

Para29 Study:

Study on the various types of mercury-emitting sources, current and future trends of mercury emissions, including analyzing and assessing the costs and the effectiveness of alternative control technologies and measures

John Munthe, IVL Swedish Environmental Research Institute,
Ad hoc Open-ended Working Group, Bangkok, 22 October, 2009

Main objectives

- Mercury emissions, incl. current trends;
- Technical characteristics of the main sources;
- Current and planned initiatives/measures to control mercury emissions and how they may affect future mercury emissions (incl. multi-pollutants control measures)
- Quantitative information on the effectiveness and costs of relevant measures.

Focus on main sectors

- coal-fired power plants and industrial boilers;
- industrial metal production (focus on non-ferrous smelters,;
- waste incineration;
- cement production factories.

Other sectors

If time permitting, and **if** relevant and sufficient information can be obtained easily (partnerships, industry associations, NGOs), inclusion of additional sectors will be considered, e.g. :

- Chlor-alkali production
- Vinyl chloride monomer production
- Manufacture of mercury-containing products
- Artisanal and small scale gold mining

Selected countries

- USA
- China
- India
- South Africa
- EU
- Brazil
- Russian Federation

Main components of the study

- Source characterization (number of facilities, important characteristics including fuel type, fuel amounts, Hg emissions, existing air pollution control etc)
- Costs and efficiencies of control measures
- Scenarios for emission control and costs
- Upscaling to global estimates
- Case studies – good examples

Questionnaire - Request for information on:

- Technical characterization of sources.
 - capacity (energy, production),
 - fuel/raw material/waste consumption,
 - fuel type (coal, Hg content),
 - existing air pollution controls,
 - mercury emissions, other emissions.
- To be used for **assessing current emissions and options for emission control**

Questionnaire - Request for information on:

- Location of sources.
To be used for updating geographical distribution of emissions, for atmospheric modelling.
- Existing plans for emission control, modernization, energy savings. **To be used for assessment of future emission trends for Hg.**

Costs and efficiencies

- Investment costs
- Running costs
- Other socio-economic consequences
- Documented information on control efficiencies
- Case studies, examples

Examples of qualitative costs and benefits of Hg emission reduction for various sectors

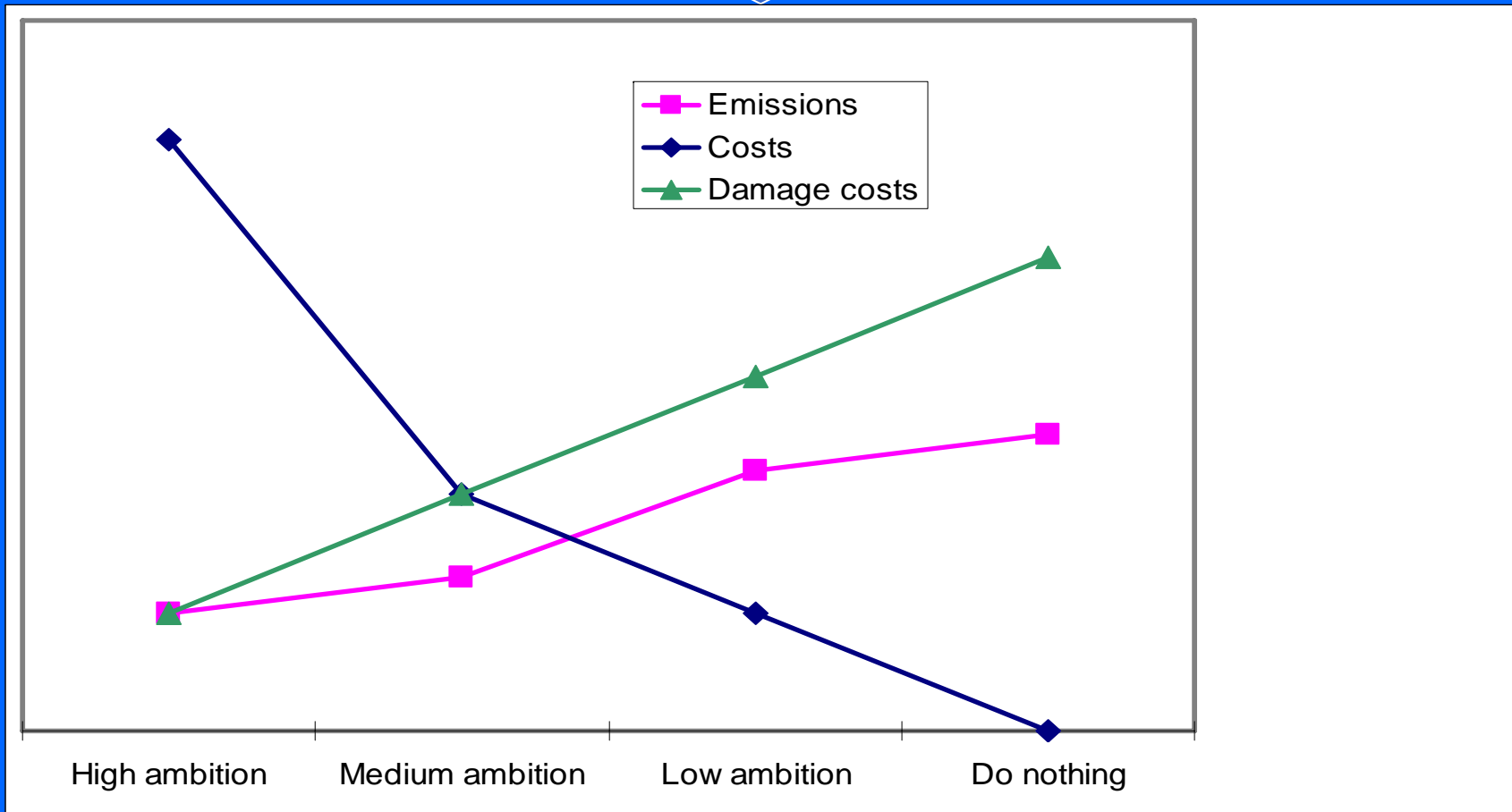
Reduction option		Costs	Benefits
1	Reduction from coal usage	Medium → Large	Large
2	Reduction from industrial processes	Medium → Large	Medium → Large
3	Reduction of waste generation	Small → Large	Large
4	Promotion of Hg waste collection and treatment	Small → Medium	Large
5	Reduction from waste disposal	Medium → Large	Large
6	Reduction of supply from mining and extraction	Small → Medium	Large

Database Source
characterization

Database control
technologies

Scenarios

Upscaling



Important dates

- Questionnaire finalised and distributed. Oct 2009
- Zero report draft for distribution Dec 2009/Jan 2010
- Deadline for questionnaire responses March 2010 (or after individual agreements with countries)
- Stakeholder consultations (industry, agencies, NGOs) - continually
- Final report to UNEP Oct 2010

Final reporting

- Intended as a basis for discussions in INC
- Will focus on costs and efficiencies in different sectors
- Information will be presented in a generalised form

Important messages

- The study will rely heavily on national contributions
- Zero draft report will serve as a first estimate of costs and efficiencies and also as a template for information needed for more accurate estimates
- The quality and accuracy of the results will rely on contribution from parties

Thank you for your attention!

Contacts:

john.munthe@ivl.se