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1. INTRODUCTION

The WMO GAW Urban Research Meteorology and Environment (GURME) project was established in 1999 in response to the requests of the National Meteorological and Hydrological Services (NMHSs). NMHSs have an important role to play in the study and management of urban environments because they have capabilities and collect information that are essential to the forecasting of urban air pollution and the evaluation of the effects of different emission control strategies. The WMO established GURME as a means to help enhance the capabilities of NMHSs to handle meteorological and related aspects of urban pollution. GURME is designed to do this through co-ordination and focusing of present activities, as well as initiation of new ones.

1.1 Goals:

- To enhance the capabilities of NMHSs in providing urban-environmental forecasting and air quality services of high quality, illustrating the linkages between meteorology and air quality.
- In collaboration with other WMO programs, WHO and environmental agencies, to better define meteorological and air quality measurements focusing specifically on those that support urban forecasting.
- To provide NMHSs with easy access to information on measurement and modeling techniques.
- To promote a series of pilot projects to demonstrate how NMHSs can successfully expand their activities into urban environment issues, showcase new technologies at appropriate conferences, and develop illustrative examples.

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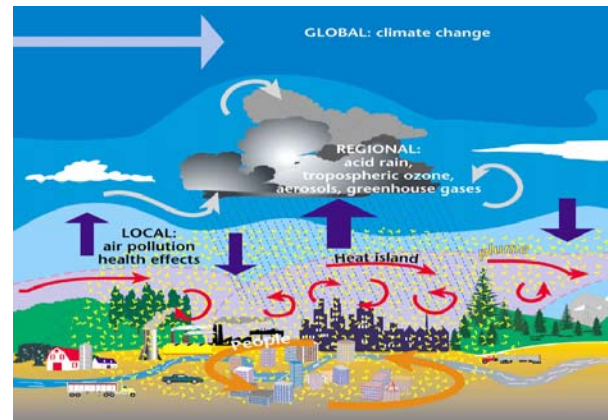


Figure 1. The GURME project focuses on meteorological and related aspects of urban air pollution.

2. CAPACITY BUILDING: AIR QUALITY FORECASTING

One important objective of GURME is to build “capacity” related to meteorological and air quality (AQ) forecasting for urban environments. Towards this objective GURME is organizing a series of AQ forecasting workshops. Three workshops have been conducted, and more are planned.

Regional Workshop on AQ Forecasting
14-17 August, 2000, Kuching, Malaysia

Expert Workshop on Air Quality Forecasting
24-26 October, 2002, Cuernavaca, Mexico

First GURME Air Quality Forecasting Workshop for Latin American Project
13-16 October 2003, Santiago, Chile

The objectives of these workshops were:

- To review the current operational air quality forecasting tools and their requirements, including measurement needs;

- To identify the current status of relevant research that can be expected to improve operational models in the next few years;
- To develop recommendations for the direction of improving air quality forecasting;
- To present the above information in such a way that it is useful for NMHSs that are starting or developing their air quality forecasting activities;
- To share best-practices regarding air quality forecasting, and to develop and deliver AQ training materials

3. PILOT PROJECTS

Pilot projects are an important mechanism to promote urban 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. Present pilot projects include:

3.1 The Study of the Mechanisms Controlling Atmospheric Environmental Pollution in Beijing

This pilot project, coordinated by the Chinese Meteorological Administration, is focused on improving the understanding of pollution formation in the atmosphere, design of optimal schemes for monitoring, forecasting of pollution events, and fostering of improved prevention strategies.

3.2 Meteorological Servicing for Sustainable Development of the Moscow Megalopolis

This demonstration project, coordinated by the Russian Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet), is an integrated measurement and modeling study of linkages between weather, air quality and climate in the Moscow environment.

3.3 Air Quality Measurements Using Passive Samplers

This project supported by NOAA/US Weather Service, is focused on the demonstration and extension of the capacity

to monitor pollutants in background as well as urban air using passive samplers.

3.4 Improvement of Air Quality Forecasting in Latin American Cities

This project seeks to improve air quality forecasting in Latin American Cities (Mexico City, Santiago de Chile and Sao Paulo) through the organization of capacity building workshops and the transfer of knowledge to other cities in Latin America.

4. INFORMATION: WEB!

A key output of GURME is information provided to NMHSs to help them effectively deal with urban pollution matters in concert with other authorities.

The GURME web site was developed to provide NMHSs with easy access on a variety of urban environment topics. The site is available at:

www.wmo.ch/web/arep/gaw/urban.html

At this site you can find:

- Guidelines for initiating urban activities, developed as outputs from a series of GURME workshops.
- Information on aspects of meteorological and air quality modeling needed to support effective environmental management on the urban scale, including background information on modeling approaches and access to various models that can be evaluated and used for specific applications.
- A list of various urban activities undertaken by NMHSs and a list of contact persons compiled from GURME surveys and workshops.
- Access to GURME reports, publications, pilot project information, and announcements of upcoming meetings.