



Implementing a One-Atmosphere Approach to Air Quality Management: A Potential NARSTO Assessment?

For some time there has been interest in a “one atmosphere” approach to air quality management. Such an approach would entail a single comprehensive plan for the management of a suite of air-quality problems such as criteria air pollutants, visibility, and air toxics. The resulting plan would presumably result in more economical and more effective protection of human health and the environment.

In 2004 the National Research Council published *Air Quality Management in the United States* (NRC, 2004), which reviewed the current state of air-quality management and made a number of recommendations for improving it. At least two of the report’s five recommendations specifically deal with implementing a one-atmosphere approach to air-quality management. Namely,

Recommendation Three: *Transform the SIP process to encourage the development of multi-pollutant control strategies.*

Recommendation Four: *Develop an integrated program for criteria pollutants and hazardous air pollutants.*

The NCR report was followed in January 2005 by a report to the Clean Air Act Advisory Committee (CAAAC) by the CAAAC’s Air Quality Management Work Group. This report, <http://www.epa.gov/air/caaac/pdfs/report1-17-05.pdf>, makes a set of procedural recommendations for improving the SIP process, and it offers a set of additional steps for promoting “greater integration of programs designed to control criteria and toxic air pollutants.” Included in these recommendations is the suggestion that EPA “develop and test a model integrated SIP”, that is, a prototype SIP based on an integrated, one-atmosphere approach.

Several members of the NARSTO community have suggested that NARSTO consider undertaking an assessment of a one-atmosphere approach to managing criteria and toxic air pollutants. Such a study would address the practical implementation of this approach. It would focus on what a one-atmosphere air-quality management plan (e.g., a multi-pollutant SIP) would look like, and it would have strong participation from individuals who are actually involved in the design and implementation of air-quality management programs. The emphasis of the assessment would be on how a one-atmosphere approach might differ from current practice. Some of the questions it would address might include:

- What would be the public health and public policy benefits of such an approach?
- Do we have the information and tools needed to implement it?
- What are the institutional barriers to implementation?
- What are the potential difficulties of transitioning to this approach from the current SIP process?
- What is the appropriate balance between modeling and monitoring in the development of a multi-pollutant SIP?
- How would Weight-of-Evidence Demonstrations be constructed in the context of a multi-pollutant air-quality management plan?
- How might we include global concerns such as long-range transport, changing background concentrations, long-lived (and possibly globally transported) toxic pollutants, and ultimately climate change into this management construct?

The recommendation to the Executive Assembly is that NARSTO task a small working group, facilitated by the Management Coordinator, to determine the level of interest in the community for such an undertaking. Given a sufficient level of community interest in this project, the working group will define a scope and charge for the effort, propose a list of potential participants, and submit them to the Executive Steering Committee (ESC) for review. Assuming a favorable response from the ESC and identification of a source of funding for the work, the assessment could begin.

References

NRC, 2004: *Air Quality Management in the United States*, National Academies Press, Washington, D.C.