



# MERCURY

## GLOBAL CHALLENGE – GLOBAL SOLUTIONS

Mercury is a global environmental problem<sup>1</sup>. This fact is well documented and widely accepted. The magnitude of the mercury problem has been analysed, discussed and acknowledged globally in UNEP's Governing Council and other leading international and regional fora. Some measures have already been taken to reduce supply, demand and releases. But there is still need for further global action.

### **A LEGALLY BINDING INSTRUMENT ON MERCURY FOR FAIR AND EFFECTIVE LONG-TERM ACTION**

*A legally binding international instrument could be the most expedient tool for creating a common vision and coordinating measures to overcome the global mercury problem. In a fair manner.*

Finding the most feasible ways of reducing mercury releases at the global scale is challenging. The present UNEP Mercury Programme, which is based on voluntary action, is very important. However, the Nordic Council of Ministers believes that the programme alone will not be sufficient to solve the problems we are facing. A combination of actions could be the solution: A legally binding instrument, regional and national activities, international partnership programmes, awareness raising activities, monitoring progress and other elements will help to overcome the global threats posed by mercury. There is a need for more forceful and coordinated action, and binding measures would constitute an important part.

We find an international binding instrument a necessary tool for efficient, effective and fair long-term action.

Most mercury releases may be reduced or eliminated in a relatively straightforward manner. For example, well developed mercury-free alternatives are already available for almost all products containing mercury. Some sources of mercury releases may be more demanding and here a step-by-step approach could be considered, taking into account the risks for human health and the environment, different needs in different sectors, available capacities and resources. One example of such sources is the use of coal in power plants.

## FAIR SOLUTIONS FOR GLOBAL MERCURY ABATEMENT

*A legally binding international instrument may be the best way to mobilise long-term resources respecting the abilities of individual countries to contribute to the solution.*

Implementing measures to reduce the adverse impacts of mercury on health and the environment costs money. But it also saves money by reducing adverse effects on human health and on the environment. In many developing countries, due to their economic situation, and the great variety of competing priorities, the protection of citizens from hazardous chemicals is a difficult problem<sup>2</sup> that leaves them with a disproportionate burden. This applies to production, import, use and disposal of mercury and the products and processes in which it is used.

Developing countries often need financial and technical assistance in order to reach an adequate protection of their populations from unsafe exposure to chemicals. Technical assistance on a bilateral basis is important but vital needs may still be left without resources. A global instrument would form a common vision to coordinate the assistance. Based on experience, the commitment to help address global environmental issues is best mobilised through the provisions of binding international agreements. A convention, or agreement, can include special programmes for raising funds, as well as systems to facilitate application for, and allocation of, funds and assistance.

## SYNERGIES WITH OTHER INTERNATIONAL AGREEMENTS LEND EFFECTIVENESS TO AN INSTRUMENT ON MERCURY

*Many of the processes involved in the implementation of agreements on chemicals are of the same character across different agreements.*

Several international agreements have been reached during recent years. Some countries have voiced the concern that negotiating and implementing another international agreement – on mercury – would be costly and resource-intensive. The Nordic Council of Ministers is prepared to provide financial assistance to support negotiations toward an international binding instrument on mercury.

Some elements of the national implementation of an instrument on mercury would no doubt require mercury-specific work and associated needs for assistance. Examples are mercury release and consumption inventories to enable development of cost-effective and focused plans and measures.

On the other hand, many of the processes and the capacities needed for the implementation of agreements on chemicals and waste handling are similar in character across different agreements. Therefore, if implementation is planned with this in mind, considerable synergies may be realised – for example as regards development of national implementation plans, public participation activities, creating administrative capacity and development of common hazardous waste management measures.



*Some countries have waste management procedures for mercury waste to minimize releases.*

Photo © Maria Cone.



*Especially populations depending on locally caught fish and other aquatic foods are at risk due to mercury – here in the Arctic.*



Photo © UNIDO/GEF/UNDP/GMP



*Mercury finds its way to small-scale miners in spite of existing restrictions on its use in some countries.*

Photo © UNIDO/GEF/UNDP/GMP

## TECHNOLOGY TRANSFER AND ASSISTANCE TOWARDS BETTER PRACTISES

*Restricting supply of mercury will reduce releases and exposure, but assistance is needed to avoid negative social consequences.*

The most serious exposures occur when people work or live in the vicinity of mercury release sources. This may take place wherever mercury or mercury-containing products are handled. A remarkable example is small-scale gold mining activities taking place in about 50 countries worldwide.

Several countries, including the USA and the European Union, are holding back, or are considering holding back, substantial amounts of mercury from the global market in order to prevent this mercury from giving rise to releases elsewhere.

Reducing the mercury supply to the global market is expected to result in higher prices, which in turn will promote

more careful practices in small-scale gold mining and other sectors which are sensitive to the mercury price. These are practices that would save miners' money, improve their own health and that of their families, and reduce mercury releases to the environment at the same time. However, experts have noted that unless miners – already in a relatively precarious economic situation – are shown how to manage with less mercury, higher mercury prices may hit them hard, at least during a period of transition. As in all other aspects of the mercury problem, education and awareness are key factors<sup>3</sup>. An international binding instrument is likely to be the best means to ensure the needed assistance and awareness raising at all levels.

## MERCURY IS A GLOBAL CONCERN

*Critical intake of mercury with food is an actual risk to population groups all over the world.*

In virtually all regions of the world – including such remote areas as the Arctic – fish and other aquatic foods with mercury concentrations too high for frequent human consumption have been found<sup>4</sup>.

The most critical toxic effect from mercury is damage to the central nervous system, notably the developing brain

of the foetus. And in many countries women of childbearing age and small children are advised to avoid eating certain fish species often due to mercury contamination. In some countries pregnant women are advised not to eat certain fish species at all. Since fish and other aquatic foods contain valuable nutrients, mercury is therefore a threat to this important food resource.



*The developing brain is most vulnerable to mercury toxicity. Fish are sources of mercury as well as of important nutrients.*



Photo © UNEP

*UNEP Governing Council acknowledged at its meetings in 2003 and 2005 that mercury has impacts globally and that further action is needed.*

*Education is everything! Mercury is discussed with small-scale gold miners in Sudan.*

Photo © UNIDO/GEF/UNDP/GMP



*At least 100 million people depend on small scale gold mining, producing 20-30 percent of global gold production<sup>3</sup>.*



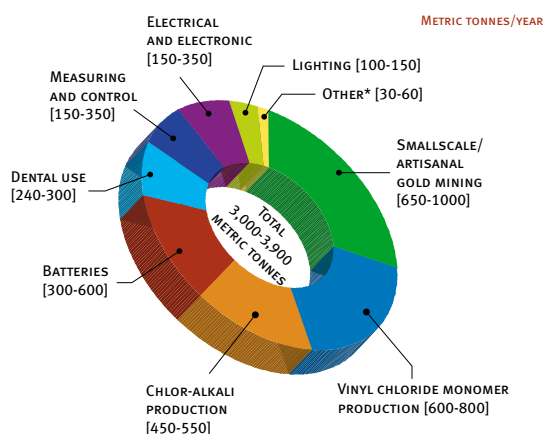
*Fish is an important food source, and some fish species around the world can be contaminated with mercury.*

## PEOPLE IN ANY COUNTRY CAN BE AFFECTED BY MERCURY

*No matter where mercury release sources are located, they may contribute to the global impacts of mercury.*

Elemental mercury vapour is transported globally in the atmosphere. Once released, mercury persists in the environment – circulating among air, water and soil. Current emissions add to the global pool – i.e. mercury that is continuously mobilised, deposited on land and water, and re-mobilised to the atmosphere via evaporation and wind-blown particles. How the transport routes will be affected by climate change is not yet known.

The quantity of mercury currently in the global pool is about three times higher than pre-industrial levels. This implies that while natural releases of mercury are significant, human activity has more than doubled the amount of mercury circulating in the biosphere. On the other hand, this also implies that the pool of mercury can be decreased through human efforts devoted to reducing mercury releases to the environment. Mercury pollution is a shared, global problem: what one nation does – or does not do – may affect all other nations. The problem can be mitigated through shared global efforts.



### MERCURY USES GLOBALLY

*Although there are alternatives to most uses of mercury, it continues to be used in many processes and products. In some Western countries, some of this use is restricted or prohibited, but production and use are still ongoing in other parts of the world. Waste treatment is a major mercury release source. Some countries have waste management systems that reduce releases from mercury containing waste, but many countries worldwide do not have such waste management systems, and practices like open waste burning and informal dumpsites are not uncommon. The diagram shows the estimated distribution of mercury use among key sectors globally in 2005 (source P. Maxson, 2006).*

## MERCURY POLLUTION

### – VIEWS AND PRIORITIES OF THE NORDIC COUNCIL OF MINISTERS

- Mercury is a serious and global environmental challenge. The Council therefore works to introduce adequate and efficient measures to reduce mercury pollution globally.
- The Nordic Council of Ministers considers a legally binding international instrument on mercury to be the most effective, efficient and fair framework for reducing global mercury releases and impacts.
- The Council is prepared to provide financial assistance to support negotiations toward a legally binding international instrument on mercury.

The members of the Nordic Council of Ministers: Finland, Denmark, Iceland, Norway, Sweden and the autonomous territories Faroe Islands, Greenland and Åland. See [www.norden.org](http://www.norden.org), English.

## READ MORE ABOUT MERCURY

- The Global Mercury Assessment: Describes all important aspects of mercury pollution in the global context: [www.chem.unep.ch/mercury/Report/Final%20Assessment%20report.htm](http://www.chem.unep.ch/mercury/Report/Final%20Assessment%20report.htm)
- UNEP Chemicals homepage on mercury and other metals: UNEP Governing Council decisions on mercury, the Global Mercury Programme, information and links on mercury from around the world: [www.chem.unep.ch/mercury/](http://www.chem.unep.ch/mercury/)
- Mercury - a global pollutant requiring global solutions: Describes the mercury problems and options for abatement, seen from the perspective of the Nordic Council of Ministers: [www.norden.org/pub/ebook/2002-516.pdf](http://www.norden.org/pub/ebook/2002-516.pdf)
- The European Commissions mercury home page: The EC mercury strategy, the draft mercury export ban, and various assessments: <http://ec.europa.eu/environment/chemicals/mercury>
- Arctic Council programmes describing impacts of mercury (AMAP: [www.amap.no](http://www.amap.no)) and the Councils' work toward reducing the impacts (ACAP: [www.acap.arctic-council.org/projects.cfm?pageID=4](http://www.acap.arctic-council.org/projects.cfm?pageID=4)).

#### REFERENCES

<sup>1</sup> Global Mercury Assessment, UNEP, 2002, and UNEP Governing Council decisions 22/23

<sup>2</sup> Government submissions to UNEP Chemicals for the Global Mercury Assessment at [www.chem.unep.ch/mercury/infosubmissions.htm](http://www.chem.unep.ch/mercury/infosubmissions.htm)

<sup>3</sup> Dr. Kevin Telmer, UNIDO: International Mercury Conference - How to reduce mercury demand and supply, Brussels, 26-27 October 2006, at: <http://ec.europa.eu/environment/chemicals/mercury/pdf/conf/telmer.pdf>

<sup>4</sup> Global Mercury Assessment, UNEP, 2002.