IMPLEMENTATION OF THE WWW IN REGION II

REGIONAL ASSOCIATION II (ASIA),

NOTING:

- (1) Resolution 2 (Cg-XIV) — World Weather Watch Programme for 2004–2007,
- (2) Resolution 5 (Cg-XIV) — WMO Space Programme,
- (3) Resolution 25 (Cg-XIV) — Sixth WMO Long-term Plan (2004–2011),
- (4) The report of the chairperson of the Working Group on Planning and Implementation of the WWW in Region II,

CONSIDERING:

- (1) That World Weather Watch (WWW) data and products are of vital importance to Members of RA II to meet existing and new requirements for meteorological services,
- (2) That the implementation of the WWW in the Region needs to be kept under constant review,
- (3) That the introduction of the new concepts and technology into the WWW will be of great benefit to all Members in the Region,
- (4) That full integration of the WWW functional components requires careful coordination among Members of RA II and constant evaluation of the related projects,

DECIDES:

- (1) To establish a Working Group on Planning and Implementation of the WWW in Region II with the following terms of reference:
 - (a) To monitor the progress made in the implementation and operation of the WWW in the Region and advise on possible improvements and priorities for appropriate action to be carried out under the WWW and on the need for external support, where required;
 - (b) To keep under review the action taken under the Sixth WMO Long-term Plan with a view to updating and further developing the WWW relating to RA II;
 - (c) To develop proposals for the further development and full integration of the WWW components and functions with a view to achieving a cost-effective operation and a better supply of WWW data and products throughout the Region;
 - (d) To keep abreast of new developments in the field of meteorological data processing, observing techniques, telecommunications and codes and to make recommendations for their application as appropriate in the Region;
 - (e) To identify and keep under review regional requirements for the exchange of observational data and processed products and to propose measures and procedures as appropriate to meet those needs for information from within and outside the Region;
 - (f) To promote implementation of the Public Weather Services Programme in the Region;
 - (g) To advise the president of the Association on all matters concerning the WWW;
- (2) That the Working Group should be composed of:
 - (a) A coordinator of a Subgroup on Regional Aspects of the Global Telecommunication Systems and Data Management;
 - (b) A Rapporteur on Regional Aspects of the Global Observing System;
 - (c) A Rapporteur on Regional Aspects of the Global Data Processing and Forecasting System;
 - (d) Co-Rapporteurs on Regional Aspects of Public Weather Services;
 - (e) Other experts as nominated by Members;with the terms of reference of the subgroup and rapporteurs as indicated in the annex to this resolution;

(3) To designate in accordance with Regulation 32 of the WMO General Regulations Mr A.K. Bhatnagar (India) as chairperson of the Working Group and Mr H. Ichijo (Japan) as coordinator of the subgroup;

(4) To invite:

(a) Mr Chen Yongqing (China) to serve as Rapporteur on the Regional Aspects of the Global Observing System;

(b) Mr Yoo Heedong (Republic of Korea) to serve as Rapporteur on the Regional Aspects of the Global Data Processing and Forecasting System;

(c) Ms H. Lam (Hong Kong, China) and Mr A. Lyakhov (Russian Federation) to serve as Co-Rapporteurs on the Regional Aspects of Public Weather Services;

(d) To invite Members to nominate experts to serve on the group and on the subgroup;

(e) To request the chairperson of the Working Group to submit progress reports at yearly intervals to the president of the Association and a final report no later than six months before the fourteenth session of the Association.

ANNEX TO RESOLUTION 1 (XIII-RA II)

WORKING GROUP ON PLANNING AND IMPLEMENTATION OF THE WWW IN REGION II

The terms of reference of the subgroup and rapporteurs nominated under Resolution 1 (XIII-RA II) are as follows:

(a) Subgroup on Regional Aspects of the Global Telecommunication System and Data Management

(i) To keep under review the organizational, technical and procedural aspects of the Global Telecommunication System (GTS) in the Region;

(ii) To keep under review the status of implementation and operation of the Regional Meteorological Telecommunication Network (RMTN), including in particular routing arrangements for the exchange of observational data and processed information within the Region and with other Regions;

(iii) To keep under review both real-time and non-real-time WWW monitoring activities pertaining to the GTS in the Region;

(iv) To keep abreast of developments in telecommunication techniques, procedures and equipment, including in particular satellite-based telecommunication services, and to study their applicability, as appropriate, to the RMTN;

(v) To formulate recommendations for the further development and upgrading of the RMTN;

(vi) To formulate recommendations for the coordination of the implementation of telecommunication facilities and techniques;

(vii) To promote regional contributions in the framework of the development of the Framework for the WMO Information System (FWIS);

(viii) To keep under review data and information presentation, including exchange formats and codes and conversion between formats and codes, especially the regional migration plan to table-driven code forms, and make recommendations;

(ix) To keep under review data and product selection and presentation to recipients' National Meteorological Centres (NMCs);

(x) To review procedures for the reception of WWW data and products in case of major outages at key facilities;

(xi) To advise and report to the chairperson of the Working Group on all matters concerning the regional aspects of the GTS and data management in the Region;

(xii) To represent the Region on the CBS Implementation Coordination Team on Information Systems and Services.

(b) Rapporteur on Regional Aspects of the Global Observing System

- (i) To review and advise on the observational data requirements of Members of Regional Association II in the context of the WWW Programme and WMO Space Programme in the Sixth WMO Long-term Plan;
- (ii) To review and advise on the design and implementation of the Regional Basic Synoptic Network (RBSN) and Regional Basic Climatological Network (RBCN) of surface and upper-air stations;
- (iii) To keep abreast of matters related to the development and introduction of new observing systems, particularly space-based and surface-based remote sensing, and advise on their application in the Region and to review the exchange of weather radar data within the Region;
- (iv) To advise and report to the chairperson of the Working Group on all matters concerning regional aspects of the Global Observing System;
- (v) To represent the Region on the CBS Implementation Coordination Team on Integrated Observing Systems.

(c) Rapporteur on Regional Aspects of the Global Data-processing and Forecasting System

- (i) To keep abreast of developments in data-processing equipment and techniques which could be beneficially introduced at national and regional centres to improve their operational capability both within the WWW system and in related areas;
- (ii) To formulate recommendations for coordinated implementation of data-processing facilities and techniques at GDPFS, GTS and other centres and, if required, for multi-purpose use;
- (iii) To advise and report to the chairperson of the Working Group on all matters concerning data-processing activities in the Region;
- (iv) To represent the Region on the CBS Implementation Coordination Team on Data-processing and Forecasting Systems.

(d) Rapporteur on Regional Aspects of Public Weather Services

- (i) To keep under review the implementation of the Public Weather Services Programme in Region II;
- (ii) To advise the chairperson of the Working Group on matters relating to formulation, presentation and dissemination of forecasts and warnings and establishing good relations with the media and the private sector;
- (iii) To keep under review education and training requirements related to the Public Weather Services Programme;
- (iv) To keep under review, in coordination with the Rapporteur on Regional Aspects of the GDPFS, aspects relating to exchange and coordination of hazardous weather information among neighbouring countries;
- (v) To represent the Region on the CBS Implementation Coordination Team on Public Weather Services.