

NEWS

Recent activities of the Global Atmosphere Watch (GAW) Urban Research Meteorology and Environment (GURME) Project (May 2011)

GURME is already in its second decade of activities! Air quality and related services play important and growing roles in many meteorological services. In this issue of **GURME News** we highlight our current pilot projects and capacity building efforts.

GURME FOCUS: Pilot Projects

Pilot projects are an important mechanism to promote Air Quality Forecasting (AQF) activities. GURME promotes pilot projects that demonstrate how NMHSs can successfully expand their activities into urban environment issues, showcase new technologies at appropriate conferences, and develop illustrative examples. Current pilot projects are briefly described below.

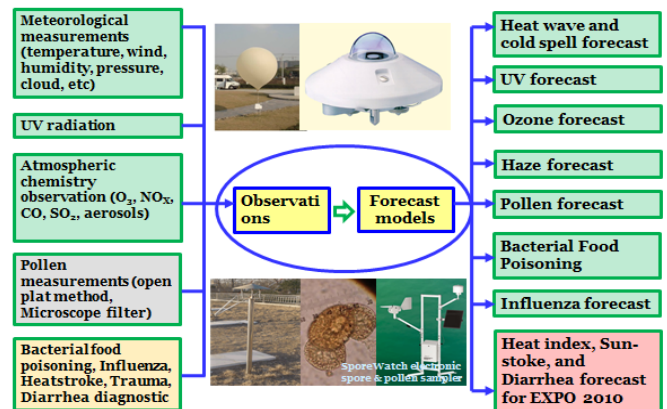
Shanghai Expo – Successfully launched new air quality and related services as a component of the Expo Multi Hazard Early Warning System (MHEWS) Demonstration Project. The project under the leadership of Xu



Tang, Director General, Shanghai Regional Meteorological Center, CMA, is designed to explore the full potentials of urban life in the 21st century. Key elements of the project are to disclose the physical and chemical mechanisms during the formation, transportation and transformation processes of the main air pollutants in the Shanghai area, to establish the air pollution prediction system for the Shanghai area, and to improve the assessment techniques of

environmental quality. Based on various measurements (meteorological and environmental observations, diseases diagnostics) new and comprehensive forecast products to support public health services were developed and demonstrated during Expo. The services include those for air quality, pollen, food poisoning and heat stroke, among others. Through these services effective actions to protect the health of individuals, especially those in sensitive groups, will be designed. The project continues with further development of the public health services focus.

Meteorological services for public health



Latin American Cities Project – This grew out of the GURME Experts Meeting held in Cuernavaca, Mexico in October 2002. The purpose is to build capacity and share experiences in air quality related areas throughout Latin America. The first Workshop on Air Quality Forecasting in Latin American Cities was held in Santiago, Chile in October 2003; this was followed by a WRF-Chem and Remote Sensing Workshop in Sao Paulo, Brazil in 2006. The very first GURME basic training course on air quality forecasting was delivered in July 2006 in Lima, Peru. A comprehensive Training Course on Air Quality Modelling for Latin American Cities Project was held in Mexico City, Mexico in August 2009. More expert workshops and training courses will be convened in the future as needed. A discussion forum with a network of scientists and groups actives in Latin American cities and international experts will be established to facilitate the exchange of information on air quality modelling and forecasting.



India Commonwealth Games - Under the leadership of the Indian Institute of Tropical Meteorology (IITM), Pune, a constituent under the Ministry of Earth Sciences, Government of India, is spearheading the country's first major air quality forecasting initiative named

"System of Air Quality forecasting and Research (SAFAR)". It has been successfully tested during the Commonwealth Games 2010 for the National Capital Region Delhi. The vision is to spread the SAFAR to other major cities in India, and to put India in the forefront of air quality forecasting research. SAFAR provides location specific information on Air Quality in near real time and forecasts 24 hours in advance. It is complemented by the weather forecasting system designed by IMD, New Delhi. The ultimate objective is to increase the awareness among the general



public regarding the air quality in their city, well in advance, so that appropriate mitigation action and systematic measures can be taken up for the betterment of air quality and related health issues.

NRT Data Application to Air Quality Forecasts - The newest pilot project was launched in

March 2011 in Hangzhou, China. Under the leadership of Xiao-Ye Zhang of the Chinese Academy of Meteorological Sciences, CMA, the project has the following objectives: Develop and establish a NRT chemical data transfer system to collect and process both ground based and satellite observations, based on the WMO data transfer protocols for conventional weather data; Develop an AQ forecasting system and integrate it with the NRT system to illustrate the capacity of NRT data to enhance the accuracy of AQ forecasts in China; Develop an emission estimating system using the NRT data and inverse modeling methodology; and Exchange and transfer research results with other national and international agencies.



GURME FOCUS: Air Quality Forecasting (AQF) Workshops and Training

GURME organizes workshops and training courses designed to advance air quality forecasting research and operational capabilities. Activities to date include:

- First GURME Forecasting Workshop, August 2000, Kuching, Malaysia
- AQF WRF-Chem and Satellites, January 2006, Sao Paulo, Brazil
- Basic AQF for Latin American Countries, July 2006, Lima, Peru
- Air Quality Forecasting for South Asia, December 2008, Pune, India
- Air Quality Modeling for Latin America, August 2009, Mexico City, Mexico
- International Workshop on Air Quality Forecast Research (IWAQFR), November 2009 Boulder, November 2010 Quebec City, Canada
- Modelling Training Workshop, with EANET, January 2011, Niigata, Japan
- Near Real Time Data Uses and Needs in Air Quality Forecasting, March 2011, Hangzhou, China



Upcoming

- Air Quality Forecasting, with USA NASA and EPA for Central America, Costa Rica, 2011
- Urban Air Quality and Climate Change Workshop (UAQCC) 16 - 18 August 2011, Hamburg, Germany
- International Workshop on Air Quality Forecast Research (IWAQFR), November 2011, Washington, DC

Please contact us with your interests and needs related to capacity building.

See the **NEW** GURME Web for further information

<http://mce2.org/wmogurme/>