

**WORLD METEOROLOGICAL ORGANIZATION**

RA II/WG/PIW-5/Doc. 5.4  
(16.VIII.2007)

---

**REGIONAL ASSOCIATION II**

**(ASIA)**

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

---

ITEM: 5.4

*Fifth Session*

Original: ENGLISH

KHABAROVSK, RUSSIAN FEDERATION

12-15 SEPTEMBER 2007

**REGIONAL ASPECTS OF THE WWW COMPONENTS AND SUPPORT FUNCTIONS,  
INCLUDING REPORTS BY THE RAPPORTEURS/CO-ORDINATORS**

**Public Weather Services (PWS)**

*(Submitted by Ms Hilda Lam, Hong-Kong China, Co-rapporteur on the Regional Aspects of Public  
Weather Services)*

---

**Summary and purpose of document**

This document provides information on the status of the Public Weather Services in RA II.

---

**ACTION PROPOSED**

The group is invited to take note of the information provided in this document, discuss the noted issues and develop any appropriate recommendations.

---

## **PROGRESS REPORT ON PUBLIC WEATHER SERVICES (PWS) IN REGION II**

### **ACTIVITIES**

#### **1. PWS-related meetings and activities relevant to the Region since 2006 included:**

- (a) Meeting of the OPAG Expert Team on PWS in Support of Disaster Prevention and Mitigation, Beijing, China, June 2006,
- (b) WMO VCP Training course on city forecasts, Hong Kong, China, October 2006,
- (c) PWS Workshop on Warnings of Real-time Hazards by using Nowcasting Technology, Sydney, Australia, October 2006,
- (d) Asia Conferences on Disaster Reduction in Seoul, Republic of Korea in 2006 and Astana, Kazakhstan in 2007,
- (e) OPAG/PWS survey on severe weather warning services in 2006,
- (f) Coordination Meeting of the World Weather Information Service (WWIS) Website Hosts, Hong Kong, China, January 2007,
- (g) First Meeting of Joint (PWS-WWRP) Nowcasting Applications & Services (JONAS) Steering Committee, Geneva, Switzerland, April 2007, and
- (h) Meeting of the CBS OPAG/PWS Implementation Coordination Team (ICT), Muscat, Oman, June 2007.

#### **2. RA II Pilot Project on the Provision of City-Specific Numerical Weather Prediction (NWP) Products to Developing Countries via the Internet**

Steady progress was made in the pilot project since 2006. The first batch of city-specific forecast time series products, provided by Hong Kong, China; Japan and Republic of Korea (see Figures 1 to 3 for samples), were launched on their respective web sites in January 2006. As of 1 August 2007, 18 RA II Members, namely Bangladesh; Bhutan; Cambodia; China; Hong Kong, China; Islamic Republic of Iran; Japan; Kazakhstan; Kyrgyz Republic; Laos; Mongolia; Myanmar; Nepal; Oman; Republic of Korea; Thailand; Viet Nam; and Yemen have joined the project. Forecast time series are now provided for a total of 160 cities in 13 participating Members.

To enable participating Members to make good use of these forecasts, a WMO VCP training course on the use and interpretation of the city-specific NWP products, was held in Hong Kong from 31 October to 3 November 2006. A total of 10 WMO Members, including 9 from RA II and 1 from RA I, attended the course. Besides speakers from Hong Kong, China, experts from Japan and Republic of Korea also delivered talks during the course.

To allow Members to post-process these city-specific weather forecasts to suit their needs, time series data in textual format in addition to the graphical format, were made available by Hong Kong, China and Japan on their web sites.

### **3. World Weather Information Service (WWIS) website (<http://worldweather.wmo.int>)**

The WWIS gained popularity in the region. As of 1 August 2007, 35 RA II Members participated in the WWIS, with 28 Members contributing forecasts for 209 cities. The WWIS enhanced its accessibility in the past couple of years, operating now in six different languages. Besides English, Arabic, Chinese and Portuguese, the Spanish and French language versions were introduced in September 2006 and January 2007 respectively. The user guides for WWIS was published on the WMO PWSP website. Efforts continued to include city maps and scenic photographs of cities whenever available from Members. Out of a total of 188 WMO Members, 159 participated in WWIS. A total of 115 Members provided forecasts for 1204 cities, while 159 Members provided climatological data for 1218 cities.

To enhance communication between host countries, a coordination meeting of the WWIS website hosts was held during January 2007 in Hong Kong, China. A roadmap for future WWIS activities was prepared. The roadmap included the eventual merging of the WWIS and Severe Weather Information Centre (SWIC) websites, which had been raised by the Expert Team on Service and Product Improvement (ET/SPI) and supported by the Expert Team on PWS in Support of Disaster Prevention and Mitigation (ET/DPM).

### **4. Severe Weather Information Centre (SWIC) Website (<http://severe.worldweather.wmo.int>)**

As of 1 August 2007, 10 RA II Members, namely Cambodia; China; Democratic People's Republic of Korea; Hong Kong, China; India; Japan; Macao, China; Republic of Korea; Thailand; and Viet Nam participated in the SWIC. Similar to the WWIS, the 13<sup>th</sup> Session of the CBS at St. Petersburg in February 2005 approved turning the SWIC pilot project into an operational component of the PWSP of WMO. The SWIC web site was developed and maintained by Hong Kong, China, containing initially tropical cyclone advisories issued by all Regional Specialized Meteorological Centres (RSMC), and official warnings issued by National Meteorological and Hydrological Services (NMHSs) for their respective countries or regions. In the light of experience gained during Tropical Cyclone Gonu which affected the Arabian Sea and Oman in June 2007, the assistance of RSMC New Delhi was sought to enhance the accessibility of advisories covering that area for SWIC. Besides tropical cyclone advisories, the SWIC also featured displays of occurrences of thunderstorms and heavy rain/snow decoded from SYNOP reports. A total of 20

WMO Members now participated in the SWIC.

## **5. PWS survey on severe weather warning services**

As one of its deliverables, the ET/DPM conducted a survey in collaboration with the ET/SPI on severe weather warning services of WMO Members in 2006. A total of 76 returns were received from Members, 34 of which were from RA II. Major survey results pertaining to RA II based on returns received, were:

- a) The top four severe weather hazards, as indicated by respondents, were related to: Rain (65%); Hot and Dry Weather (52%); Low Visibility and Other Hazards (48%) and Tropical Cyclones (47%).
- b) Percentage of those who responded already had alerts/warnings in place, in descending order: High Winds other than caused by Tropical Cyclones(89%); Tropical Cyclone (88%); Hot and Dry Weather (80%); Cold Weather (76%); Rain (66%); and Poor Visibility (59%).
- c) The main challenge/obstacle in the provision of alerts/warnings for all hazard types was “forecast accuracy” while “public understanding of warnings” was also indicated as an obstacle for the provision of warnings for RAIN.
- d) Enhancing the predictability of rain would be the most effective improvement, helping to reduce the vulnerability of Members to heavy rain. Capacity building in nowcasting would thus be most required.

### **NOTABLE NEW INITIATIVES AND UPCOMING EVENTS ON PWS INCLUDE:**

#### **1. Strategy to promulgate the PWS application of nowcasting technology in developing countries**

Following the PWS Workshop on Warnings of Real-time Hazards by Using Nowcasting Technology in Sydney in October 2006, a Joint (PWS-WWRP) Nowcasting Applications and Services (JONAS) Steering Committee was formed to further develop the framework and oversee the implementation of a strategy to promulgate the PWS application of nowcasting technology in developing countries, in particular, the establishment of a pilot open test bed on nowcasting applications and services. RA II Members are encouraged to participate and make use of the open test bed when ready.

## **2. Proposal on a Public Outreach Campaign in RA II about Meteorological and Hydrological Services in Disaster Risk Reduction**

At the Asia Conference on Disaster Reduction 2007 in June in Kazakhstan, the Chair of OPAG ET/DPM presented a proposal on the pilot project entitled “Public Outreach Campaign in RA II about Meteorological and Hydrological Services in Disaster Risk Reduction”. The objectives of the pilot project were to raise awareness of the public about risks of disasters common to all participating Members pertaining to meteorological, hydrological and climate-related extreme events and their impacts; promote utilization of NMHSs for disaster risk reduction; provide a platform to enable partnerships in disaster risk reduction involving international and regional and national agencies of host Members; and showcase best practices related to early warning systems for major hazards common to participating Members, e.g. tropical cyclone. The pilot project was proposed to consist of roving exhibitions on disaster risks and mitigation in respect of a major hazard common to participating Members. The exhibitions were expected to be held in conjunction with seminars and other DPM-related activities related to the public.

## **3. CBS OPAG/PWS ICT Pilot Project “Learning through Doing”**

To ensure that, in so far as possible, those on the front line of delivering services in NMHSs were aware of, trained in, and putting into practice the advice and guidance which had been collected, the ICT at its meeting in Muscat 2007 decided to embark on a pilot project whereby a coordinated training and mentoring programme might be devised which would focus on a small group of neighbouring countries, and which would draw on the expertise available through the OPAG PWS Expert Teams as well as that provided through the WMO Secretariat. The focus of the pilot project would be on “Learning Through Doing” and the aim would be to work with the staff of the relevant NMHSs in assisting them to improve their communication with users in a defined range of sectors, and to develop and deliver an improved range of products and services which would enhance the socio-economic benefits provided through the NMHSs to Members. In implementing the pilot project, the ICT had established a number of criteria which a candidate country would need to meet in order to engage with the pilot project. RA II Members are encouraged to join the pilot project to enhance their PWS.

## **4. International Symposium on PWS**

The International Symposium on PWS – A Key to Service Delivery would be held on 3-5 December 2007 in Geneva, Switzerland. The main themes to be covered in the Symposium included the challenges and best practices in the delivery of weather, climate and water services; building capability in service delivery; and new political, economical and technological influences

that would shape service delivery in the next decade. It is expected that NHMSs in RA II would be represented in the Symposium.

Figure 1: Forecast Meteogram by Republic of Korea  
**FORECAST METEGRAM**

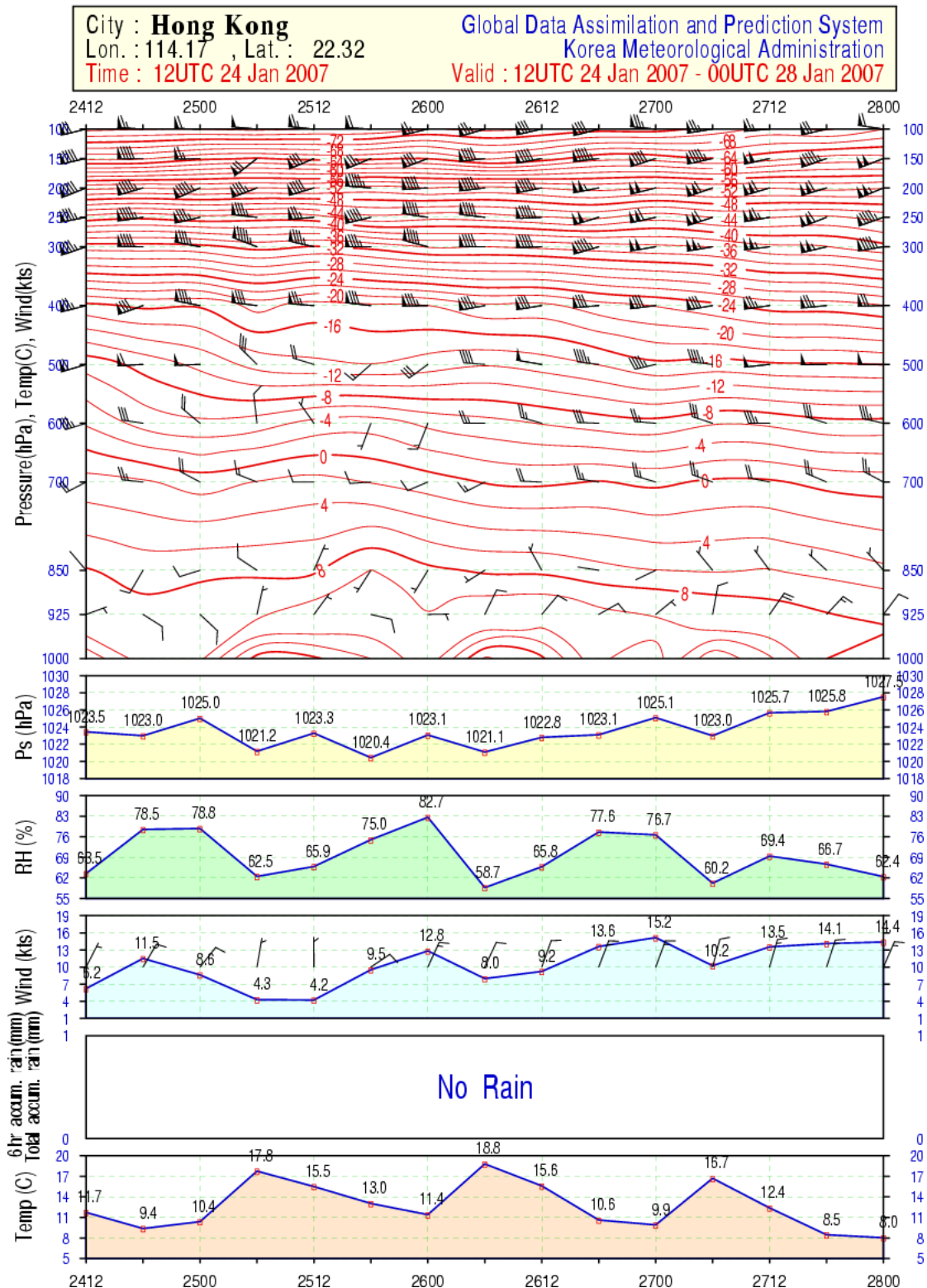


Figure 2: Forecast time series by Japan

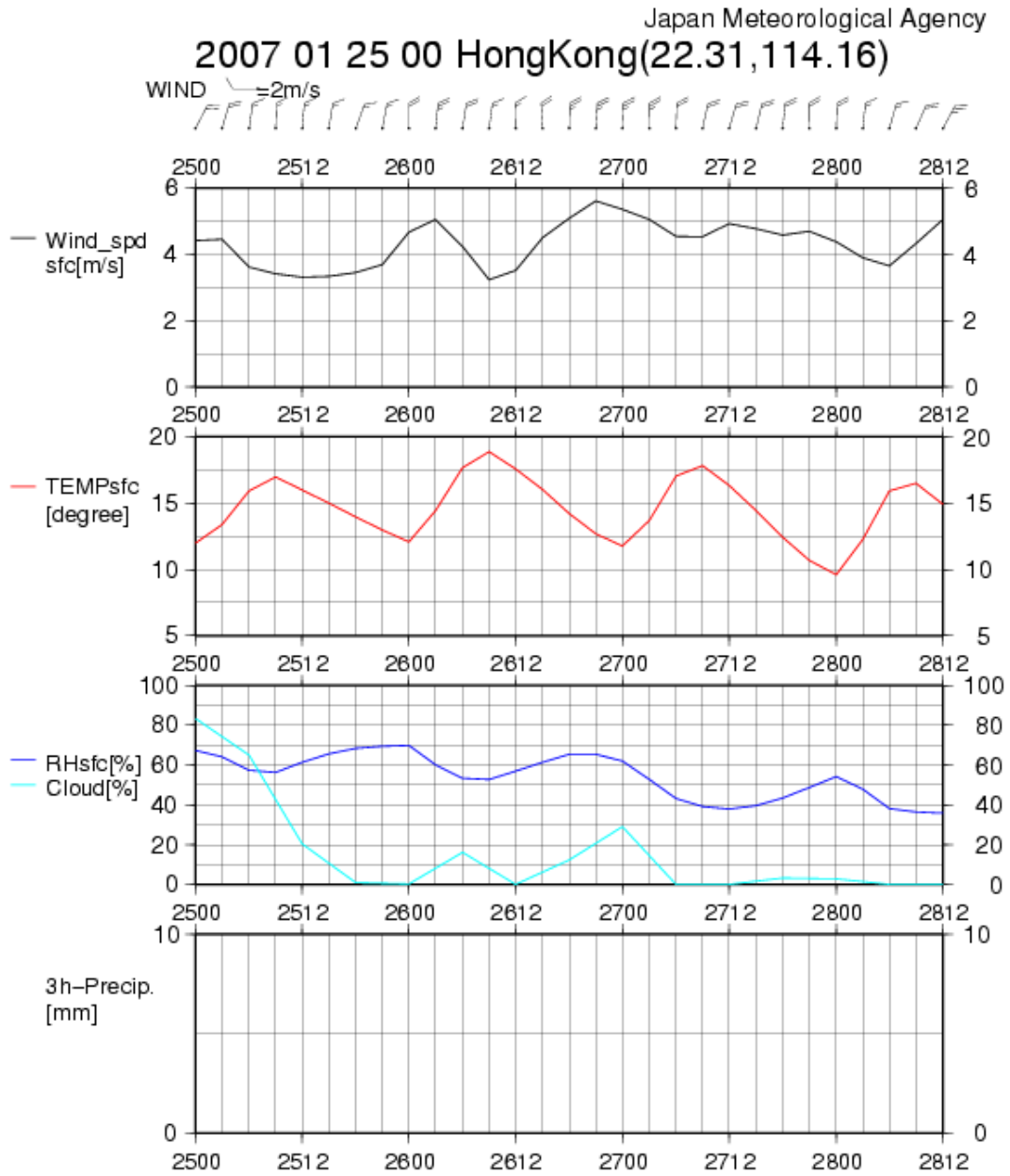




Figure 3 : Forecast Time Series by Hong Kong, China

