WORLD METEOROLOGICAL ORGANIZATION

RA II/WG/PIW/Doc. 6.6 (19.VI.2003)

REGIONAL ASSOCIATION II (ASIA)

WORKING GROUP ON PLANNING AND IMPLEMENTATION OF THE WWW IN REGION II FOURTH SESSION ITEM 6.6

ENGLISH ONLY

MOSCOW, 10-13 SEPTEMBER 2003

## **TECHNICAL CO-OPERATION ACTIVITIES RELATED TO WWW**

(Submitted by the Secretariat)

### Summary and purpose of document

This document provides information on the implementation of the VCP, UNDP and Trust Funds projects related to the WWW in RA II. VCP projects submitted by RA II Members which have not received full support are also listed. It also includes the CBS guidelines for the allocation of priorities for technical co-operation support of the WWW Programme.

### ACTION PROPOSED

The Working Group is invited to note the information contained in the document and confirm priorities for technical co-operation support of the WWW Programme for Region II.

- Annexes: I. VCP Projects related to WWW in RAII fully or partially supported and reported as on-going as at 15 June 2003;
  - II. VCP Projects related to WWW in RAII fully or partially supported and reported as completed in 1998-2003;
  - III. Outstanding VCP Projects related to WWW in RAII as at 15 June 2003

### DISCUSSION

## United Nations Development Programme (UNDP)

## <u>Bahrain</u>

1. Within the UNDP/WMO project in Bahrain entitled "Strengthening of Meteorological Services", consultancy missions were provided in the fields of Radar Meteorology and Satellite Meteorology. Standard barometers and thermometers have been procured and six (6) Automatic Weather Stations have been installed.

## <u>Maldives</u>

2. Within the UNDP/WMO project entitled "Human Resources Development in Meteorology", a sunshine recorder, a wind system for aviation and an aviation barometer system have been procured

### United Arab Emirates

3. Within the UNDP/WMO project entitled "Strengthening of Meteorological Services", surface observing stations, data processing system of the Meteorological Department were upgraded. The Meteorological Data National Bank and a Meteorological Instruments Calibration Laboratory were established in the Meteorological Department.

4. Within the UNDP/WMO project entitled "Strengthening of Meteorological Services for the Armed Forces", automatic weather stations, an Integrated Meteorological System, a satellite receiving system have been installed. Introduction of a numerical weather prediction system is being implemented.

5. Within the UNDP/WMO project entitled "Establishment and Operations of National Network for Weather Radars and Automatic Weather Observing Stations", a national data collection network comprising five weather radars and 32 automatic weather stations has been provided to the Department of Water Resources Studies.

# Trust Funds

### Islamic Republic of Iran

6. Within the Trust Fund between WMO and the Islamic Republic of Iran Meteorological Organization (IRIMO) to establish a weather radar network, one (1) S-band radar and two (2) C-band radars have been produced. These radars are expected to be shipped to Islamic Republic of Iran shortly.

### <u>Oman</u>

7. Within the Trust Fund project "Meteorology, Training and Equipment", the Department of Meteorology was provided with a SADIS system, seven (7) Automatic Weather Stations, two (2) upper-air stations and airport weather systems.

8. Within a new Trust Fund project "Data collection/Processing Systems and Training", development of Model Output statistics (MOS), development of numerical wave model, and enhancement and maintenance of the Oman Regional Model (ORM) are being implemented.

### Saudi Arabia

9. Within a Trust Fund agreement with the Presidency of Meteorology and Environment (PME) and WMO, a SADIS system has been installed. Within the agreement between US NOAA and WMO to implement technical assistance projects, equipment and software to collect data for a

cloud physics experiment, dust storm forecasting and numerical modeling have been provided to PME.

## Voluntary Co-operation Programme (VCP)

10. The status of VCP projects related to WWW in Region II are represented in Annexes I-III to this document. As it is seen from Annex II, within the framework of the WMO VCP, fifteen countries in RA II had received full or partial support for a total of 27 VCP projects (training projects excluded) related to the WWW during the period 1998-2003. All these projects were reported as completed. 15 projects were aimed at strengthening upper-air surface observing stations, 2 at rehabilitation of surface observing stations, 3 at installing satellite receiving stations, 5 at improving the GTS and 2 were related to the improvement of the GDPS facilities. 11 projects were fully or partially supported and reported as ongoing in eight countries (see Annex I).

11. Cg-XIV (May 2003) decided that as in the thirteenth financial period, the fields of cooperation covered by the VCP during the fourteenth financial period shall include the implementation of the WWW as a first priority. It also confirmed that VCP in the fourteenth financial period shall follow the same general procedures as during the thirteenth financial period and that special assistance should be provided to new Members of the Organization including the Newly Independent States (NISs), Small Island Developing States (SIDSs), as well as the Least Developed Countries (LDCs) within the framework of the VCP.

12. As at 15 June 2003, 43 VCP requests relating to the WWW submitted by 16 Members of RA II have not yet received full support (see Annex III). Of these requests, 15 are related to upperair observing stations, 6 related to surface observing stations, 3 related to satellite receiving stations. 15 requests are for the improvement of the GTS and 4 are for the improvement of the GDPS.

### Priorities allocated by CBS for technical co-operation support

13. The Extraordinary session of the Commission for Basic Systems in 2002 reviewed the technical co-operation and system support activities related to the WWW Basic Systems and agreed on guidelines for allocation of priorities for technical co-operation support as given in the following paragraphs:

### Integrated Observing Systems

14. CBS agreed on the following guidelines for the allocation of the priorities for technical cooperation activities for the IOS:

- (a) The highest priority should be given to the projects aimed at improving, restoring, replacing and building the upper-air observational capacities of the RBSNs. The activities should focus on the activation of silent upper-air observing stations comprised in the RBSNs;
- (b) A high priority should be given to the activities related to the improvement of data quality and coverage of surface observations of the RBSNs. The activities should focus on activation of silent surface observing stations comprised in the RBSNs;
- A high priority should be given to projects related to the deployment and/or use of new and cost-effective observing systems like surface-based AWSs, AMDAR, ASAP and drifting buoys;
- (d) A high priority should be given to the projects related to the improvement of the data quality and coverage provided by newly established RBCNs.

#### Information Systems and Services

15. As regarded technical co-operation activities for the ISS, CBS agreed on the following guidelines for the allocation of the priorities:

- (a) The highest priority should be given to the implementation of the connection of each NMC to the GTS for the exchange of observational data and processed information (at a minimum speed of 16 Kbits -s using TCP/IP procedures);
- (b) The highest priority for the exchange of data between RTHs at a minimum speed of 64 Kbits -s using TCP/IP procedures;
- (c) The highest priority for the implementation of the project for an improved MTN;
- (d) The highest priority for the collection of data from RBSN stations at NMCs or centres with similar functions;
- (e) A high priority for a backup connection of each WWW centre to the GTS, such as the reception of satellite distribution systems;
- (f) A high priority for the implementation of virtual private network (VPN) connections via the Internet as a backup for the exchange of data, in particular for RTHs.

16. The WMO goals for Members equipped with were 100 per cent for polar orbiting satellite data receivers (either APT or HRPT) and 100 per cent for geostationary satellite data receivers (either WEFAX or HR). The expected change from analogue to digital low resolution imagery coupled with improved capability to utilize satellite data within all WMO Members indicated that a strategy towards implementation of low and high resolution digital receivers should be pursued by WMO Members as well as through assistance programmes. The Commission agreed on the following guidelines for the allocation of priorities for the meteorological satellite receiving equipment used to receive satellite images:

- (a) The highest priority for satellite receivers for those Members without any receiver;
- (b) A high priority for satellite receivers for those Members without a polar-orbiting receiver or a geostationary receiver;
- (c) A medium priority for satellite high resolution receivers for those Members with only low resolution polar-orbiting receiver or only low resolution geostationary receivers;
- (d) A low priority for satellite receivers for those Members already exceeding the WWW goal.

#### Data-processing and Forecasting Systems

17. With regard to technical co-operation activities for DPFS, CBS agreed on the following guidelines for the allocation of priorities:

- (a) The highest priority for co-operation activities in establishing access, processing and forecasting functions of NMHSs for NWP and transport modelling, application of seasonal to inter-annual prediction and linkages with disaster management agencies to assure effective community response to severe weather forecasts and warnings;
- (b) The highest priority for activities contributing to the improvement of the dissemination and application of weather and climate products;
- (c) The highest priority for activities on capacity building facilities and use of Internet and implementation of related facilities in developing countries for improving the access to forecast products and the exchange of meteorological and environmental information;

- (d) The highest priority should be given to workshops on EPS, including the interpretation of probabilistic products and case studies that were relevant to the trainees and a high priority to co-operation for training in EPS for those who intended to make their own products and/or who would need more specific training about products or the methodology of the forecast;
- (e) The highest priority in training on data processing, modelling, and applications support and development;
- (f) A high priority in training activities on computer operation and maintenance;
- (g) A high priority in setting up remote support, maintenance and distance training.