

**Discussion Paper**  
**October 11, 2005**  
**Global Partnership for Mercury Air Transport and Fate Research**

### **The Transport and Fate Partnership**

The development of mercury control strategies is limited by the considerable uncertainty associated with our current understanding of the global cycling of mercury, *i.e.*, the estimated amount of mercury coming into and being transported from individual countries has significant associated uncertainty. This factor, together with a limited number of country-specific release inventories and a lack of standardization of measurement methods, limits the accuracy of modeling predictions and, therefore, our ability to quantify the impacts of emission and use reductions.

To address these challenges, a “Global Partnership for Mercury Air Transport and Fate Research” is proposed that would bring together governments, international organizations, the private sector, non-governmental organizations, international funding institutions, research institutions, academia, and other interested stakeholders to improve our scientific understanding of global mercury fate and transport. The partnership would build on existing arrangements and activities and bring together experts to address the goals and objectives as described below.

### **Proposed Goals of the Partnership**

The partnership would:

- (1) accelerate the development of sound scientific information on the global cycling and related scientific information on mercury and related species (e.g., air concentrations and deposition rates, mechanisms of air transport/transformation);
- (2) enhance sharing of such information among scientists and between them and policymakers; and,
- (3) provide technical assistance and training, where possible, to support the development of critical information.

### **Proposed Objectives of the Partnership**

Recognizing the broad scope of issues, areas and mechanisms of potential collaboration, the partnership may include:

- Establishment of regional air transport and fate collaborative research programs. Each regional program would be invited to post non-technical summary reports of their research plans, progress, and published results to the UNEP website. This would serve as a vehicle for information exchange and coordination between scientists and policymakers

as well as facilitate communication among scientists themselves.

S The posted research plans would be short documents (roughly 5 pages) and would include:

- ☐ research questions addressed;
- ☐ training arrangements (including harmonization of instruments and methods);
- ☐ roles of various participants (research, *etc.*); and,
- ☐ a schedule, including meetings among collaborators to leverage their cooperation.

S Progress reports and descriptions of published research results, including, where useful, links to websites for papers, would be placed on the web site from each of the regional programs.

- Coordination and conduct of critical research on national/regional/global scales that could contribute to a better understanding of the atmospheric transport and environmental fate of mercury emissions;

- Development of related data sets and tools, including:

S encouragement of consistent approaches to global inventory building; and,

S development of global meteorological data sets for use in models.

- Coordination and training among international organizations and individual countries to achieve:

S methods/modeling harmonization;

S development of model intercomparison studies, sensitivity analyses and research strategies (national, regional, global) for addressing global cycling and transport; and,

S increased awareness and information transfer of global cycling in risk management decision-making.

- Coordination with various organizations and related efforts, *e.g.*, the Global Earth Observation System of Systems (GEOSS).

### **Proposed Initial Actions of the Partnership**

- Work with potential partners to build one or more pilot air transport and fate regional collaborative program(s) at a regional level that can serve as models for collaboration generally and for establishment, where useful, of similar regional programs.
- Summary research plans, progress reports and published results would be posted on the UNEP web site.

Partners will consider practical mechanisms for sharing of information in this area, *e.g.*, development of an electronic library (or “clearinghouse”) of air transport and fate information, and what other coordination mechanisms (*e.g.*, a steering group of partners, web site) might be needed to achieve the objectives of the Partnership.

### **Becoming a Partner**

All stakeholders are welcome to participate in the Global Partnership for Mercury Air Transport and Fate Research. Generally, a partner is an entity who indicated a willingness to contribute time, resources, or expertise to implement the partnership, which would be designed to advance the objectives of the 2005 UNEP Governing Council Decision 23/9 IV. Partners can include national, state or provincial governments, international organizations, national and international companies, trade associations, healthcare, and environmental organizations, international funding institutions, and other interested stakeholders. As partners, we would hope to work together closely to identify the elements and mechanisms necessary to achieve the objectives of the partnership. Interested partners or participants should contact Stanley Durkee of the U.S. Environmental Protection Agency at [durkee.stan@epa.gov](mailto:durkee.stan@epa.gov) or by fax at 202/565-2911.