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**United Nations
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Global Mercury Partnership
Partnership Advisory Group
Second meeting
Geneva, 21-22 September 2010

**Reporting of the mercury air transport and fate research
partnership area (January 2009 – May 2010)**

UNEP Global Mercury Partnership

Note by the Secretariat

Individual partnership area evaluations have been prepared by the partnership areas in response to Annex I Section 3.f.iv of the UNEP Global Mercury Partnership Overarching Framework. The mercury air transport and fate research partnership area has a drafted partnership area evaluation. It is available in the annex to this document for information.

Annex 1: Evaluation of the ‘Mercury air transport and fate research’ partnership area

TIMEFRAME: January 2009 – May 2010

1. GENERAL INFORMATION	
1.1 Individual partnership area:	Mercury Air Transport and Fate Research (MFTP)
1.2 Individual partnership area lead:	Prof. Nicola Pirrone Director CNR- Institute of Atmospheric Pollution Research Rome, Italy pirrone@iia.cnr.it
1.3 Reporting year/period:	2009-2010
1.4 How many meetings were held over the reporting period?	Number of face to face meetings: 0 Number of teleconferences: >5
1.5 How many partners are parts of this partnership area?	The partnership currently has 24 official partners with much additional informal support.
1.6 How much funding was raised through this partnership area? What about in-kind assistance?	All countries involved provided in kind contributions in terms of personnel involved, travel funds, and facilities made available (i.e., teleconferences, computing).
1.7 What is the objective of the individual partnership area?	
<p>To support the decision of the GC and specifically the activity of the overarching partnership by:</p> <ul style="list-style-type: none"> • Accelerating the development of sound scientific information to address uncertainties and data gaps in global mercury cycling and its patterns (e.g., air concentrations and deposition rates, source-receptor relationships, hemispheric-global air transport/transformation, emission sources); • Enhancing sharing of such information among scientists and between them and policymakers; • Providing technical assistance and training, where possible, to support the development of critical information; • Enhancing the development of a globally-coordinated mercury observation system to monitor the concentrations of mercury species into the air and water ecosystems in cooperation with the GEO Task HE-09-02d “Global Observation Network for Mercury” as part of GEOSS 2009-2011 workplan. Enhancing the exchange of information and cooperation with the Task Force on Hemispheric Transport of Air Pollutants (TF HTAP) of the UNECE-LRTAP Convention. 	
2. MONITORING PERFORMANCE	
(tracking partnership activities and partner contributions)	
2.1 Please provide a short overview of key partnership area efforts completed since the previous Governing Council (brief description, outcomes, costs, timeframe).	
<p>a) The MFTP report prepared as contribution to the 25th session of the UNEP GC (Nairobi, February 2009) has been published by Springer in 2009; this allowed the MFTP to make this report broadly available to the scientific communities as well as to private and governmental institutions;</p> <p>b) The MFTP partners were involved in several special sessions of the 2009 International Conference as a Global Pollutant held in Guiyang in China.</p> <p>c) Relevant information have been gained through International Polar Year 2008 activities. The partners have collaborated together to mutually benefit from the knowledge and information generated under this activity.</p> <p>d) The leader of the MFTP in cooperation with partners and other research and university institutions in the world submitted (Call of July 2009) a 5-yr research proposal to the European Commission aiming to build a Global Mercury Observation System (GMOS) – the GMOS proposal was approved by the EC for funding and will likely start in November 2010. GMOS will support major international programs and conventions aiming to control the effectiveness of control measures that will be adopted in the future to reduce the impact of mercury pollution related to man-made activities on human health and ecosystems.</p>	

2.2 Please provide a short overview of the key current partnership area efforts (brief description, expected outcomes, budget, timeframe).

- (a) The GMOS project that will start in 2010 will provide an important contribution to the future activity of the MFTP in relation to the improvement of Emission Inventory, mercury monitoring programs, regional and global scale modeling and policy scenario development;
- (b) Harmonization of greenhouse gas and development of mercury global emissions inventories, e.g., by filling current gaps in geographic and source coverage which includes information on regions not yet accounted for and on sources not yet accounted for in currently used databases, e.g. biomass burning, artisanal gold mining, coal-bed fires and natural.
- (c) Planning continues on various joint projects: for example the U.S. and Italy have been discussing potential collaboration on the use of the monitoring data that the U.S. has collected at Mauna Loa, Hawaii. The U.S. has provided two years of these data to the UNEP mercury program and to CNR-IIA modelers for further analysis of atmospheric transport patterns;
- (d) Close coordination with the Group on Earth Observations (GEO), the organization working to build GEOSS (the Global Earth Observation System of Systems), to include mercury in GEOSS work plans;
- (e) Preparation of the Report on Mercury in the framework of the Task Force on Hemispheric Transport of Air Pollutants (TF HTAP) which is part of the UNEP-LRTAP convention. This report will be released in its final draft in July 2010 and will be provided as input to the preparation of the report for the para 29 as requested to the Executive Director of the UNEP Chemicals during the 2008 GC, following the same approach adopted for the 2008 report. This report will be discussed and presented by the leader of the F&T during the next F&T meeting that will be held in Glasgow, UK on June 17-18, 2010.

All results help provide valuable insights to these countries and to the UNEP Global Mercury Partnership in strategic activities in moving forward, including contributing to, coordination and liaison with various organizations and programs (such as United Nations Economic Commission for Europe, Arctic Monitoring and Assessment Programme, UNEP Regional Seas, Task Force on Hemispheric Transport on Air Pollutants of the UNECE-LRTAP convention).

2.3 Please provide a short overview of any key upcoming, planned partnership area efforts (brief description, expected outcomes, budget, timeframe).

- (a) Possible partnership activities to further the understanding of atmospheric mercury through a measurement program at K2 Italian Research Station;
- (b) Close coordination with the Group on Earth Observations (GEO), the organization working to build GEOSS (the Global Earth Observation System of Systems), to include mercury in GEOSS work plans;
- (c) The MFTP will expand its scope to include oceanic transport, methylation, bioaccumulation and exposure, as decided in its 11/25/09 teleconference. This expanded role of the partnership in integration of the science linking global emissions and exposure will benefit UNEP and the individual partners;
- (d) During the last Call for Proposal of the EC-FP7 (July 2009) the Leader of F&T in cooperation with leading international research and university institutions, part of which are members of F&T, prepared a 5-yr proposal titled "Global Mercury Observation System - GMOS" - this proposal received a good evaluation from the expert panel and therefore is candidate to be funded - it is expected that GMOS will start around the end of 2010/beginning of 2011. GMOS is aimed, among other objectives, to support the implementation of future legally binding instruments aiming to reduce the impact of mercury emissions on human health and ecosystems that are under preparation in the framework of the UNEP Mercury Program and last GC meeting's decisions;
- (e) The MFTP partners will be involved in several International Conference as the next International Conference on Heavy Metals to be held in Brno -Czech Republic, in September 2010 and the 10th International Conference on Mercury as a Global Pollutant to be held in Halifax -Canada, in 2011.

The MFTP will continue not only to act as an integrator of scientific information among the partnerships but will continue to support the overarching goals of the UNEP Mercury Program, including contributing to, coordination and liaison with various organizations and programs (such as United Nations Economic Commission for Europe, Arctic Monitoring and Assessment Programme, UNEP Regional Seas, Task Force on Hemispheric Transport on Air Pollutants of the UNECE-LRTAP convention).

2.4 Identify the priority actions for the forthcoming reporting cycle (2 years) (2011-2012).	
<ul style="list-style-type: none"> ▪ Enhancing the development of a globally-coordinated mercury observation system to monitor the concentrations of mercury species into the air and water ecosystems; ▪ Enhancing the communication of new scientific findings to policymakers; ▪ Improving of linkages with other air-emissions-related partnership areas and further planning on various joint projects 	
3. TRACKING PERFORMANCE RELATED TO UNEP GOVERNING COUNCIL PRIORITIES	
3.1 In response to Governing Council Decision 25/5, paragraph 34/c:	
Please summarize the key results achieved to date by the partnership area in terms of the following areas (as applicable).	
i)	Providing information on best available techniques and best environmental practices and on the conversion of mercury-based processes to non-mercury based processes; <u>Not applicable</u>
ii)	Enhancing development of national inventories on mercury; Further contribution will be provided on different aspects related to atmospheric emissions from natural and anthropogenic sources. The report in progress within the framework of Task Force on Hemispheric Transport of Air Pollutants (TF HTAP) of the UNECE-LRTAP Convention will certainly provide relevant information to the Paragraph 29 study – this report is already available on the wiki page of the TF HTAP.
iii)	Raising public awareness and supporting risk communication; The MFTP partners have organized a number of workshops and conferences focusing on mercury, including the global mercury conference held in Guiyang, China in June 2009.
iv)	Providing information on sound management of mercury; The 2009 MFTP report was presented and provided as contribution to the 25th Session of the GC provides, among others, also information on sound-management technologies.
3.2 (a) Please specify whether the promotion of non-mercury technologies (where suitable economically feasible alternatives do not exist) is relevant to the partnership area. Yes or No	
NO	
(b) If it is relevant, how is the partnership area specifically addressing the promotion of non-mercury technologies?	
Dissemination of knowledge through the channels of workshops and conferences and cooperation with international programs and conventions, and contributions of MFTP partners could include providing any available information on costs and effectiveness of alternative control technologies and measures as appropriate and relevant.	
4. ASSESSING EFFECTIVENESS	
(measuring the impact of partnership activities on target beneficiaries)	
4.1 What are the partnership area indicators of progress? If no indicators, please specify why.	
Indicators of progress are under development in the MFTP framework. The following indicators will be discussed with MFTP partners:	
<ul style="list-style-type: none"> • Mercury emissions to the atmosphere from anthropogenic sources by region and emission-source category; • Mercury emissions to the atmosphere from natural sources by region and emission-source category; • Regional and global emissions for each mercury-species; • Maps of atmosphere mercury depositions by region, mercury-species and emission scenario; • Update on mercury emissions, transport and depositions on different spatial and temporal scales. 	

4.2 Please report on progress in terms of each of the partnership area indicators outlined within the partnership area business plan.
Indicators of progress are under development (See section 4.1, above-reported).
4.3 What are the strengths of the partnership area?
This partnership has demonstrated the ability both in organizing top expertise globally (in developing a global assessment and in cooperating research) and in communicating effectively with policymakers. The institutions involved in the MFTP have a close cooperation among them and with key institutions worldwide. This has led to the GMOS project which will be, in cooperation with existing national programs, the key project in the years to come to monitor the effectiveness of control policy on mercury contamination worldwide.
4.4 What are the weaknesses and/or major challenges for this the partnership area?
This partnership faces the challenge of involving emerging countries, such as India, in its activities. It also faces the challenge of ensuring policymakers understand the need for all the various types of scientific information.
4.5 Can the weaknesses or major challenges be addressed through the partnership? If yes, what is the best strategy to address such weaknesses / major challenges in moving forward?
The MFTP partners do not see any relevant weakness to be dealt with at this stage.
4.6 In view of above, how should the partnership area be modifying its approach in the coming two year cycle? Should the objective and indicators of the partnership area be revised in moving forward?
5. FUTURE COLLABORATION
5.1 Please identify whether there are potential areas of effort for the partnership that would benefit from enhanced collaboration within the overall UNEP Global Mercury Partnership.
The MFTP will explore how can MFTP improve the linkages with other air-emissions-related partnership areas and how can MFTP communicate and coordinate activities with other partnership areas. The future development of the GMOS project will certainly enhance and facilitate this cooperation.
6. OTHER
6.1 Please outline how this report was drafted and who was consulted with in doing so.
Drafted by Nicola Pironne, and all the partners of MFTP were consulted for the elaboration of this report.
6.2 This section is intended for other relevant comments.