



**Global Mercury Partnership
Partnership Advisory Group
Fourth meeting**
Rome, 27-28 September 2012

Reporting of the mercury emissions from chlor-alkali partnership area

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 releases from chlor-alkali partnership area has drafted a partnership area evaluation. It is available in the annex to this document for information.

1. GENERAL INFORMATION	
1.1 Individual partnership area:	Mercury-cell Chlor-alkali Production
1.2 Individual partnership area lead:	U.S. Environmental Protection Agency Martin Dieu
1.3 Reporting year/period:	July 2010- June 2012
1.4 How many meetings were held over the reporting period?	Number of face to face meetings: 0 Number of teleconferences: 3 (most recent in June 2011)
1.5 How many partners are parts of this partnership area?	Five partners have submitted official partnership letter to UNEP; approximately 16 stakeholders actively participate in teleconferences and other discussions.
1.6 How much funding was raised through this partnership area? What about in-kind assistance?	USEPA has provided \$575,000 (see Section 4.0) since 2005 for project activities in this area. Additional contributions from Russia, Canada, Norway, the World Chlorine Council are in excess of 375,000. There have also been substantial in-kind contributions provided by UNEP, India, and Mexico.
1.7 What is the objective of the individual partnership area?	
<p>To significantly minimize, and where feasible, eliminate global mercury releases to air, water, and land that may occur from chlor-alkali production facilities. Sub-objectives:</p> <ul style="list-style-type: none"> ▪ Prevent the construction of new mercury-cell chlor-alkali production facilities ▪ Reduce mercury emissions and use from existing mercury-cell facilities ▪ Encourage conversion to non-mercury processes ▪ Reduce or eliminate mercury releases from waste generated by chlor-alkali production facilities including waste from conversion to non-mercury processes ▪ Promote environmentally-sound options for storage of surplus mercury to limit downstream releases from surplus mercury generated by the conversion, phase-out, or closure of mercury-cell chlor-alkali facilities <p>The partnership promotes a target of reduction in mercury demand to 250 tons by 2015 (developed in response to the first PAG meeting).</p>	
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>Overview: The partnership area promotes reporting and information sharing on mercury use and release reductions in the sector, and on the extent of conversions to non-mercury technologies. Conversions in the United States and Europe are continuing to take place, as is the implementation of India's voluntary program of mercury cell plant closings and conversions. Over the first years of the chlor-alkali partnership effort, the emphasis has been on: (1) sharing regional data on the status of chlor-alkali mercury cell plants, including the pace of conversion; (2) providing technical assistance, often industry-to-industry, on reducing the demand for mercury at existing plants.</p> <p>The World Chlorine Council (WCC), which includes members from North and South America, EU, China, India, and Russia, continues updating performance in total mercury emission reduction and plant capacities reduction. These annual reports are posted on the UNEP Mercury website.</p>	

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

In 2010-2011, the Partnership compiled a comprehensive inventory of mercury-cell facilities throughout the world. This inventory will help identify countries and organizations that could benefit from technical exchanges under the Partnership. The Partnership is currently updating the inventory and expanding the type of data that will be presented.

In 2011, the Partnership produced a draft paper on the economics of conversions of mercury-cell chlor-alkali facilities to non-mercury technology. This draft paper was made available at INC3 in Nairobi in October 2011. The Partnership is currently working on completing a final version of the document.

In 2011, The United Nations Environment Program, jointly with WCC, Clorosur, the Government of Uruguay through DINAMA, the Convention Coordinating Center for training and technology transfer for Latin America and the Caribbean, and Eface S.A., implemented a project on assessing the applicability of WCC guidance on best practices for chlor-alkali facilities. The Government of Norway has provided funds for these activities in Uruguay.

EPA and the Russian chlor-alkali industry have partnered to reduce mercury releases in wastewater and improve mercury monitoring systems. These successful efforts have reduced releases to the environment by about 1 ton per year. This project was completed in 2011.

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

The Partnership is working to update the global mercury-cell chlor-alkali facility inventory, and complete the final version of the study on economics of conversion to non-mercury technologies.

The Partnership will continue its information sharing efforts in the areas of technical cooperation for mercury use and release reduction and on conversions (including storage, management, and financing.) In particular, the Partnership plans to forge greater links with the Supply and Storage Partnership Area with a view towards, among other things, facilitating access to information on environmentally sound storage options for those facilities that plan to close or convert in the future.

2.4 Identify the priority actions for the forthcoming reporting cycle (2 years).

See above (2.3)

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;

The Partnership completed and disseminated a draft paper on the economics of conversion to non-mercury processes, and is working on the final version. The Partnership also completed an assessment of WCC guidelines on best practices for mercury-cell chlor-alkali plants.

- ii) Enhancing development of national inventories on mercury;

The Partnership developed a comprehensive global inventory of mercury cell facilities. This helps better define mercury stocks worldwide, will provide information on facilities that are not members of major regional industry groups, and will point towards areas where technical assistance may be beneficial. An update to the inventory is currently under way.

<p>iii) Raising public awareness and supporting risk communication; USEPA presented a poster on the chlor-alkali partnership area at 10th International Conference on Mercury as a Global Pollutant in Halifax, Canada, in July 2011.</p> <p>The Partnership also presented at the Global Mercury Partnership exhibition at INC3 in Nairobi, Kenya, in October 2011.</p>
<p>iv) Providing information on sound management of mercury. <u>See above (i)</u></p>
<p>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. <u>Yes</u></p> <p>(b) If it is relevant, how is the partnership area specifically addressing the promotion of non-mercury technologies? The Partnership encourages governments and industry to convert mercury-cell chlor-alkali facilities to non-mercury technology, and to refrain from constructing new mercury-cell facilities.</p>
<p>4. ASSESSING EFFECTIVENESS (measuring the impact of partnership activities on target beneficiaries)</p>
<p>4.1 What are the partnership area indicators of progress? If no indicators, please specify why.</p> <p>Percent reduction in mercury use per metric ton of chlorine production, percent reduction in mercury emissions per metric ton of chlorine production, percent reduction in mercury use by the chlor-alkali industry, percent reduction in mercury emissions and use by the chlor-alkali industry, number of chlor-alkali units with mercury-cell technology decommissioned.</p>
<p>4.2 Please report on progress in terms of each of the partnership area indicators outlined within the partnership area business plan.</p> <p>According to Partnership inventory, about 100 facilities in 43 nations have some industrial mercury cell chlorine capacity. Between 2005 and 2010, global mercury cell chlorine capacity is estimated to have declined by about 28 percent. According to the revised database, there remains approximately 6.5 million metric tons per year of mercury cell chlorine capacity worldwide, compared to about 9 million metric tons per year in 2005. 37 facilities in 14 countries that have eliminated a total of approximately 2.6 million metric tons per year of mercury cell chlorine capacity since 2005. 20 facilities in 10 countries have announced, or are said to be contemplating, plans to eliminate a total of 1.9 million metric tons per year of mercury cell chlorine capacity in the next five years.</p>
<p>4.3 What are the strengths of the partnership area?</p> <p>This area has provided sound data on mercury cell production globally, mercury use, and mercury emissions. Additionally, it has demonstrated best practices achievable at mercury cell facilities, and has facilitated a dialog among stakeholders as the priority of future efforts. In addition, the partnership includes more than 80 % of chlor-alkali industry worldwide through its industry association participation.</p>
<p>4.4 What are the weaknesses and/or major challenges for this partnership area?</p> <p>The partnership has been weakest with regards to two main challenges: (1) the difficulty in setting a specific timeline for elimination of mercury-cell process on both a national and global level, due largely to the financial cost of converting chlor-alkali plants from mercury-cell to membrane-cell technology; and (2) the difficulty posed by surplus mercury, including the question of storage, resulting from closure or conversion of mercury-cell facilities and minimizing effect of those stocks on global mercury supply. In addition, conversion rates are linked to socio-economic factors that can be difficult to address.</p>
<p>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?</p>

Yes, in cooperation with other partnership areas (e.g. supply and storage). Addressing mercury-cell plant conversion and long-term storage are especially difficult, since this will require both government and industry commitments. The partnership area would like to work with particular countries and facilities on storage and surplus issues, and will work in conjunction with the UNEP effort on terminal storage in Latin America and Asia. Export bans in the U.S. and E.U. will provide further opportunities to share information and best practices on storage, while also creating impetus for industries and governments outside these areas to address their mercury trade issues. Multinational industries will likely have additional incentive to participate as their ability to send mercury to refiners and brokers becomes limited.

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?

The partners believe that advances are being made but that challenges remain with regards to conversion and storage. The path forward depends greatly on the establishment of technical and regulatory capacity within the affected countries and regions for surplus mercury management, and on financial capacities within the specific industries. The UNEP effort on storage should be of enormous help in this regard over the longer term. Partners have also expressed interest in seeking financing from international development banks for conversions. The Partnership is considering how it can adjust its role to address these needs.

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 partnership area believes that strengthening collaboration in the areas of mercury waste partnership area and with the supply and storage partnership area is essential.

6. OTHER

6.1 Please outline how this report was drafted and who was consulted with in doing so.

This report was drafted by USEPA as the partnership area lead. USEPA solicited input from members of the Partnership area in drafting the report.

6.2 This section is intended for other relevant comments.