Linking Air, Land, and Water Pollution for Effective Environmental Management

Since the passage of the National Environmental Policy Act in 1970, the U.S. Environmental Protection Agency (EPA), other federal agencies, and the states have made substantial progress in improving the nation's air and water quality. Traditionally, air, land, and water pollution control programs are managed independently of one another due, in part, to differing funding allocations and separate sets of rules and regulations. Even in a single-medium management paradigm, air programs have been addressing one pollutant at a time. Recognizing the complex interplay between meteorology and atmospheric chemistry, air quality managers are now beginning to pay attention to the development of multipollutant strategies under the "one-atmosphere" concept.

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It is increasingly evident that air pollution control programs aimed at addressing issues such as acid rain, ozone, and fine particulate matter can also provide significant benefits to water quality. For example, reductions in nitrogen oxide emissions have helped reduce nitrogen eutrophication in coastal waters, while controls on mercury emissions into the atmosphere help reduce methylmercury concentrations in fish and wildlife.

Atmospheric deposition is the natural physical process by which airborne contaminants leave the atmosphere and are transferred to the land and water, contributing to multi-media pollution problems. Hence, policies dealing with excess greenhouse gases, nitrogen, sulfur, mercury, and other contaminants in the atmosphere must also consider multimedia issues to maximize the benefits of environmental regulations.

The articles that follow in this issue of *EM* discuss the need for integrated assessments of air, land, and water pollution and the resulting challenges confronting environmental managers. It should be noted that the views expressed in these articles do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, or any federal agency. **em**

by S.T. Rao, Ph.D.
Director, Atmospheric Modeling Division
National Exposure Research Laboratory
U.S. Environmental Protection Agency;
and Director, Atmospheric Sciences Modeling Division
National Oceanic and Atmospheric Administration
E-mail: rao.st@epa.gov

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