UNEP MERCURY AND OTHER METALS PROGRAMME

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Overview of presentation

- Mercury – a global problem
- Demand, trade, and supply
- Economics
- Emissions
- Solutions
- Plan of mercury activities
- Lead and Cadmium Activities
The problem with mercury – the global assessment

- Initiated by UNEP Governing Council at its 21st session in February 2001;
- Responded to concerns that national/regional actions were not sufficient to address mercury pollution;
- Assessment concluded that sufficient evidence of significant global adverse impacts from mercury to warrant further international action.
Global Mercury Assessment
Key findings - global cycling

- Hg is persistent and cycles globally – emissions in any continent can contribute to deposition in others thus an international issue

- Due to long-range transport, even nations with minimal Hg releases, and other areas remote from industrial activity, may be adversely affected.
Mandates for mercury work

- 2001 – UNEP GC initiated global assessment of mercury
- 2003 – UNEP GC decision 22/4 V
  - Decided that national, regional and global actions, both immediate and long-term should be initiated ASAP
  - Urged all countries to adopt goals and take actions with the objective of identifying exposed populations and ecosystems, and reducing anthropogenic mercury releases
Decisions from GC 23rd session strengthened the mercury programme.

- UNEP was requested to implement partnerships between Governments, IGOs, NGOs and private sector, in a clear, transparent and accountable manner, as one approach to reducing risks from mercury.
GC Decision 24/3

- Recognised that current efforts to reduce risks from mercury are not sufficient to address the global challenges posed by mercury.
- Concluded that further long-term international action is required to reduce risks to human health and the environment and that, for this reason, the options of enhanced voluntary measures and new or existing legally binding instruments will be reviewed and assessed in order to make progress in addressing this issue.
Mercury continues to be used…

Global mercury demand by use, 2005 (metric tonnes)

- Small-scale/artisanal gold mining: [800-1100]
- Vinyl chloride monomer production: [600-800]
- Chlor-alkali production: [550-750]
- Batteries: [300-600]
- Measuring and control: [120-250]
- Dental use: [240-300]
- Electrical and electronic: [100-250]
- Lighting: [100-150]
- Other*: [20-60]
- TOTAL: 3,000 - 3,900 metric tonnes

* Laboratory, pharmaceutical, cosmetic, cultural/traditional uses, etc.

... and there is a global demand.

Mercury demand by region - 2005 (metric tonnes)

- Middle Eastern States: [50-100]
- East and Southeast Asia: [1,600-1,900]
- European Union (25 countries): [400-480]
- North America: [200-240]
- South Asia: [300-500]
- CIS and other European countries: [150-230]
- South America: [140-200]
- West and Sub-Saharan Africa: [50-120]
- Middle Eastern States: [50-100]
- Central America and the Caribbean: [40-80]
- North Africa: [30-50]

TOTAL: 3,000 - 3,900 metric tonnes

Approaches to managing the problem

- Two main ways forwarded identified by Decision GC 24/3
  - strengthen the United Nations Environment Programme mercury programme partnerships
  - establish an ad hoc open-ended working group of Governments, regional economic integration organisations and stakeholder representatives to review and assess options for enhanced voluntary measures and new or existing international legal instruments
Other recommendations

- Prepare a report on atmospheric emissions, including:
  - trends analysed where possible by country, region and sector
  - Current results from modelling
  - An overview of sector-based best practices
Strengthening partnerships

- Working towards a developing an overarching framework including
  - Development of business plans
  - Identification of partnership goals
  - Development of operational guidelines
- Overarching framework agreed in April
Mercury partnership activities currently underway

- artisanal/small-scale gold mining;
- coal combustion;
- chlor-alkali sector;
- reduction in products
  - batteries, dental amalgams, measuring and control (largely medical sector), electric and electronic switches, fluorescent lamps, cosmetics; and
- air transport and fate research.
New partnership areas proposed by Governing Council Decision.

- vinyl chloride monomer production
- non-ferrous metals mining
- cement production
- waste combustion
- Supply and storage
Partnership activities relevant to LRTAP

On-going and Planned Activities

- Italy is planning a monitoring project in China.
- An overall plan indicating contributions of various countries is being developed by Italy.
- The partnership is making a contribution to the updated emissions study requested by GC 24/3
- Work on inventories in Asia and Latin America will contribute information to this partnership
Open Ended Working Group

- Established by GC 24/3 to review and assess options for enhanced voluntary measures and new or existing international legal instruments
- Options paper prepared by UNEP to facilitate discussions
- First meeting in Bangkok, 12 to 16 November 2007
- Interim report to GC SS, final report to GC 25
Open Ended Working Group

- Possibilities for a legally binding approach include:
  - Utilisation of relevant elements of existing instruments
  - Drafting new protocols or procedures for inclusion in existing instruments
  - Negotiation of a “stand-alone” agreement
Planned activities until GC 25 (Feb 2009)

- Activities to reduce uses and releases of mercury will be ongoing throughout 2007 and 2008
- Air emissions report will be published late 2008
- Second meeting of the OEWG
  - 6-10 October 2008
  - Will present options and any consensus recommendations to the Council/Forum at its twenty-fifth regular session;
Air emissions report

- Most comprehensive inventory to date
  - Includes improved estimates for critical factors
  - Estimates for sectors not previously well quantified
  - Better national reporting
  - Better global coverage in some areas
Current results of air emissions report

- No big changes from data seen in 2000
- Trends continuing as expected
- Corrections to inventories produce some large jumps in emissions from some countries
- Coal combustion still major source
- Asia identified as major regional source of emissions
Scenarios included

- Scenario inventories included for:
  - Business as usual with implementation of Kyoto protocol (includes reduction of emissions from coal burning power plants consistent with reduction of green house gases)
  - Maximum Feasible Technological Reduction
    - Assume implementation of all possible measures to reduce mercury emissions
Report availability

- Draft report will be made available to second meeting of OEWG in October
- Final draft report will be tabled at GC 25, 16 – 20 February 2009
Continuing activities relating to mercury

- To support country efforts to take action in initiating technical assistance and capacity building activities;
- Main element of the programme to assist countries to understand and address mercury problems, through:
  - Building inventories of uses and releases,
  - Identifying populations at risk,
  - Developing communication and outreach to at-risk populations,
  - Initiating actions to reduce uses and releases of mercury, including promoting mercury-free products, technologies and processes, using environmentally friendly alternatives.
Lead and Cadmium Activities

- GC23 requested UNEP to:
  - Review scientific information, focusing on long range environmental transport to inform discussions on the need for global action

- Interim scientific review were presented to GC 24 which:
  - Acknowledge the data and information gaps, and
  - Requested the ED to provide available information to address these gaps
UNEP activities on lead and cadmium

- UNEP sent out a call for data to bring in information to address the gaps
- The interim reviews have been revised to incorporate newly submitted information and posted on the website for comment in March 2008
- Comment phase ends 13 June 2008
  - Comments will be considered and incorporated, and the final version presented to GC 25
GC 24 also recognised the need for developing countries to have access to information on risk management measures.

UNEP is compiling an inventory of risk management measures.

The inventory will be published on the website and presented to GC 25.

Submissions of additional measures are welcome.
Further information can be found at:

http://www.chem.unep.ch/mercury/

http://www.chem.unep.ch/Pb_and_Cd/