

UNEP GLOBAL MERCURY PARTNERSHIP

Mercury-cell chlor-alkali production Area*



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ISSUE

The mercury-cell process is one of three manufacturing processes used by the chlor-alkali sector to produce chlorine and caustic soda. Mercury-cell chlor-alkali production remains a significant use of mercury globally and can be an important source of mercury releases to the environment.

The sector witnesses global decline in mercury use as mercury-cell facilities age and a number of facilities are encouraged to close and/or move to mercury-free processes. Mercury-cell facilities, which close or convert to non-mercury technologies, require careful site management as well as management of any excess mercury.



STRATEGY

The Partnership Area provides economic, technical, and educational information to chlor-alkali production facility partners, governments, and other stakeholders. It promotes commercially competitive and environmentally responsible solutions for eliminating mercury use in chlor-alkali production.



CONTRIBUTION TO THE IMPLEMENTATION OF THE MINAMATA CONVENTION

The Partnership Area has dramatically improved the information base on the issue, including through knowledge to negotiators, other stakeholders and the public during the negotiation process with the development of a global inventory of mercury-cell chlor-alkali facilities. It continues to contribute to the reduction in mercury use in this sector on a global, regional and national basis in accordance with the Minamata Convention.



OBJECTIVE

The Partnership Area works to significantly minimize and where feasible, eliminate global mercury releases to air, water, and land that may occur from chlor-alkali production facilities. Its objectives are to:

- 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; and
- 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.

RELEVANT PROVISIONS OF THE MINAMATA CONVENTION ON MERCURY:

Article 3 (Mercury Supply Sources and Trade)

requires each Party to take measures to ensure that, where the Party determines that excess mercury from the decommissioning of chlor-alkali facilities is available, such mercury is disposed of in accordance with the guidelines for environmentally sound management referred to in paragraph 3 (a) of Article 11, using operations that do not lead to recovery, recycling, reclamation, direct re-use or alternative uses.

Article 5 (Manufacturing processes in which mercury or mercury compounds are used)

and its corresponding **Annex B** establish a phase-out date of 2025 for mercury use in chlor-alkali production.



OUTREACH ACTIVITIES

The Partnership Area shares information on:

- Appropriate procedures and methods to convert to non-mercury processes;
- Best practices to minimize releases of mercury during the conversion or closure process;
- Financing options to assist industry in addressing capital costs associated with conversion;
- Management of excess mercury generated by conversion, phase-out, and closure of mercury-cell facilities; and
- Best practices for the management of mercury-containing waste generated by chlor-alkali production facilities.



FEATURED PROJECTS

The World Chlorine Council reports annually to UNEP on mercury emissions and consumption in the chlor-alkali industry. This data covers about 85% of the world chlorine production capacity based on mercury¹.

Key recent activities included:

- UNIDO on behalf of the Partnership Area visited the remaining chlor-alkali plant in Indonesia still using mercury and advised the plant ownership on the relevant Convention date for phase-out. The Government was also briefed on this visit and its findings.
- UNIDO and ABICLOR on behalf of the Partnership Area have been coordinating efforts to assist the remaining 4 mercury-cell chlor-alkali plants in Brazil to phase-out mercury from their operations. These efforts have included facilitating the search for financing for both replacement with membrane facilities and treatment, stabilization and disposal (storage) of the mercury wastes.
- CLOROSUR, the Latin American Chlorine, Alkali and Derivatives Industry Association is exploring a similar effort that would address the needs of other facilities in Latin America.

¹ web.unep.org/globalmercurypartnership/world-chlorine-council-report-unesp-chlor-alkali-partnership-data-2018.



FUTURE PLANNED ACTIVITIES

The Partnership Area aims to continue working with partner governments to establish effective approaches to meet Minamata Convention requirements for closure or conversion of existing mercury-cell chlor-alkali facilities by 2025.

More specifically, the Partnership Area plans to undertake the following activities:

- Continue to collect information from countries on ongoing and potential conversion projects;
- Provide technology advice for potential conversions;
- Facilitate the access to financing for promising potential conversion projects; and
- Increase the focus on addressing stocks management and disposal for converted facilities.



COLLABORATION WITH OTHER PARTNERSHIP AREAS AND RELEVANT STAKEHOLDERS

The Mercury-cell chlor-alkali production Partnership Area and the Mercury Waste Management Partnership Area have been conducting joint missions to identify the needs and challenges faced by chlor-alkali producers both for financing the conversion process and for addressing the management and disposal of mercury wastes.

In light of their close linkages, the Partnership Area will further explore joint initiatives to leverage expertise in the Mercury Supply and Storage, Air Transport and Fate Research, and Waste Management Partnership Areas towards its objectives. This will include exploring additional inventory information that would assist in identifying needs for the sound management of excess mercury and mercury waste from mercury-cell chlor-alkali facilities that have closed or converted or plan to close or convert; and information exchange on technologies and management practices for waste and excess management.



Read more about the UNEP Global Mercury Partnership and how to become a Partner:

web.unep.org/globalmercurypartnership

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