UNEP Global Mercury Partnership

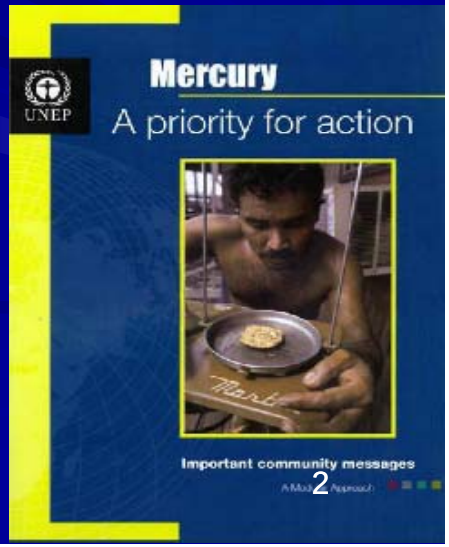
UNEP Global Mercury Partnership

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 + exchange ,advocacy, awareness raising
- Strengthening national capacities to identify problems and take strategic actions; national + regional planning
- Demonstration projects

The GMP can support to early implementation of the Minamata Convention on Mercury



UNEP Global Mercury Partnership

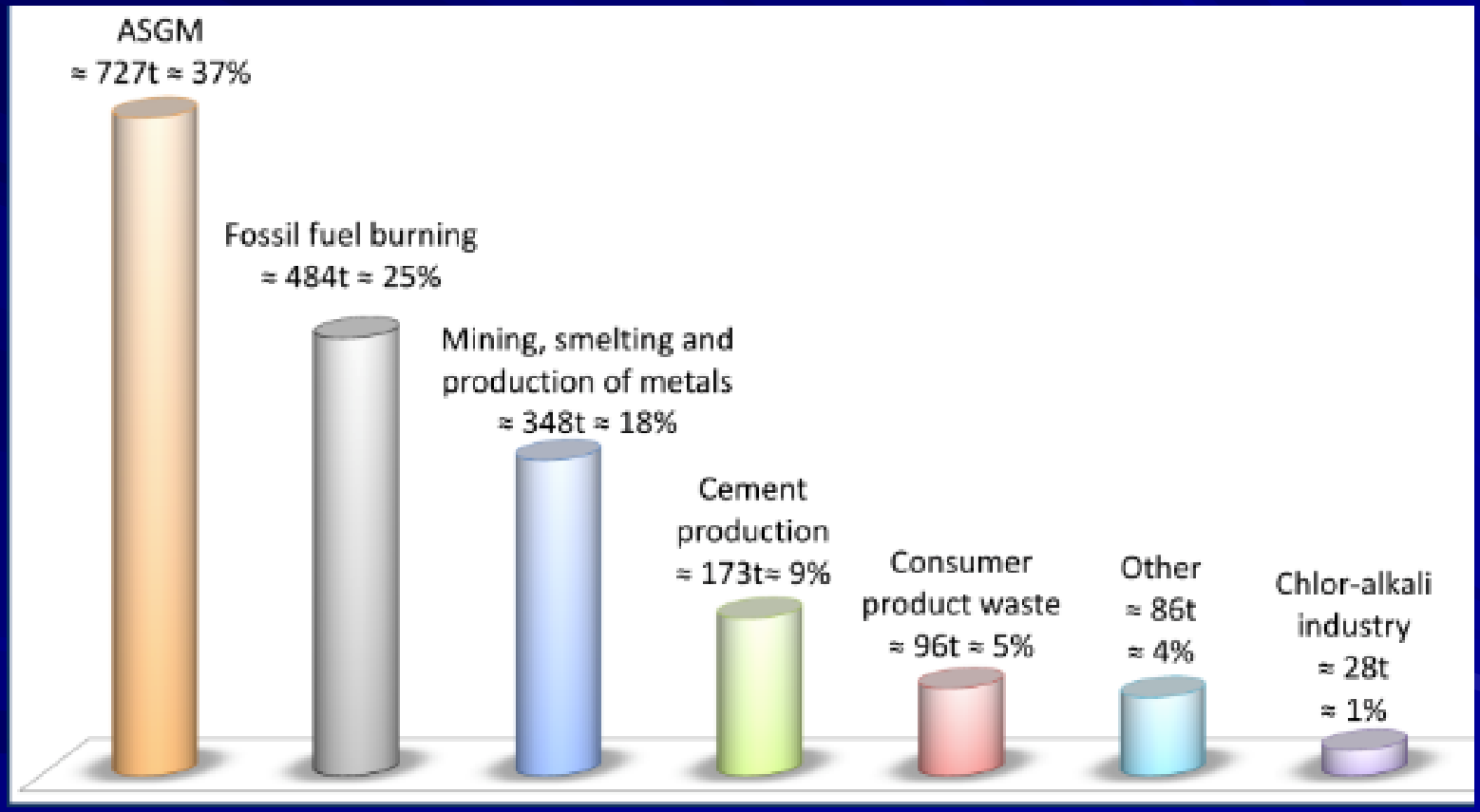
8 Partnership areas and business plans

- ASGM
- Coal combustion
- Chlor-alkali
- Products
- Transport and fate
- Waste management
- Supply and storage
- Cement

131 partners– 26 governments, 5 UN agencies, 98 NGO and others

Global Anthropogenic Atmospheric Emissions

(UNEP, Global Mercury Assessment, 2013)



Partnership activities can in general support Governments in implementing the Minamata Convention by providing

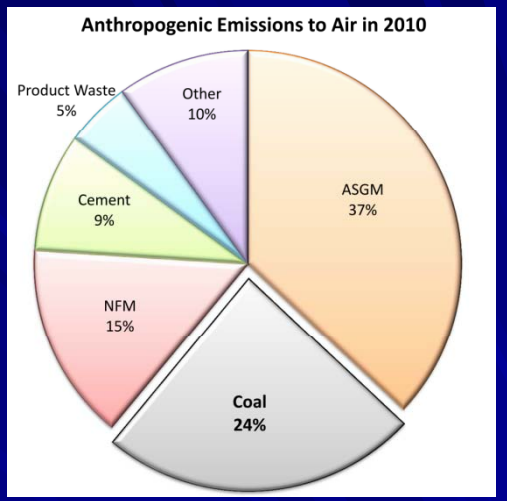
- Information that will increase the understanding of Hg emissions from sectors and the possibilities for Hg reductions

- Information necessary for prioritizing actions in sectors

- Technical guidance, capacity building and recommendations on reducing Hg emissions from sectors

- Input to national emission inventories

Mercury from coal combustion



- Mercury is…

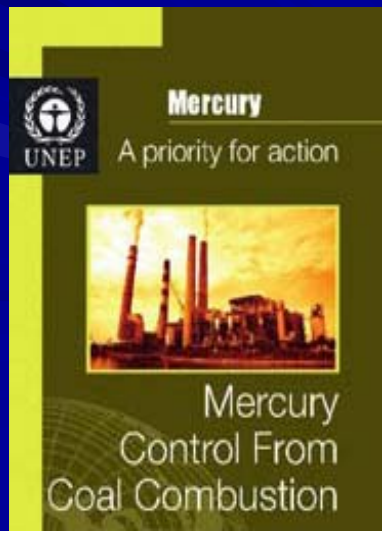
- …found in trace quantities in coal…
  - –Hg concentrations in coal vary significantly geographically
  - –Significant differences even between coals from same field

- …and mainly released via emissions to air
  - –Some Hg may be released in wastes/residues or water + soil.

•Rapid development in many parts of the world has resulted in a high rate of construction of large coal-fired units.

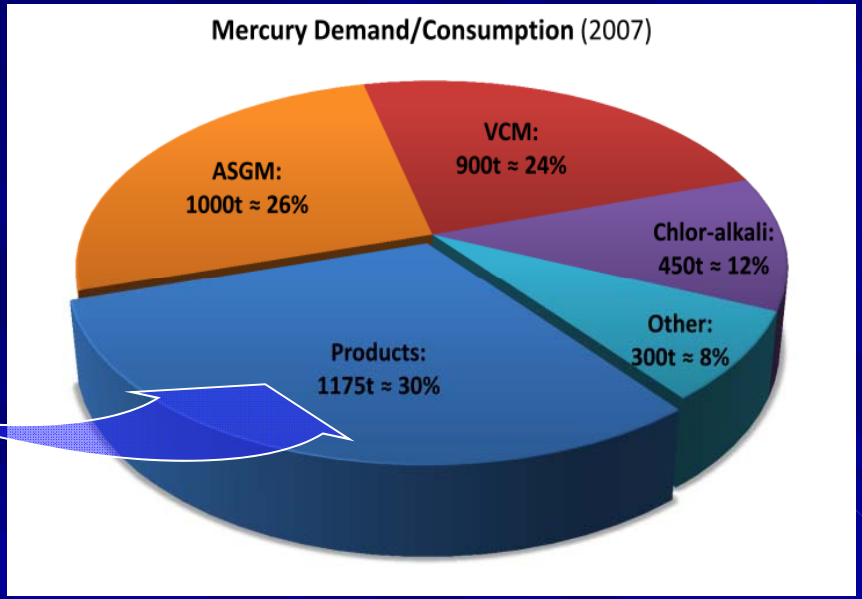
Mercury Control from Coal Combustion partnership can assist countries to

- Characterize and assess the coal-fired power sector and recommend possible measures on how to reduce emissions
- Analyse mercury content of coals used
- Measure emissions of mercury from selected power plants
- Develop emissions inventories based on collected information
- Develop action plans to reduce Hg emissions/releases
- Demonstrate mercury reductions



Use of Mercury in Products

Towards mercury-free alternatives for key products …



Demand/Consumption by Product Category (2007)	
Batteries	200 – 400 t
Dental use	250 – 350 t
Measuring devices	250 – 350 t
Switches and relays	100 – 200 t
Lighting	110 – 140 t

- **Mercury-added products ≈ 1/3 of total demand (Maxson, 2009)**

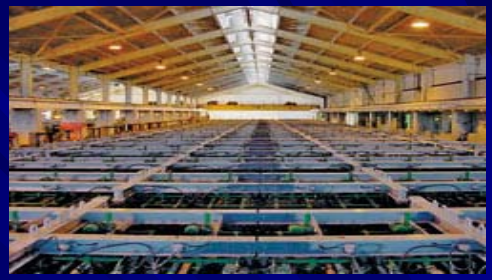
Mercury in Products partnership can assist countries by providing

- A list of product alternatives (batteries, lamps, measuring devices in health care, dental amalgam)
- Prioritized project proposals on mercury added products and seeking appropriate funding
- Information on case studies

and best practices

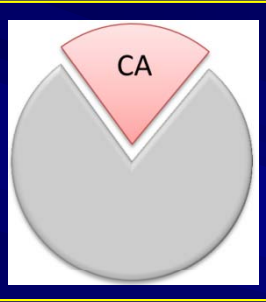
on use of alternatives

Mercury Reduction in Chlor-Alkali production

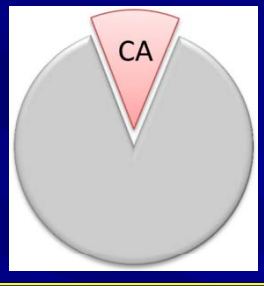


The chlor-alkali industry is a major **intentional use** sector.

- Mercury-cell technology may be used in the production of chlorine + caustic soda



•Decommissioned chlor-alkali cells form ca. 21% of global mercury supply.



•The chlor-alkali sector accounts for ca. 12% of global mercury demand.

•... this makes the use of best available techniques (BAT) and best environmental practices (BEP) key!

•The ***Chloralkali Project in Uruguay*** assessed WCC guidelines on the use of BAT and BEP in mercury management in a non-member facility.

➢The report concluded that global application of the guidelines should be encouraged.

Mercury Reduction in Chlor-Alkali production

Situation in Latin America and the Caribbean

Table 5: Chlor-alkali plants with mercury cells in the LAC region, 2012.

Country	Capacity 1000 t Cl2	Number of facilities	Consumption/ Use kg Hg	Hg at facilities t Hg
Argentina[11]	120	1	1045	74
Brasil	226	4	22947	325
Colombia	24	1		60
Cuba[12]	17	1		
México	154	2	4170	208
Perú	120	1		
Uruguay	14	1	1850	24
Total ALC	**675**	**11**	**30012**	**691**
Total Global	**5046**	**75**	**189543**	**8413**
% ALC	**13%**	**15%**	**16%**	**8%**

Source: Global inventory of chlor-alkali plants with mercury cells (UNEP, 2013d).

Mercury Reduction in Chlor alkali partnership can assist countries by providing

- Information on the current global inventory and plans of conversion to mercury-free technology

- Technical assistance to chlor alkali plants that plan to convert (assistance to be provided in collaboration with the World Chlorine Council)

Mercury Supply and Storage Partnership

***Kyrgyz Republic*:**

- Assisting in the transition
- Providing alternatives to mercury mining

- ***Workshop on Hg management in the LAC region (Brazil, May 2012)***

- Assessed situation and existing challenges
- Explored environmentally sound solutions
- Provided a forum for knowledge sharing
- Informed mercury management authorities

- Remediated site
- (Source: MAYASA Spain)

- ***Workshop on Hg management and decontamination in the Mediterranean Regional Plan on Hg (Dec. 2012)***

- Provided technical support for ESM of mercury/mercury wastes
- Provided tools for implementing the Regional Plan

Mercury Supply and Storage partnership area can assist countries to

- Find environmentally sound storage solutions
- Encourage the use of hazardous waste management facilities to serve as temporary storage
- Promote the management of mercury waste as close to the source as possible
- Encourage legislation coupled with effective enforcement
- Provide information on available stabilization/solidification technologies

Mercury Waste Management partnership can assist countries by

•*Providing information on the ff:*

Resource Persons List

- Provide information of resource persons for technical advice

Basel Technical Guidelines

- Provide principles for the ESM of mercury wastes

Draft Good Practice Document

- Provide practical information for managing releases from waste

•Projects dealing with different waste streams:
Waste Products Containing Mercury, Health care waste, Industrial waste and mine tailings, and Sites Contaminated with Mercury Waste

- Examples: Five country waste project in Burkina Faso, Cambodia,
- Pakistan, Philippines, Chile; batteries project in Cameroon

•Valuable lessons learned in the life-cycle management of mercury waste

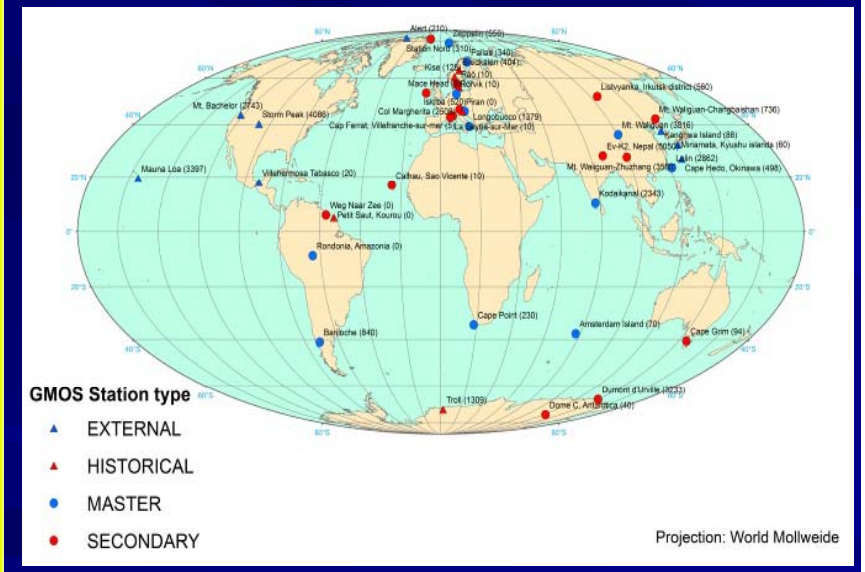
Basel Convention Technical Guidelines on Mercury Waste

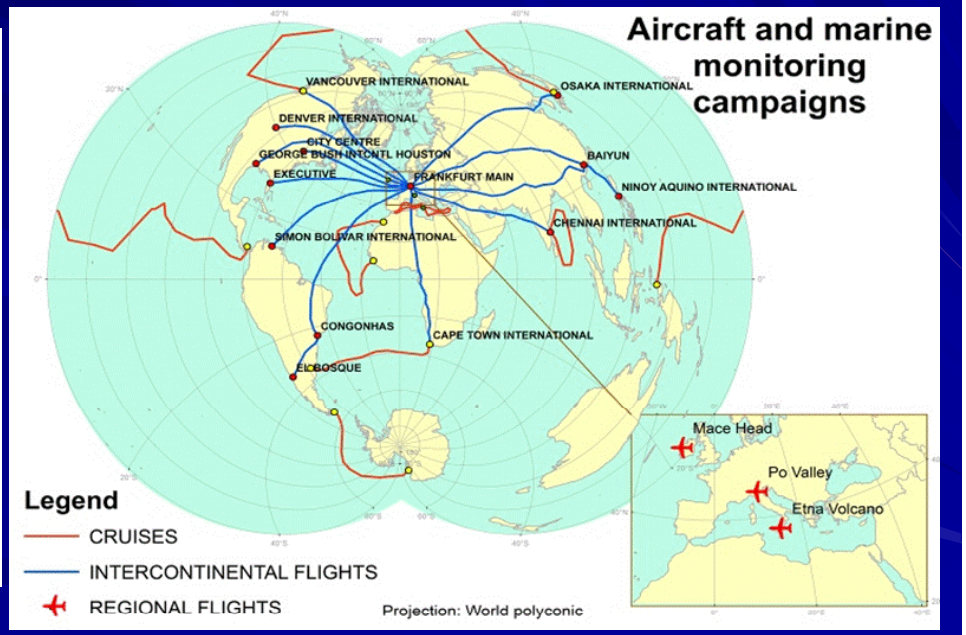
'Basel Convention Technical Guidelines for the Environmentally Sound Management of Wastes Consisting of Elemental Hg and Wastes Containing or Contaminated with Hg'

Table of Contents

Fate and Transport partnership can assist countries by providing information on

- Global Mercury Observation System (GMOS) that conducts worldwide measurements of mercury from natural + anthropogenic sources.
- Project led by Institute of Atmospheric Pollution Research of the National Research Council of Italy and is funded by the EU.





•GMOS will provide an improved world-wide overview of mercury distribution in the environment

Mercury Reduction from Cement Industry partnership can assist countries to

- Establish sectoral mercury inventories and baseline scenarios for the industry.
- Encourage use of most appropriate technique to reduce or minimize mercury releases into the environment.
- Increase the awareness of the cement industry to mercury as a pollutant through increased outreach efforts.

Thank you for your attention

For more information contact:
Division of Technology, Industry and Economics
Chemicals Branch
International Environment House 1
11-13 Chemin des Anémones
CH 1219 Châtelaine
Geneva, Switzerland

Or visit:
http://www.unep.org/hazardoussubstances/Mercury/tabid/434/lang