

WORLD METEOROLOGICAL ORGANIZATION

REGIONAL ASSOCIATION II
(ASIA)

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IMPLEMENTATION OF THE WWW IN REGION II
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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 Programme in RA II. The Status of the implementation of supported VCP projects and VCP projects which have not received full support is also listed. It also includes the CBS guidelines for the allocation of priorities for technical co-operation support for 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 for the WWW Programme for Region II.

- Annexes:**
- I. VCP projects related to WWW in RA II fully or partially supported and reported as on-going as of August 2007
 - II. VCP projects related to WWW in RA II fully or partially supported and reported as completed in 2003-2007
 - III. Outstanding VCP projects related to WWW in RA II as of August 2007
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DISCUSSION

United Nations Development Programme (UNDP)

Bahrain

1. Within the UNDP/WMO project in Bahrain entitled "Strengthening of Meteorological Services", consultancy missions in agrometeorology, marine meteorology, radar meteorology, satellite meteorology and climatology were carried out. A number of staff members participated in the various short-term and long-term training courses. An automatic weather station (AWS) network composed of six stations was established, and a TV weather presentation system and a climate database management system were installed in 2003-2004

Maldives

2. In Maldives, the UNDP/WMO project entitled "Human Resources Development in Meteorology" continued to build human resources capacity in the Department of Meteorology of Maldives through various long-term and short-term training activities.

United Arab Emirates

3. Within the UNDP/WMO project entitled "Strengthening of Meteorological Services for the Armed Forces", a numerical weather prediction system was installed in 2003.

Trust Funds

Islamic Republic of Iran

4. Within the Trust Fund agreement between WMO and the Islamic Republic of Iran Meteorological Organization (IRIMO) to establish a weather radar network, one S-band and three C-band Doppler weather radars were installed in August 2007. In order to expand the weather radar network, two C-band Doppler weather radars will be installed by 2008.

Oman

5. Within the Trust Fund project "Data collection/Processing Systems and Training" in Oman, the development for the Model Output Statistics (MOS), improvement of the numerical wave model, and enhancement of the software for the Oman Regional Model were implemented during 2002-2004. A staff member of the Department of Meteorology completed a PhD programme on regional numerical modelling at a university in UK.

Sri Lanka

6. A Trust Fund Agreement for the implementation of a project for the installation of the Doppler radar system was concluded between the Government of Sri Lanka and WMO in May 2007. The procurement of the radar is expected by the end of 2007.

Voluntary Co-operation Programme (VCP)

7. The status of VCP projects related to WWW in Region II is represented in Annexes I-III. As can be seen from Annexes I and II, within the framework of the WMO VCP, 13 countries in RA II had received full or partial support for a total of 33 VCP projects (training projects excluded) related to the WWW during the period 2003-2007. A total of 17 projects was on-going as of August 2007, and 16 projects were reported as completed. Among those, 11 projects were aimed at strengthening upper-air observing stations, three at improvement of surface observing stations,

three at installing satellite receiving stations, 13 at improving the GTS including the Internet connection, and three were related to the improvement of the GDPS facilities.

8. Cg-XV (May 2007) decided that as in the fourteenth financial period, the fields of cooperation covered by the VCP during the fifteenth financial period shall include the implementation of the WWW as first priority. It also confirmed that VCP in the fifteenth financial period shall follow the same general procedures and rules as during the fourteenth financial period and reaffirmed that the VCP is an appropriate mechanism for the promotion and support of Technical Co-operation among Developing Countries (TCDC). Congress decided that special assistance should be provided to new Members of the Organization as well as the Least Developed Countries (LDCs) and Small Island Developing States (SIDSs) with special emphasis on increasing the visibility of their NMHSs.

9. As of August 2007, 43 VCP requests relating to the WWW submitted by 17 Members of RA II have not yet received full support (see Annex III). Of these requests, 18 are related to upper-air observing stations, eight related to surface observing stations, one for the provision of weather radar and three related to satellite receiving stations. Six requests are for the improvement of the GTS and five are for the improvement of the GDPS. Two other requests are for the provision of TV weather presentation systems.

WWW Implementation Support Revolving Fund of the VCP

10. Cg-XV recognized that the WWW Implementation Support Revolving Fund of the VCP has permitted the provision of urgent assistance to Members of WMO for the operation and maintenance of WWW facilities through loans for the purchase of spare parts and consumables, and encouraged Members to make use of the Fund. Since no Members in RA II utilized this mechanism during the period 2003-2007, RA II Members are particularly encouraged to make use of the Fund, when necessary.

Emergency assistance activities

11. During the period 2003-2007, substantial emergency assistance had been provided to Members affected by disasters, including war, for the restoration of basic meteorological and hydrological networks. This assistance was provided within the framework of the existing WMO mechanism through the WMO Disaster Assistance Fund for Meteorological and Hydrological Services (Emergency Assistance Fund), VCP, and the Emergency Assistance Response Team (EART). In RA II, assistance was provided to Afghanistan, Democratic People's Republic of Korea, Pakistan and Sri Lanka through donations of Member countries for rehabilitating networks of stations and associated facilities destroyed by disasters. The Emergency Assistance Response Team (EART) was playing a lead role in coordinating efforts aimed at the rehabilitation of the Meteorological Service of Iraq. Members affected by natural disasters and those emerging from conflicts are also encouraged to utilize the mechanism for the rehabilitation of their services, and Members are urged to further participate in this initiative.

Priorities allocated by CBS for technical co-operation support

12. The Extraordinary Session of the Commission for Basic Systems in 2006 reviewed the technical cooperation and system support activities carried out through the WMO Technical Cooperation Programme and related to the WWW Basic Systems and Public Weather Services during the period 2005-2006. The Commission agreed on guidelines for the allocation of priorities for technical cooperation support as given below, but noted that successful implementation would depend largely on the alignment of priorities as specified by CBS, the requesting WMO Member and the donor concerned. The Commission noted the importance of streamlining the priorities, limiting the number of proposals with the "highest" and "high" priorities; this would help the donors and recipient countries to make better use of limited available funds and also to help focusing efforts in resources mobilization.

Integrated Observing Systems (IOS)

13. The Commission agreed on the following guidelines for the allocation of priorities for the IOS:

- (a) Highest priority should be given to the projects aiming at improving and restoring the existing and building new upper-air observational capabilities of the RBSN/RBCN with emphasis on the activation of silent upper-air stations and the improvement of coverage over data-sparse areas;
- (b) High priority should be given to the projects related to the improvement of data quality, regularity and coverage of surface observations of the RBSN/RBCN with emphasis on the activation of silent stations and the improvement of coverage over data-sparse areas;
- (c) High priority should be given to projects related to the introduction and/or use of new cost-effective observing equipment and systems including surface-based AWSs, AMDAR, ASAP and drifting buoys;
- (d) Medium priority should be given to the projects related to the improvement/upgrading of stations not included in RBSN/RBCN list of stations.

Information Systems and Services (ISS)

14. The Commission agreed on the following guidelines for the allocation of priorities for cooperation activities for the ISS:

- (a) Highest priority for 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), including reception of satellite-based data distribution systems;
- (b) Highest priority for the exchange of data between RTHs at a minimum speed of 64 Kbits/s using TCP/IP procedures;
- (c) Highest priority for the completion of the implementation of the project for an improved MTN;
- (d) Highest priority for the collection of data from RBSN stations at NMCs or centres with similar functions;
- (e) Highest priority for activities on capacity building facilities and use of Internet and implementation of related facilities in developing countries for improving exchange of meteorological and related information;
- (f) High priority for a backup connection of each WWW centre to the GTS;
- (g) 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;
- (h) High priority for the migration to Table Driven Code Forms (TDCF).

15. The WMO goals for Members equipped with meteorological satellite receiving equipment were 100 per cent for polar-orbiting satellite data receivers and for geostationary satellite receivers. The Integrated Global Data Dissemination Service (IGDDS) concept offers new technical possibilities for efficiently meeting these goals through the use of Advanced Dissemination Methods (ADM) in several WMO regions. The Commission agreed on the following guidelines for the allocation of priorities for satellite data receiving systems:

- (a) Highest priority for a multipurpose telecommunication satellite receiving system providing space-based observation data and products (ADM) if the WMO Member is within the area covered by such a dissemination system;
- (b) Second highest priority for meteorological satellite direct broadcast receivers for those Members who are not within the area covered by a telecommunication satellite dissemination system providing satellite data and products (ADM), and who are without any direct broadcast receiver;
- (c) High priority for direct broadcast geostationary or polar-orbiting receiver for those Members who are not covered by any ADM system and who have either no geostationary or no polar-orbiting satellite receiver respectively;
- (d) Medium priority for high resolution satellite direct broadcast receiver for those Members who have only low resolution direct broadcast receivers and cannot be covered by any ADM system;
- (e) Low priority for satellite direct broadcast receivers for those Members who are in an area covered by an ADM system.

Data-processing and Forecasting Systems (DPFS)

16. The Commission agreed on the following guidelines for the allocation of priorities for cooperation activities for the DPFS:

- (a) Highest priority for establishing access at NMHSs to NWP products from advanced centres, for viewing and use as guidance for forecasting applications, in particular severe weather forecasting;
- (b) Highest priority for automation of operational data-processing functions, including the processing of observations and post-processing of NWP products, for improvement of all weather forecasting applications, in particular nowcasting;
- (c) High priority for training on use of NWP products, in particular use of relevant EPS products, and applications to probabilistic forecasting;
- (d) High priority for training on operational data-processing, including on the implementation of post-processing of NWP products and running of a Limited Area Model.

Public Weather Services (PWS)

17. The Commission agreed on the following guidelines for the allocation of priorities for the PWS:

- (a) Highest priority for TV/media presentation systems comprising high performance computing and communications hardware, peripherals and software, video equipment for television production, as well as the related training of staff;
- (b) Highest priority for computer-based meteorological workstations that enable, through forecaster interaction, the creation of new or enhanced products for users, based on satellite imagery and processed products (inputs);
- (c) Highest priority for enhanced Internet access for NMHSs as a communications tool to improve their data access, as well as expand the dissemination methods of their public weather services, and promote the use of official consistent information;

- (d) Highest priority for training related to national PWS plans; that include training in media skills (writing and presentation), product design, and public education and awareness;
 - (e) Highest priority for fixed and mobile communications systems for the dissemination of public weather services, preferably modern telephone and communication services (*e.g.*, mobile telephones, pagers/short message system and fax-on-demand);
 - (f) Medium priority for VHF radios to provide radio broadcast and warning alert systems.
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