



VAUTER, BENJAMIN

Co-lead

UNEP Global Mercury Partnership  
Chlor-Alkali Production Partnership Area

# CHLOR ALKALI INDUSTRY, GLOBAL MERCURY PARTNERSHIP AND THE MINAMATA CONVENTION ON MERCURY



GLOBAL  
MERCURY  
PARTNERSHIP

BENJAMIN VAUTER

## MINAMATA CONVENTION IN BRIEF

- 2017 entry into force
- Addresses the supply, trade, use, release, and emission of mercury; environmentally sound storage and disposal, and strategies to address contaminated sites.
- Includes provisions for technical assistance, capacity building, information exchange, public awareness, research and monitoring.
- Requires Parties to report on measures taken to implement certain provisions.



GLOBAL  
MERCURY  
PARTNERSHIP

A world map with countries colored in yellow and grey. Yellow countries represent signatories and parties to the Minamata Convention, while grey countries represent non-signatories. The map shows a high density of yellow countries in North America, Europe, and Africa, with some grey countries in Asia and South America.

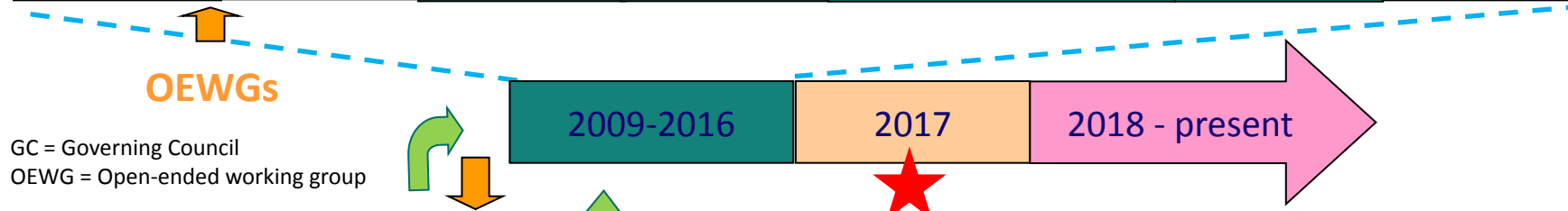
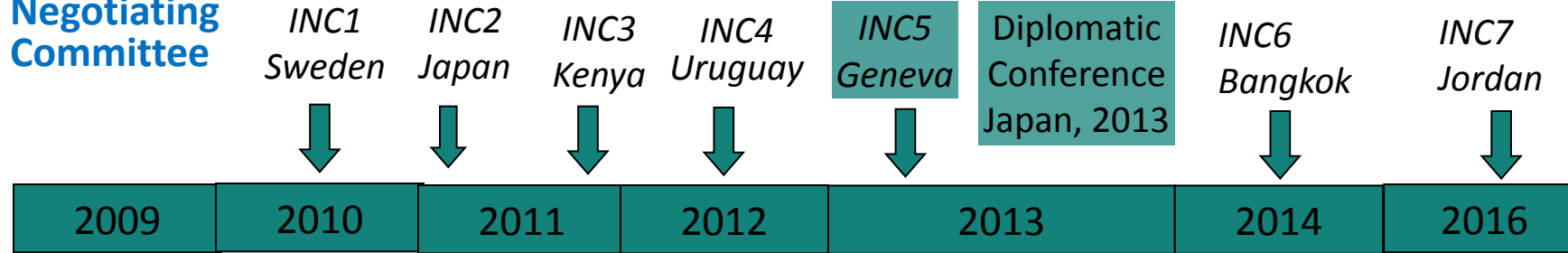
# MINAMATA CONVENTION IN BRIEF

**Number of Signatories: 128**

**Number of Parties: 140**

# HISTORY OF THE UNEP GLOBAL MERCURY PARTNERSHIP

## Intergovernmental Negotiating Committee



GC = Governing Council  
OEKG = Open-ended working group

2001-2008 **UNEP Governing Council decisions**

*Minamata Convention Entry into force*



Global Hg assessments

**Global Mercury Partnership**

# UNEP GLOBAL MERCURY PARTNERSHIP

## 8 Partnership areas and business plans

- ASGM
- Coal Combustion
- **Chlor-alkali**
- Products
- Air Transport and Fate
- Waste Management
- Supply and Storage
- Cement



>200 Partners – governments, international organizations, NGOs, industry, academia and others



# UNEP GLOBAL MERCURY PARTNERSHIP

**Mandate:** to deliver immediate action  
**Objective:** to protect human health and the global environment from the release of mercury  
**Means:** minimizing and, where feasible, ultimately eliminating anthropogenic releases

## Activities

- Generation of baseline data and information
- Development of guidance materials/toolkits
- Information gathering and exchange, advocacy, awareness raising
- Strengthening national capacities to identify problems and take strategic actions; national and regional planning
- Demonstration projects

**Support for ratification and implementation of the Minamata  
Convention on Mercury**

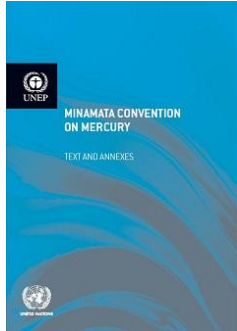


GLOBAL  
MERCURY  
PARTNERSHIP

## How the UNEP Global Mercury Partnership contributes to the implementation of the Minamata Convention on Mercury

Articles in the Minamata Convention on Mercury	UNEP Global Mercury Partnership Areas								
	Mercury supply and storage	Mercury reduction in chlor-alkali	Mercury reduction in products	Reducing mercury in Artisanal and Small-Scale Gold Mining	Mercury release from the cement industry	Mercury waste management	Mercury air transport and fate research	Global Mercury Assessment and national inventories	
3. Mercury supply sources and trade	✓	✓							
4 and Annex A. Mercury-added products			✓						
5 and Annex B. Manufacturing processes in which mercury or mercury compounds are used		✓							
6. Exemptions available to a Party upon request			✓						
7. Artisanal and small-scale gold mining Annex C. National action plans				✓					✓
8. Emissions and Annex D. List of point sources of emissions of mercury and mercury compounds to the atmosphere					✓	✓	✓		✓
9. Releases		✓		✓	✓	✓	✓		✓
10. Environmentally sound interim storage of mercury, other than waste mercury	✓								
11. Mercury wastes		✓			✓	✓	✓	✓	
12. Contaminated sites						✓	✓		✓
16. Health aspects			✓	✓					
20. Implementation plan				✓					✓
21. Reporting				✓					✓
22. Effectiveness evaluation							✓		✓
14. Capacity-building, technical assistance and technology transfer	✓	✓	✓	✓	✓	✓	✓	✓	✓
17. Information exchange	✓	✓	✓	✓	✓	✓	✓	✓	✓
18. Public information, awareness and education	✓	✓	✓	✓	✓	✓	✓	✓	✓
19. Research, development and monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓

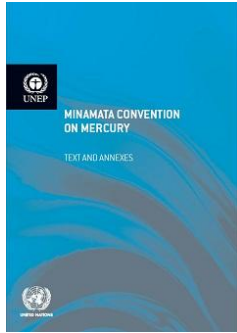




## Article 3: Mercury supply sources and trade

- **Restricts** export of mercury - requires prior written consent; only for an allowable use or environmentally sound interim storage (Article 10)
- **Restricts** import of mercury from non-Parties - requires information that it does not come from prohibited sources
- Requirements for reporting under Article 21 (measures a Party has taken to implement provisions, effectiveness and challenges)





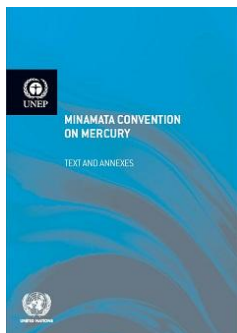
## Article 3: Mercury supply sources and trade

### 3.5: Each Party shall

- a) Endeavour to **identify individual stocks of mercury** or mercury compounds **exceeding 50 metric tons**, as well as sources of mercury supply generating stocks exceeding 10 metric tons per year, that are located within its territory



GLOBAL  
MERCURY  
PARTNERSHIP



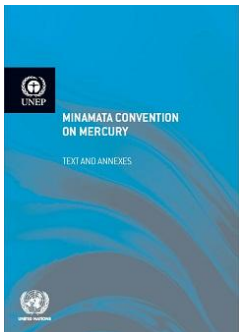
## Article 3: Mercury supply sources and trade

b) 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 reuse or alternative uses.

\*Basel Convention: Technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with mercury or mercury compounds



GLOBAL  
MERCURY  
PARTNERSHIP



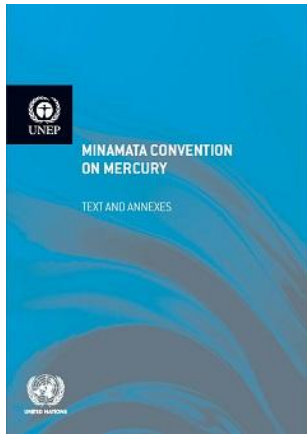
## Article 5:

# Manufacturing processes in which mercury or mercury compounds are used

**5.2:** Each Party shall not allow, by taking appropriate measures, the use of mercury or mercury compounds in the **manufacturing processes** listed in Part I of Annex B after the phase-out date specified in that Annex for the individual processes, except where the Party has a registered exemption pursuant to Article 6.



GLOBAL  
MERCURY  
PARTNERSHIP



# Annex B:

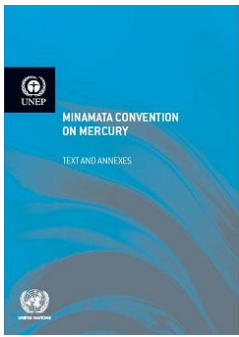
## Manufacturing processes in which mercury or mercury compounds are used

### Annex B

#### Manufacturing processes in which mercury or mercury compounds are used

Part I: Processes subject to Article 5, paragraph 2

Manufacturing processes using mercury or mercury compounds	Phase-out date
Chlor-alkali production	2025
Acetaldehyde production in which mercury or mercury compounds are used as a catalyst	2018

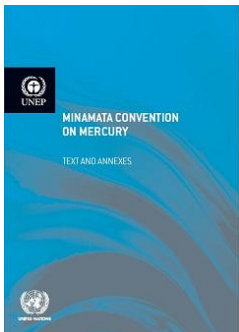


## Article 5: Manufacturing processes in which mercury or mercury compounds are used

**5.5:** Each Party with facilities that use mercury or mercury compounds in the manufacturing processes listed in Annex B shall:

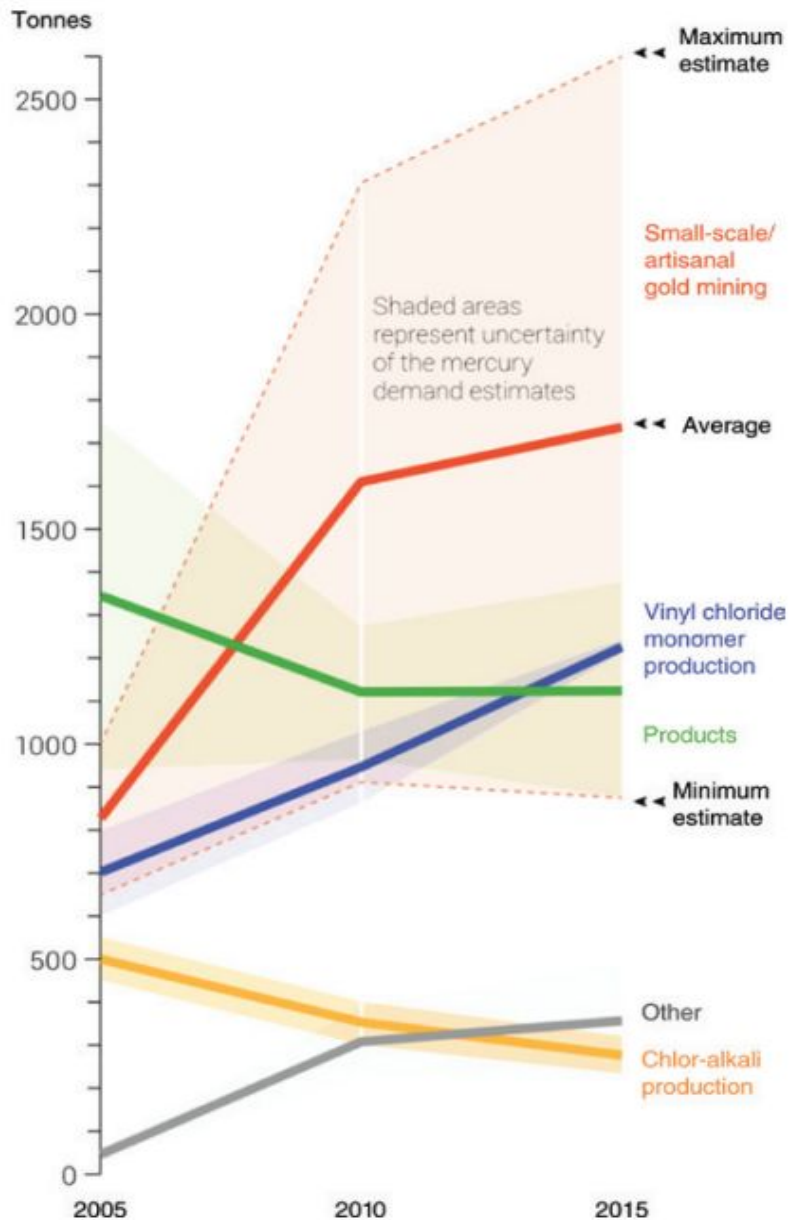
- a) Take measures to **address emissions and releases** of mercury or mercury compounds from those facilities;
- b) Include in its **reports** submitted pursuant to Article 21 information on the measures taken pursuant to this paragraph, and
- c) Endeavour to **identify facilities** within its territory that use mercury or mercury compounds for processes listed in **Annex B** and submit to the Secretariat information on the number and types of such facilities and the estimated annual amount of mercury or mercury compounds used in those facilities. **The Secretariat shall make such information publicly available.**





## Article 14: Capacity-building, technical assistance and technology transfer

**14.2:** Capacity-building and technical assistance may be delivered... through partnerships, including partnerships involving the private sector. **Cooperation and coordination with other multilateral environmental agreements** in the field of chemicals and wastes **should be sought** to increase the effectiveness of technical assistance and its delivery.



Sector mercury consumption (tonnes)	2005	2010	2015
Small-scale/artisanal gold mining	650 - 1 000	912 - 2 305	872 - 2 598
Vinyl chloride monomer (VCM) production	600 - 800	860 - 1 030	1 210 - 1 241
Chlor - alkali production	450 - 550	300 - 400	233 - 320
Batteries	300 - 600	230 - 350	159 - 304
Dental applications	240 - 300	270 - 341	226 - 322
Measuring and control devices	150 - 350	219 - 280	267 - 392
Lamps	100 - 150	105 - 135	112 - 173
Electrical and electronic devices	150 - 350	140 - 170	109 - 185
Other (paints, laboratory, pharmaceutical, cultural/traditional uses, etc.)	30 - 60	222 - 389	215 - 492
<b>Total</b>	<b>3 000 - 3 900</b>	<b>3 258 - 5 400</b>	<b>3 404 - 6 027</b>

Note: Rather than "demand," the term "consumption" is used here to indicate the mercury content of all mercury added products used in a given country or region

# GLOBAL MERCURY CONSUMPTION BY SECTOR

Source: UN Environment. *Global Mercury Supply, Trade and Demand*, UNEP, Chemicals and Health Branch, Geneva, Switzerland, 96 (2017). [Internet]. Available from: [https://wedocs.unep.org/bitstream/handle/20.500.11822/21725/global\\_mercury.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/21725/global_mercury.pdf?sequence=1&isAllowed=y).

## REDUCING MERCURY SUPPLY ON THE MARKET

- Mercury export bans in the USA and EU have reduced the availability of residual mercury from the chlor-alkali sector on international markets
- In the European Union alone, an estimated 650 tons per year of chlor-alkali related mercury are no longer available.<sup>2</sup>
- In both EU and USA, mercury recovered from chlor-alkali sector must be stabilized, stored, and/or disposed of domestically/locally. If converted into a stable compound, export is allowed for disposal.
- Countries without mercury export bans may export elemental mercury for allowable use. **Oftentimes, export is the only option due to limited local/regional disposal options.**

## CHLOR ALKALI PARTNERSHIP PRIORITY ACTIONS:

### Play a more active facilitative role:

- More direct involvement with **non-WCC** facilities and their associated governments
- Assist in identifying remaining mercury facility status and needs
- Assist in identifying and accessing the technical and financial resources to support conversion/decommission
- Identify viable interim and long-term storage and final disposal solutions
- Greater collaboration across GMP partnership areas, namely Waste Management partnership area
- Explore and identify synergies with other MEAs (BRS, GCF, etc)



THANK YOU FOR YOUR ATTENTION

Vauter.ben@epa.gov

<https://www.unep.org/globalmercurypartnership>



GLOBAL  
MERCURY  
PARTNERSHIP