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The treaty — called the Minamata Convention on Mercury — sets what will become legally binding and enforceable limits on mercury. It will be formally celebrated in October in Japan, but still must be ratified by the signatory nations.

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The treaty — called the Minamata Convention on Mercury — sets what will become legally binding and enforceable limits on mercury. It will be formally celebrated in October in Japan, but still must be ratified by the signatory nations.

The State Department was the negotiator for the U.S.

The treaty sets controls and reduction targets for many industries, products and manufacturing processes that use mercury.

The problems caused by mercury are widely acknowledged; one European Union study showed as many as 2 million European children are born each year with mercury-caused learning deficiencies. The study calculated that the mental health damage costs European society \$12 billion a year in lost income.

But the cost to fix the mercury problem has been a major issue. In developing nations, mercury is used by poor miners to extract gold, sold to wealthier nations. And developing nations in Asia also rely more heavily on coal-fired power plants to electrify their economies.

The treaty will be finalized in Minamata, Japan, in recognition of the deaths and human suffering caused by mercury poisoning in that city. Generations of people from the city suffered severe mercury poisoning, including birth defects and early deaths, from the release of methylmercury in the wastewater from the Chisso Corp. chemical factory from 1932 to 1968. The mercury accumulated in shellfish and fish, which were a large part of local residents' diets.

David Lennett of the Natural Resources Defense Council said the treaty doesn't go far enough to make all fish everywhere safe to eat. But he added the treaty is still a good step forward.

The treaty “is strong in some areas but weak in others,” Lennett said in his blog. “The provisions on product phase-outs are relatively strong, while the air emission control requirements for existing facilities are delayed far too long. Still, the fact that there is a global mercury treaty at all is a significant accomplishment given the gridlock on other issues.”

No mercury exports

A new U.S. law banning the export of mercury took effect this month. Under federal law it is now illegal to export elemental mercury from the U.S., which should reduce the amount of mercury on the global market. Previously, much of it went to gold mining in developing nations, the U.S. Environmental Protection Agency said. The new law also calls for the long-term mercury management and addresses the storage of elemental mercury.

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23/1/13

Big deal, little fanfare over global pact on mercury controls

- 



Traditional miners pan for gold at a mine in Hampalit, Indonesia. Soaring prices for the precious metal have given rise to a doubling of toxic mercury emissions over the last eight years from unregulated gold processing at tens of thousands of remote sites, mostly in Asia, Latin America and Africa. (Dita Alangkara / Associated Press)

By Carol J. Williams

January 23, 2013 2:00 a.m.

It's a highly toxic element that travels the world in mysterious ways, respects neither manmade nor natural boundaries and rapidly accumulates in people and the food they eat.

Mercury's risks for human and environmental health have slowly but steadily come to light over the centuries, leading to ad hoc phase-outs of mercury-filled thermometers, dental amalgam and the felt-hat-shaping compound that caused brain damage in 19th century milliners, giving rise to the term "mad as a hatter."

U.S. and European governments have invoked strict regulations in recent decades to reduce mercury emissions. But fresh research by the United Nations Environmental Program and U.S. and European scientists has documented a concurrent rise in mercury emissions in Asia, Africa and the Arctic Ocean region, underscoring that mercury is a global problem in need of a collaborative solution.

A legally binding agreement to reduce emissions that was reached this past weekend at U.N.-sponsored talks in Geneva drew little notice or fanfare, probably because it still faces the rigors of ratification in 140-plus countries that will take another two to four years.



Carol J. Williams
GLOBAL FOCUS

Still, getting so many states with competing economic agendas and disparate means to commit to the plan was no small feat--and not a minute too soon, in the view of environmental advocates spooked by mounting evidence of mercury's dangers.

A European Union-coordinated [study](#) of 4,000 residents in 17 countries over the last two years found mercury levels in one-third of the test group to be above the amount considered safe, suggesting a causal link with brain damage in newborns.

"Mercury has been known as a toxin and a hazard for centuries, but today we have many of the alternative technologies and processes needed to reduce the risks for tens of millions of people, including pregnant mothers and their babies," said Achim Steiner, the U.N. Environment Program chief, in heralding the successful conclusion of the decade-long International Negotiating Committee on Mercury.

Studies released by the U.N. agency ahead of the culminating negotiations lent urgency to the forum's mission. In the world body's "Global Mercury Assessment 2013," emissions of toxic metals from artisanal gold mining were shown to have doubled since 2005. Researchers attributed some of the rise to more thorough reporting from developing nations, but blamed more of it on the lure of record prices commanded for the precious metal.

A separate U.N. study said coal burning was responsible for about 24% of mercury emissions globally each year, with a heavy concentration in Asia, where smokestacks lack the emissions-scrubbing equipment widely used in North America and Europe.

Franz Perrez, international affairs division chief for Switzerland's environmental office, attributed the unusual unity of purpose that secured the mercury pact in Geneva to a forum less subject to the rich-poor divides bedeviling the world body's pursuit of a climate change treaty.

"There are some differences over financing and burden-sharing and over the compliance mechanism, but these are typical," said Perrez, adding that he heard nothing to suggest ratification would be a problem.

Horse-trading remains to be done on helping developing countries switch to technologies that capture mercury emissions at the source and phase out antiquated and dangerous mining practices, said Noelle Selin, a professor of engineering systems and atmospheric chemistry at the Massachusetts Institute of Technology.

Mercury controls have been practiced on a voluntary basis by leading industrial countries in recent years, but "the advantage of having a treaty is that it is a strong legal statement that mercury is a

problem and sets guidelines and timelines for reducing its major sources,” Selin said in a phone interview from the Geneva forum.

Selin and Harvard University colleague Elsie Sunderland published an appeal in the journal [Environmental Health](#) this month for aggressive emissions reductions and pointed to the European Union study showing as many as 2 million children born on the Continent each year with mercury-induced IQ deficiencies. The study calculated that the mental health damage costs European society \$12 billion a year in lost income.

How mercury that has accumulated in the environment for millennia migrates the globe and transforms as it mixes with air, soil and water isn't well understood, said James Hurley, director of the University of Wisconsin Aquatic Sciences Center. But an [experiment](#) he conducted over the last seven years found that new emissions from industrial activities and mercury released from melting Arctic ice and thawing permafrost were far more hazardous to the food chain than deposits in the ground.

Mercury released from coal-fired plants that falls into lakes or watersheds converts to methylmercury in water and is absorbed first by plankton, then by the fish that feed on it. To determine how quickly the element enters the food chain, Hurley put about three times the amount of mercury into one of Canada's Experimental Lakes as would naturally make its way into the water body from rainfall and adjacent wetlands.

“We got a rapid response to new mercury added to the lake,” Hurley said. “More and more of the stable isotope kept accumulating in predator fish.”

Even more significant, he said, was the finding that as soon as researchers ceased adding mercury to the lake, absorption of it in fish responded with a parallel decline.

“By eliminating the amount of mercury in the atmosphere, we hopefully will be seeing improvement in mercury levels in fish,” Hurley said, predicting what passes for rapid rewards in environmental recovery if the global compact on mercury regulations moves ahead.

A foreign correspondent for 25 years, Carol J. Williams traveled to and reported from more than 80 countries in Europe, Asia, the Middle East and Latin America.

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http://www.lemonde.fr/planete/article/2013/01/19/mercure-vers-la-fin-des-amalgames-dentaires_1819448_3244.html

Mercure : vers la fin des amalgames dentaires

LE MONDE | 19.01.2013 à 10h28 • Mis à jour le 19.01.2013 à 11h12 Par Gilles van Kotte - Genève, envoyé spécial



Les dentistes français vont [devoir changer](#) leurs habitudes. Dans l'[Union européenne](#), ils sont ceux qui réalisent le plus d'obturations de caries en ayant recours une fois sur deux à des amalgames dentaires. Selon un rapport publié en 2012 par la Commission européenne, la France pèse à elle seule pour un tiers des 55 tonnes de mercure utilisées chaque année dans l'Union pour la réalisation de ces amalgames et dont la toxicité continue de [faire](#) débat.

Le texte de la convention sur le mercure, conclue samedi 19 janvier à Genève, prévoit une diminution de l'usage des amalgames, sans toutefois [fixer](#) d'objectifs chiffrés ni d'échéances. Chaque pays signataire s'engagera à [prendre](#) au moins deux des mesures figurant dans une liste annexée au traité, qui vont de la fixation d'objectifs nationaux de réduction au déremboursement des amalgames, en passant par la prévention des caries ou la recherche de solutions alternatives.

"C'est le début de la fin des amalgames dentaires dans le monde", se félicite Michael T. Bender, directeur du [Mercury Policy](#) Project, une organisation non gouvernementale (ONG) américaine. "Nous militons pour une interdiction pure et simple, mais c'est un résultat positif, reconnaît [Marie Grosman](#), conseillère scientifique de l'ONG française Non au mercure dentaire. Les amalgames sont en [Europe](#) la première source d'exposition et de contamination corporelle au mercure."

"MATÉRIAU ALTERNATIF"

Les opérations de pose ou de retrait de ces amalgames produisent aussi des déchets contenant du mercure et exposent les dentistes et leur personnel à de fortes concentrations. Longtemps opposée à des mesures de restriction de l'usage des amalgames, la France a changé de position en 2012.

A Genève, ce sont les recommandations, plutôt prudentes, de l'Organisation mondiale de la santé qui l'ont emporté. L'agence onusienne estime que les amalgames dentaires présentent un rapport bénéfices-risques favorable dans un certain nombre de cas et que les matériaux composites, à base de silice et de résine, qui constituent une alternative sont plus coûteux et moins solides.

"Le jour où l'on disposera d'un matériau alternatif facile d'utilisation et stable, on y passera naturellement, rien que pour des raisons esthétiques", la couleur des composites se rapprochant de celle des dents, affirme [Jean-Luc Eiselé](#), directeur exécutif de la Fédération dentaire internationale. Il estime que le traité est un "signal" qui rappelle à la profession sa responsabilité en matière d'environnement.

Nations agree first global treaty to ban mercury emissions

Yojana Sharma

22 January 2013 | EN | [ES](#)



If fully implemented the treaty would eliminate most mercury use by 2020

Flickr/burnt out Impurities

A legally binding global treaty to curb mercury in the [environment](#), agreed after a week of gruelling negotiations in Geneva, will also include a funding facility to assist developing countries in phasing out the toxic heavy metal in industrial processes and in artisanal gold mining in Africa, Asia and Latin America

The Minamata Convention on Mercury, named after the Japanese port where people suffered serious [health](#) effects from mercury pollution in the 1950s, was agreed by more than 140 countries after week-long talks in Geneva leading up to all-night negotiations on Saturday (19 January).

SPEED READ

- More than 140 countries have agreed to a treaty to cut mercury emissions
- Developing nations may get up to US\$100 million a year to help fund the required technologies
- But provisions on reducing mercury pollution from small-scale gold mining are too weak, critics say

It was a "herculean task", says Fernando Luginis, the Uruguayan diplomat who chaired the latest set of negotiations, which have taken four years in total.

The treaty includes a phased-in ban on the use of mercury in many industrial processes and in products such as thermometers, batteries and lamps. It will introduce a ban on primary mercury mining and mercury emissions from new power plants to take place within 15 years of the treaty coming into effect, as well as measures to reduce mercury releases from existing plants.

It also includes controls on the export and import of the heavy metal and measures to ensure the safe storage of waste mercury.

But no target dates were agreed for phasing out the use of mercury in subsistence, or 'artisanal', and small-scale gold mining. This is "by far the major contributor" to mercury emissions in Latin America and Sub-Saharan Africa, according to a UN Environment Programme (UNEP) report entitled 'Mercury: Time to Act', which was published this month.

Instead, countries must draw up national action plans to reduce mercury use in the sector within three years of the treaty coming into force.

The treaty did not ban use of mercury as a preservative in vaccines, which many in the public health community feared would make vaccines more expensive and harder to deliver safely.

If the treaty is fully implemented most global mercury use could be eliminated by 2020, according to the delegates. Around 50 countries must ratify the treaty for it to come into being — a process that could take another three years.

"Overall the message from the negotiations is that mercury use will go down, and [industries] will need to find something else [to replace it]. It is an important signal to the market," Elena Lymberidi-Settimo, Brussels-based co-

coordinator of global campaign group the Zero Mercury Working Group, tells SciDev.Net, adding that alternatives now exist for most mercury-containing products.

Noelle Selin, assistant professor of engineering systems and atmospheric chemistry at Massachusetts Institute of Technology, United States, says: "Because mercury lasts so long in the environment, any avoided emissions have long-term benefits".

Funding phase-out in developing countries

Independent international funding organisation the Global Environment Facility (GEF), will help pay for technical assistance and technological investments to help reduce or eliminate mercury, under a proposed mercury 'trust fund', it was agreed.

"There was strong support among negotiators for GEF to finance the new convention," says Lugris.

At the meeting, Naoko Ishii, CEO of GEF, said she was committed to securing "new and additional" financial resources to implement the treaty.

This is a major victory for developing country negotiators who had been pressing for funding assistance. Switzerland's chief negotiator, Franz Perrez, head of the International Affairs Division of the Swiss Federal Office for the Environment, says the target amount for the mercury fund has yet to be established.

"Figures have been put forward of between US\$50 million and US\$100 million," he tells *SciDev.Net*.

In addition, Japan, Norway and Switzerland have each promised US\$1 million as "interim funding" to help developing countries carry out the work needed before the treaty is signed in Minamata, Japan, in October.

This includes assessing the needs of countries in order to comply with the treaty "to develop inventories of where mercury emissions are taking place and for drawing up national plans. Each country has to determine what will have to be done," Perrez says.

Such data "will be key to the success of the new treaty", UNEP executive director Achim Steiner said during the talks.

A steep hill to climb

"It remains to be seen how effective the treaty is going to be. Just signing the treaty won't be enough: developing countries will need the [technology](#) [to comply with the treaty provisions]," Selin says.

Under the new rules, new power plants and industrial facilities will have to ensure that they are using the "best available technology" for reducing mercury emissions.

Delegates said it could cost tens of billions of dollars to carry out the changes envisaged in the treaty, including installing mercury filters and scrubbers in hundreds of coal-fired power plants in China and India.

East and South-East Asia account for about 40 per cent of anthropogenic mercury emissions into the atmosphere — with China producing about a third of global emissions — and South Asia a further eight per cent, according to the UNEP report 'Global Mercury Assessment 2013', which was published during the talks.

Selin said that funding must be focused on the biggest mercury sources that caused the greatest environmental harm. "What's going to be important is to get the most bang for the buck," she says.

The biggest need will be to fund the best techniques and practices and to apply emission standards to current facilities, Perrez says. "This will be the most expensive part for developing countries". Tackling artisanal mining will require less money, he adds.

The challenge of artisanal mining

The UNEP mercury assessment report found that emissions related to small-scale gold mining in developing countries, which escalated as the price of gold rose, had risen since 2005 to account for more than half of global mercury emissions.

But environmental groups say the provisions on artisanal mining are among the weakest in the treaty, and could be hard to enforce.

"Mercury artisanal and small-scale gold mining is already illegal in Brazil, but it is very complicated to control," says Zuleica Nycz in Geneva for the Brazilian environmental health non-governmental organisation Toxisphera, which is a member of the country's National Chemical Safety Commission.

"Most of it, for example in the Amazon basin, is clandestine, and mercury is still entering the environment," she says.

[Link to UNEP's 'Mercury: Time to Act' report](#)

[Link to UNEP's 'Global Mercury Assessment 2013' report](#)

Global mercury emissions treaty agreed

Minamata Convention treaty placing legally-binding limits on mercury emissions has been signed by more than 140 countries

More than 140 countries have agreed legal limits on mercury emissions after talks at a United Nations-backed convention in Geneva on Saturday (January 19).

Limits have been agreed on the supply of and trade in mercury; its use in products (such as thermometers, measuring devices and batteries) and industrial processes; and the level of emissions from gold mining, power plants and metal production facilities.



Janez Potočnik said the treaty will bring benefits to populations across the globe

After four years of negotiation, the Minamata Convention treaty will be officially signed at a ceremony in October in the Japanese town it is named after, which was hit by severe mercury pollution more than 50 years ago.

The agreement comes after a United Nations Environment Programme (UNEP) [report](#), 'Mercury: Time to act', found that mercury emissions from developing countries were on the increase due to mining and coal burning.

Emissions from gold mining (mercury is used to separate gold from the rock) and coal-fired power stations represent the biggest source of mercury pollution worldwide, according to UNEP. However, limits have been placed on mercury emissions from these large industrial facilities as well as from waste incinerators and cement clinkers.

Signatories of the Treaty will also be required to reduce and if possible eliminate the use of mercury by small-scale gold miners, while commitments to public awareness campaigns and promotion of mercury free alternatives are also part of the Treaty.

Benefits

European Commissioner for the environment, Janez Potočnik, said: "We have reached a robust, balanced and dynamic environmental agreement. Whilst the EU has an overarching strategy for controlling mercury at all stages of the mercury life-cycle, such controls are unfortunately lacking in many parts of the world. This new Treaty will bring benefits to all populations around the world, including the citizens of the EU given the long distances that mercury can travel in the air. Pregnant women, infants and children are at particular risk from mercury in the food-chain and this Treaty will bring about significant decreases to their exposure to this toxic substance."

He continued: "It would be unrealistic to expect more than one hundred countries around the world, with economies and living conditions significantly different to those of European citizens, to simply live up to our environmental standards here and now. But the new Treaty is a forceful driver towards a comprehensive mercury phase-out, and we are proud to see that many EU concepts and ideas have made its way into the text. The EU has fought for a global Mercury Treaty for almost seven years – and now we are there."

Elena Lymberidi-Settimo, of NGO the European Environmental Bureau (EEB) and co-coordinator of its Zero Mercury Working Group (ZMWG) also welcomed the Treaty: "Some of these steps were unthinkable just a couple of years ago. Now, alternatives exist for most all products containing mercury. The treaty sends the right market signal and will eventually lead to less exposures worldwide."

Concerns

However, there are concerns that the treaty does not go far enough in reducing mercury emissions, as new facilities will have five years to meet the new limits, while existing facilities will have as long as 10 years.

Michael T. Bender, who also co-ordinates the ZMWG, said: "Adoption of a global legal agreement on mercury is a major accomplishment. Yet the instrument is hampered by weak controls on mercury emissions from major sources like coal-fired power plants."

According to World Health Organization (WHO) guidance: “Mercury is highly toxic to human health, posing a particular threat to the development of the (unborn) child and early in life. The inhalation of mercury vapour can produce harmful effects on the nervous, digestive and immune systems, lungs and kidneys, and may be fatal.”

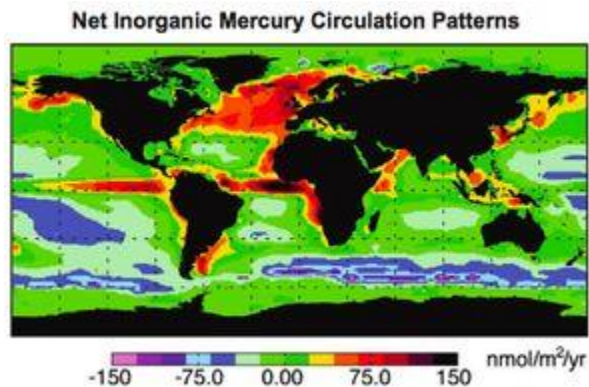
More information about the Mercury Treaty is available on the UNEP [website](#).

An international conference regarding the pollutant, ‘Mercury 2013’, is due to take place in Edinburgh at the end of July ([see airqualitynews.com story](#)).

Mercury: un premier traité mi-figue, mi-raisin

Le 21 janvier 2013 par Marine Jobert

»Air, Déchets, Risques & Santé, Sites & Sols, Politique & Société, Eau industrielle, Eau potable, Pollution des eaux, Sites et sols naturels, Sites et sols industriels, Droits/Fiscalité Risques et Santé, Produits, Espaces lacustres, ONG



L'Océan Atlantique est un réservoir à mercure.
IPEN

Le texte du premier traité sur le mercure a été négocié de haute lutte à Genève la semaine passée. Ambitieux et insuffisant à la fois, il interdit certains produits de consommation, limite les émissions des centrales à charbon et diminue l'usage de mercure dans les amalgames dentaires. Grands oubliés du traité: les orpailleurs artisanaux et leurs familles, exposés aux vapeurs de mercure et à une alimentation contaminée.

Le monde n'en a pas fini avec le mercure. Après 5 ans de négociations, les 140 Etats parties ont accouché en fin de semaine dernière du premier traité international contraignant visant à réguler -voire interdire- l'extraction, l'utilisation et les rejets de mercure. Un traité ambitieux, mais plein de failles face au vif-argent, connu pour ses effets toxiques sur les reins, les systèmes nerveux, cardiaque, gastrique, hématologique, immunitaire et reproductif.

Premier objectif: tarir la source. L'extraction primaire minière va être interdite dans le monde entier, d'ici 2025. Une avancée qui concerne un nombre restreint de pays –notamment la Chine, le Kirghizistan et l'Algérie- mais qui va permettre de ne pas aggraver la contamination mondiale déjà forte. Deuxième avancée: la plupart des produits ou procédés utilisant du mercure seront éliminés d'ici 2020. Finis les thermomètres, batteries,

interrupteurs, crèmes décolorantes pour la peau et «lampes écolos» à vapeur de mercure, «qui ont intoxiqué des milliers d'ouvriers lors de leur fabrication et exposé clients et employés lors de leur recyclage en magasin», déplore Marie Grosman, présidente de l'association [Non au mercure dentaire](#), la seule ONG française présente à Genève pour suivre les négociations.

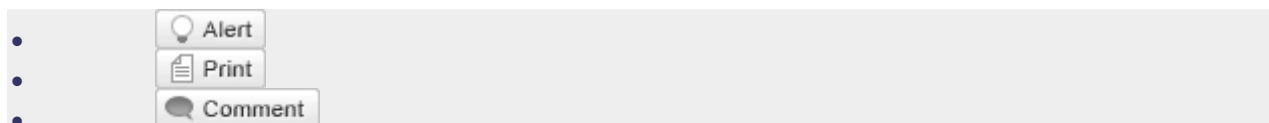
Les amalgames dentaires (3 à 400 tonnes métriques de mercure par an, 10% du mercure utilisé au plan mondial) restent dans la liste des produits dits en «phase down», c'est-à-dire dont l'usage doit être diminué, mais pas interdit. C'est surtout Cuba, appuyé par l'Amérique du Sud, qui a fait pression pour le maintien des amalgames. Dans la coulisse, décrit Marie Grosman, les lobbies dentaires ont insisté sur l'aspect «prévention des caries», plaidant qu'en l'absence de carie, les amalgames deviendraient inutiles. «Une position qui va à l'encontre de la demande des pays africains, qui sont parmi les plus touchés par l'augmentation de la consommation de sucre et donc par les caries», regrette Marie Grosman, qui plaide pour l'application du principe de précaution en la matière.

Enfin, le bilan s'avère mitigé pour ce qui reste les deux plus grosses sources d'émission de mercure: la production d'électricité –via la combustion de charbon- et l'orpaillage. Les pays qui consomment massivement du charbon, comme l'Inde ou la Chine, se voient contraints d'abaisser les seuils d'émission de leurs usines en activité et d'installer des filtres plus performants pour les futures usines. Les travailleurs de l'or sont, eux, les grands oubliés du traité. Ce sont des millions de familles à travers le monde –en France, avec la Guyane- qui séparent l'or du minerai en pratiquant le brûlage du mercure à l'air libre. Les vapeurs de mercure, puis la consommation de poissons également contaminés par les rejets dans les eaux, les condamnent à l'empoisonnement. Le traité prévoit l'édiction de bonnes pratiques, sans les réglementer plus avant. Enfin, certains secteurs ou pratiques bien spécifiques ont échappé à toute réglementation. Ainsi pour les usages religieux –comme l'ayurveda-, les produits à usage militaire et les vaccins pour les hommes et pour les animaux.

Globalement, au cours des diverses conférences organisées durant la semaine de négociation, il est apparu que les normes sanitaires étaient inadaptées face à la réalité de la contamination mondiale. «Les océans du monde entier sont des réservoirs de mercure», (voir photo) écrit l'[International POPs Elimination Networks](#) (Ipen), qui relève que les limites d'exposition édictées par les agences sanitaires sont largement dépassées dans quantités de points du globe.

Les Etats se retrouveront en octobre prochain à Minamata, cette ville côtière du Japon où, dans les années 50, l'empoisonnement des poissons, des chats, puis des hommes révéla l'extrême toxicité du mercure. Le traité sera alors ouvert à la ratification. Cinquante parafes seront nécessaires à son entrée en vigueur, ce qui devrait prendre deux à trois années au moins.

Global mercury ban to hit electronics, plastics, power prices



Minamata Convention will mean mercury runs away by 2020

http://www.theregister.co.uk/2013/01/21/minamata_convention/

By [Simon Sharwood, APAC Editor](#) • [Get more from this author](#)

Posted in [Science](#), [21st January 2013 02:55 GMT](#)

The United Nations Environment Programme (UNEP) has signed off on the Minamata Convention, a new global agreement that will ban mercury from most uses by 2020.

UNEP's *Mercury: Time to Act* [book](#) says the substance “damages the central nervous system, thyroid, kidneys, lungs, immune system, eyes, gums and skin” and can result in “Neurological and behavioural disorders ... with symptoms including tremors, insomnia, memory loss, neuromuscular effects, headaches, and cognitive and motor dysfunction.”

< a
href="http://pubads.g.doubleclick.net/gampad/jump?iu=/6978/reg_science/front&sz=300x250|300x600&tile=2&c=22UP-XoMCoZHAAABYzIcAAAAPj&t=ct%3Dns%26unitnum%3D2%26pos%3Dtop%26gunit%3Drow_top_mpu%26test%3D0" target="_blank">

Mercury mostly enters the human body through food, as it is passed up the food chain to organisms like large fish people enjoy eating.

The Convention's name was chosen for the Japanese city of Minamata, where industrial pollutants led to mercury concentrating in local shellfish. Thousands experienced Mercury poisoning as a result, with over 1,000 deaths.

The Convention will impact *Reg* readers in many ways. Some fluorescent lamps rely on the element, as do light switches. Button cells are another common application. If PCs and servers still need CMOS batteries by 2020, the button cells you buy will need to be manufactured without mercury (some jurisdictions already have this ban in place, given button cells' prevalence in toys and the likelihood kids can swallow them).

Mercury-rich devices like thermometers and blood pressure meters will have to be replaced. And you can forget about mercury switches in your after-hours electronics projects (and yes, we do know there are better alternatives these days).

PVC is also in trouble, as the zero mercury working group says much Chinese PVC relies on a mercury-intensive manufacturing process. Furniture, iPod covers, and even a [mouse](#) use PVC, as do a great many laptop bags and other tech accessories.

Large industrial facilities like coal-fuelled power plants, cement production and metal production factories are among the world's larger sources of mercury and will be regulated to reduce their output. The UNPE book says these industrial sources are worrisome as the mercury they emit is airborne. Much of these mercury emissions reach the arctic, where they find their way into the food chain. As many species conduct seasonal arctic migration, airborne mercury can therefore find its way back around the world to threaten populations dependent on migratory creatures.

Debate about controlling carbon dioxide emissions has nearly always seen such industries point out that compliance costs of a lower-carbon regime will mean higher costs for consumers. The same can surely be expected of mercury abatement measures, which could mean more pressure on data centre power bills. ®

Africa: Mercury Convention "Must Be Brought to Life"

BY JULIANE KIPPENBERG AND JANE COHEN, 21 JANUARY 2013

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OPINION

This weekend, more than 140 governments agreed on the text for a new legally binding convention on mercury, a highly toxic metal.

It has taken three years and many compromises to get here. What often seemed like a dry and bureaucratic process - delegates arguing over nuance during long night sessions - has very real implications for millions of people around the globe.

Mercury attacks the central nervous system and is particularly harmful to children. It is used in various sectors, including in the production of a type of plastic, polyvinyl chloride, and is emitted by coal-fired power plants. The largest sector for mercury use and emissions is artisanal and small-scale gold mining.

At least 13 million people in Africa, Asia, and Latin America work in small-scale gold mining, relying on mercury to separate gold from the rock ore. Miners, including children, mix the mercury into the crushed ore to attract the gold and burn the amalgam, releasing toxic mercury vapors.

This can cause permanent mental disability and a range of other conditions. Human Rights Watch research has found that many miners do not know about these risks. One doctor in Papua New Guinea told us how some miners with mercury poisoning were "star(ing) blankly at the wall" and "did not recover".

Under the new treaty, governments are obligated to draw up action plans on artisanal and small-scale gold mining. Under these plans, governments must ban the most harmful forms of mercury use, such as the burning of amalgam in residential areas, a practice we have documented in several countries.

Governments also have to promote methods to reduce mercury use in mining, seek to improve the health of miners, and take steps to protect children and women of childbearing age from exposure to mercury used in mining.

This is good news. Governments are finally getting a signal that they are responsible for ensuring their people and environment does not get poisoned. And for the first time, an environmental treaty recognises the importance of health strategies by including provisions on health prevention and treatment of mercury-related conditions.

But there is bad news too. The convention lacks teeth in many key areas. It does not set an end-date for the use of mercury in small-scale gold mining, nor does it include a clear plan on how to phase it out. While the treaty calls for protection of children, it does not explicitly address the critical and widespread problem of child labour in small-scale mining.

In the end the one article in the convention, which provides specific provisions for health, became voluntary after days of tough talks during which the European Union, Canada, and the United States rejected mandatory language on this.

Despite these flaws, the agreement of this new treaty is a positive development.

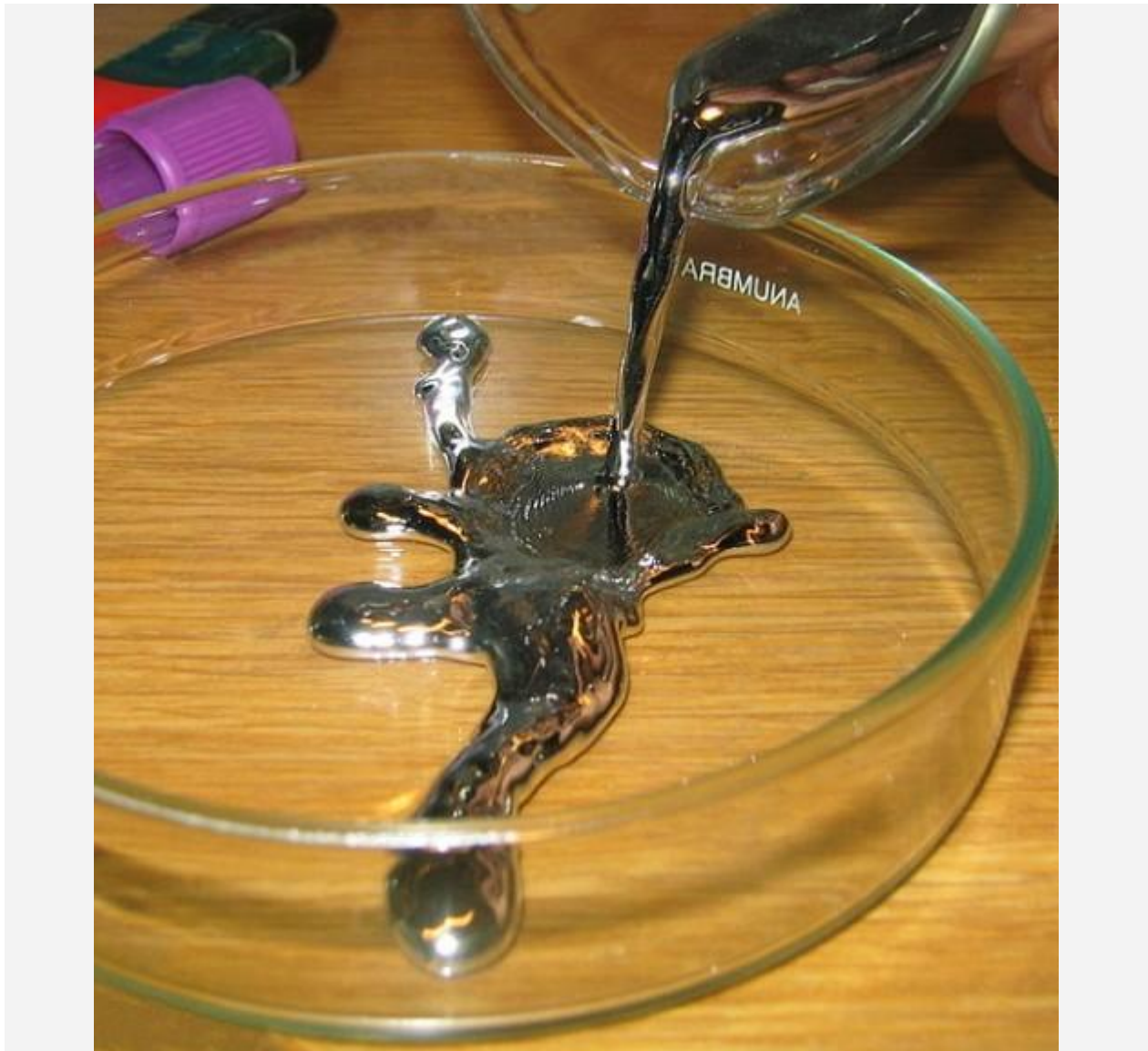
The new Minamata Convention on mercury - named after a mercury poisoning disaster that killed more than 1,700 people in Japan half a century ago - has to be brought to life now. Governments should sign it, ratify it, and implement it. If they do that, the convention will be a huge step forward in protecting the right to health.

January 22, 2013 9:08 am

[After Millennia of Heavy Use, Mercury Gets the Boot](#)

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Mercury is a liquid in its pure form. Photo: [Bionerd](#)

For at least two thousands years, the element [mercury](#) has fascinated a bevy of ancient civilizations, [from the Hindus to the Chinese, to the Greeks and Romans](#). But [an international resolution passed over the weekend](#) means that mercury's saga will soon be coming close to an end.

Two centuries before the turn to the Common Era, the first Emperor of China, [Ying Zheng](#), went to his grave surrounded by an army of clay soldiers—a force of troops and horses, chariots and weapons counting 8,000 strong. Nearby, [says National Geographic](#), were “replicas of the area's rivers and streams made with mercury flowing to the sea through hills and mountains of bronze. Precious stones such as pearls are said to represent the sun, moon, and other stars.” The great emperor died, it is thought, of mercury poisoning—[the unfortunate aftermath of his consuming the toxic metal in a bid for immortality](#).

Centuries later, hordes of would-be alchemists, [including Sir Isaac Newton](#), experimented with the liquid metal in a bid to turn lead into gold through the fabled Philosopher's Stone.

Right up through to the early 20th century, [says Julie Sloane for Dartmouth College](#), mercury's role in medicine continued—the element was used as a treatment for the then-rampaging syphilis.

In the 19th century, [says the American Chemical Society](#), “Mercurial disease was common among hatters and included such symptoms as tremors, irritability, and mental instability.”

To make felt, hatters separated fur from the skin of small animals in a process called carroting. In this process, the secondary nitrous gas released from mercury (II) nitrate caused the fur to turn orange, lose shape, and shrink. The fur also then became darker, coiled, and more easily removed.

The true industrial effects of mercury exposure, dramatized in [Lewis Carrol's](#) 1865 book [Alice's Adventures in Wonderland](#), inspired the phrase “Mad as a hatter.”

The 1970s marked a bit of a turning point in some people's perception of mercury, when the “[Poisoning of Minamata](#)” began to make headlines, [says](#) University of Minnesota philosopher of science [Douglas Allchin](#). In 1956, says Allchin, an “apparent epidemic broke out,” where “people would stumble while walking, not be able to write or button their buttons, have trouble hearing or swallowing, or tremble uncontrollably.” The disease was traced to the mass mercury-poisoning of the residents of Minamata Bay, Japan:

Minamata is located on the Western coast of Kyushu, Japan's southernmost island. . . . Its disturbing story begins, perhaps, in the 1930s, as the town was continuing to shed its heritage as a poor fishing and farming village. In 1932 the Chisso Corporation, an integral part of the local economy since 1907, began to manufacture acetaldehyde, used to produce plastics. As we know now, mercury from the production process began to spill into the bay. Though no one knew until decades later, the heavy metal became incorporated into methyl mercury chloride: an organic form that could enter the food chain.

To this day, mercury is a common component of a wealth of consumer and industrial products, everything from batteries and dental fillings to paint and cosmetics, [says the Environmental Protection Agency](#). But this, [says Science Insider](#), is soon to change, with the signing by 140 countries of the Minamata Convention. The agreement “will require its signatory nations to phase out the use of mercury in certain types of batteries, fluorescent lamps, and soaps and cosmetics by 2020,” draw down coal-fired power plants' and cement factories' mercury emissions, and reduce the use of mercury in gold mining.

Read more: <http://blogs.smithsonianmag.com/smartnews/2013/01/after-millennia-of-heavy-use-mercury-gets-the-boot/#ixzz2InR20zeg>
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21 January 2013 Last updated at 06:27 ET



Europe's environmental news and information service

News

Deal on global mercury controls agreed

ENDS Europe

Monday 21 January 2013

An international binding agreement to control emissions, use, trade and mining of mercury was sealed in Geneva in the early hours of Saturday after four years of negotiations.

The treaty, known as the Minamata convention, will ban the production and trade of a wide range of products containing mercury by 2020.

These products include switches, cosmetics, fluorescent lighting and non-electronic medical devices such as thermometers and most batteries, with a 2% limit applying to button cells used in some medical devices.

Exceptions to the ban include some large measuring devices and vaccines. Delegates also agreed to choose from a series of options to curb dental amalgam use. The EU is already considering action in this area, prompting [opposition](#) from some dentists.

Countries with small-scale and artisanal gold mining activities agreed to draw up strategies to reduce the pollution caused and, when possible, eliminate the use of the toxic metal. These activities account for about 37% of anthropogenic emissions, or 727 tonnes per year, according to the UN Environment Agency ([UNEP](#)).

Regarding industrial emissions, the negotiators agreed to apply best available techniques (BAT) to new installations, as it is already the case in the EU. But they delayed a decision on emission limits or which plants should be subject to them.

An agreement on these issues might be reached at the first meeting of parties to the new convention after it enters into force. This could be three to five years away.

The delay was criticised by the NGO coalition the Zero Mercury Working Group, which is also unhappy that the controls will not apply to oil and gas installations.

A new installation is a plant built one year after the convention's entry into force, which will happen once 50 countries have ratified the treaty. In countries signing up after entry into force, a new installation will be a plant built one year after ratification.

Old plants will have to develop plans to reduce emissions over time. These plans should contain at least one of four measures listed in the treaty, including BAT, quantitative limits and Emission Limit Values (ELVs).

EU commissioner Janez Potočnik said it was unrealistic to expect countries across the world to immediately adopt European quality controls. "But the new treaty is a forceful driver towards a comprehensive mercury phase-out, and we are proud to see that many EU concepts and ideas have made its way into the text," he added.

The convention is named after the [Japanese city](#) afflicted by industrial mercury pollution last century and where the convention will be formally adopted in October.

Follow-up:

UNEP [press release](#)

(<http://www.unep.org/newscentre/Default.aspx?DocumentID=2702&ArticleID=9373&l=en>) plus negotiations [webpage](#)

(<http://unep.org/hazardoussubstances/Mercury/Negotiations/INC5/tabid/3471/Default.aspx>) (the full text is not yet available) and Zero Mercury Working Group [reaction](#)

(<http://www.eeb.org/EEB/index.cfm/news-events/news/mercury-treaty-emerges-but-weak-emissions-regime-undercuts-progress/>)

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Global mercury treaty will take decades to work

<http://www.newscientist.com/article/dn23096-global-mercury-treaty-will-take-decades-to-work.html>

- 12:19 22 January 2013 by [Michael Marshall](#)
- For similar stories, visit the [Energy and Fuels](#) Topic Guide

This crackdown certainly has a few cracks in it. Activists have criticised loopholes in a new treaty, signed by 140 countries, that will control mercury pollution. But at least the [Minamata Convention on Mercury](#) does commit countries to reducing their mercury emissions.

The convention, named for a Japanese city that suffered [severe mercury pollution](#), aims to control global mercury levels. Products like batteries and thermometers that contain mercury will be phased out by 2020, while major sources like coal-fired power stations will have to obey new and stricter rules.

Mercury is a powerful neurotoxin that accumulates as methylmercury in the environment and in the bodies of marine animals. It causes [developmental problems and physical deformities](#) in humans, is lethal in acute cases, and [affects animals' ability to reproduce](#). The World Health Organization says it is [not possible to estimate how many people are killed or injured by mercury globally](#), mostly because there is not enough data on exposure, but the harm done to heavily exposed populations is significant.

According to the UN Environment Programme's [Global Mercury Assessment 2013](#), about 1960 tonnes of mercury were released into the air in 2010, and at least another 1000 tonnes into water. The biggest sources are [artisanal small-scale gold mining](#), which releases 727 tonnes per year, and coal burning, which emits 475 tonnes per year.

Loopholes?

But the treaty is weak on both points, says [Elena Lymberidi-Settimo](#) of the European Environmental Bureau in Brussels, Belgium. For instance, while the treaty encourages countries to draw up action plans to cut mercury use in artisanal gold mining, no targets or dates are specified.

That is because most artisanal gold mining is illegal and therefore difficult to track, so there's little point setting targets, says [Tim Kasten](#), head of the chemicals branch of UNEP in Geneva, Switzerland. Instead, the treaty focuses on [providing information and technologies to the miners](#) that will both improve their health and reduce the amount of mercury they release. "This is the most that can be done," he says.

Miners are using mercury to separate gold from its ore, then burn it off with a torch. Instead, Kasten wants them to use retort flasks that recover 80 per cent of the mercury, which they can later reuse. The system limits their exposure and the amount that is released into the environment.

Lymberidi-Settimo also criticises the treaty's rules on coal burning, the second biggest emitter of mercury. New coal-fired power plants must use the best available technology to cut emissions. But where existing plants are concerned, nations can choose to cut emissions by as little or as much as they wish.

However, Kasten says that while the rules are looser for existing coal facilities, they still have to cut emissions. "It's not a complete walk-away, there are things they will be required to do," he says.

Kasten says global mercury emissions should start to fall in the 2020s. It will then take a few decades for exposure rates to drop, as so much mercury has built up in the environment. "This is still going to take some time," he says. "But we have to start now."

Nations agree on legally binding mercury rules

By Mark Kinver Environment reporter, BBC News

More than 140 countries have agreed on a set of legally binding measures to curb mercury pollution, at UN talks.

Delegates in Geneva approved measures to control the use of the highly toxic metal in order to reduce the amount of mercury released into the environment.

Mercury can produce a range of adverse human health effects, including permanent damage to the nervous system.

The UN recently published data that showed mercury emissions were rising in a number of developing nations.

The deal was agreed after all-night talks.

"After complex and often all night sessions here in Geneva, nations have today laid the foundations for a global response to a pollutant whose notoriety has been recognised for well over a century," UN Environment Programme executive director Achim Steiner said on Saturday.

"Everyone in the world stands to benefit... in particular the workers and families of small-scale gold miners, the peoples of the Arctic and this generation of mothers and babies and the generations to come."

The rules, known as the Minamata Convention and named after the [Japanese town that experienced one of the world's worst cases of mercury poisoning](#), will open for nations to sign at a diplomatic conference later this year.

The convention will regulate a range of areas, including:

- the supply of and trade in mercury;
- the use of mercury in products and industrial processes;
- the measures to be taken to reduce emissions from artisanal and small-scale gold mining;
- the measures to be taken to reduce emissions from power plants and metals production facilities.

Ahead of the five-day meeting, Unep published a report warning that developing nations were facing growing health and environmental risks from increased exposure to mercury.

It said a growth in small-scale mining and coal burning were the main reasons for the rise in emissions.

As a result of rapid industrialisation, South-East Asia was the largest regional emitter and accounted for almost half of the element's annual global emissions.

Lasting effects

Mercury - a heavy, silvery white metal - is a liquid at room temperature and can evaporate easily. Within the environment, it is found in cinnabar deposits. It is also found in natural forms in a range of other rocks, including limestone and coal.

Burning coal is another major source of mercury emissions, the report says

Mercury can be released into the environment through a number of industrial processes including mining, metal and cement production, and the burning of fossil fuels.

Once emitted, it persists in the environment for a long time - circulating through air, water, soil and living organisms - and can be dispersed over vast distances.

The World Health Organization (WHO) says: "Mercury is highly toxic to human health, posing a particular threat to the development of the (unborn) child and early in life.

"The inhalation of mercury vapour can produce harmful effects on the nervous, digestive and immune systems, lungs and kidneys, and may be fatal.

"The inorganic salts of mercury are corrosive to the skin, eyes and gastrointestinal tract, and may induce kidney toxicity if ingested."

The Unep assessment said the concentration of mercury in the top 100m of the world's oceans had doubled over the past century, and estimated that 260 tonnes of the toxic metal had made their way from soil into rivers and lakes.

Another characteristic, it added, was that mercury became more concentrated as it moved up the food chain, reaching its highest levels in predator fish that could be consumed by humans.

Campaign group Zero Mercury Working Group co-coordinator Michael Bender called the global deal a "major accomplishment", but added: "Yet the instrument is hampered by weak controls on mercury emissions from major sources like coal-fired power plants."

He said new facilities would not be required to have mercury pollution controls for five years after the treaty came into force, with existing facilities given a decade before they had to begin their control efforts.

The World Coal Association (WCA), a trade body for the industry, said that burning coal account for about 24% of global mercury emissions and the use of "adequate technologies" could reduce emissions of the metal from coal-fired power stations by up to 90%.

WCA chief executive Milton Catelin said: "[The Convention] will ensure that countries are able to address the issue of mercury emissions from their coal-fired power plants via the application of technologies which are most appropriate in a given national context and for a given facility and without having to restrict the use of coal as an energy fuel or to compromise their economic development goals."

<http://www.bbc.co.uk/news/science-environment-21078176>

The Irish Times - Tuesday, January 22, 2013

Treaty on mercury restriction criticised

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FRANK McDONALD, Environment Editor

A new global regime to limit the use of mercury has been criticised by the European Environmental Bureau for not going far enough or fast enough to address the "spiralling human health risks" of exposure to this toxic substance.

Although adoption of the agreement in Geneva at the weekend is seen as a step forward, Michael Bender, joint co-ordinator of the bureau's Zero Mercury Working Group, said it was "hampered by weak controls on mercury emissions from major sources like coal-fired power plants". But the treaty had its "bright spots", including provisions to reduce trade in mercury, prohibit the primary mining of mercury and phase out the toxic element in products that contain mercury, such as batteries, energy-saving lightbulbs and thermometers.

The Minamata Convention on Mercury – named after a city in Japan where serious health damage occurred after mercury pollution in the last century – provides controls across products, processes and industries where mercury is used.

‘Notorious heavy metal’

The UN Environment Programme described mercury as a “notorious heavy metal” that had significant health and environmental effects, including brain and neurological damage in children, and kidney and digestive system harm in adults.

The treaty will be open for signature at a meeting in Japan in October. Funding to fast-track action until it comes into force has been pledged by Japan, Norway and Switzerland. Unep executive director Achim Steiner said it “laid the foundations for a global response to a pollutant whose notoriety has been recognised for well over a century”.

<http://www.irishtimes.com/newspaper/world/2013/0122/1224329146820.html>

Le mercure à la baisse

Progrès

Au terme d'une semaine de difficiles négociations, la Convention sur le mercure a été adoptée samedi par quelque 140 Etats. Cet accord va permettre de réduire au niveau mondial les émissions de mercure très nuisibles pour la santé et l'environnement. Le mercure est un métal lourd très toxique pour les êtres vivants.

La nouvelle convention a pour objectif de réduire la production et les utilisations du mercure, en particulier lors de la fabrication de produits et lors de processus industriels. Elle règle également la question du stockage et du traitement des déchets. Elle sera ouverte à la signature des Etats en octobre 2013 à Minamata, au Japon, en hommage aux habitants de cette ville touchée durant des décennies par une grave contamination au mercure. Elle entrera en vigueur lorsqu'elle aura été ratifiée par 50 Etats, ce qui devrait prendre trois ou quatre ans, selon les experts.

La Convention prévoit l'interdiction de cette substance dans les thermomètres, instruments de mesure de la tension, batteries, interrupteurs, produits cosmétiques et certains types de lampes fluorescentes d'ici à 2020. Ce processus de négociations avait été initié il y a dix ans par la Suisse et la Norvège.

Dans une étude présentée à la veille de la Conférence de Genève qui s'est tenue du 13 au 19 janvier, le Programme des Nations unies pour l'environnement a donné des indications chiffrées sur la présence du mercure dans les lacs et rivières. La déforestation s'est ainsi traduite, dans le monde, par un déversement dans les lacs et rivières de quelque 260 tonnes de mercure auparavant retenues dans les sols. Sur les cent dernières années, les quantités de mercure présentes dans les cent premiers mètres de profondeur des océans, et provenant d'émissions liées à l'activité humaine, ont doublé. Les concentrations dans les eaux profondes ont, elles, augmenté de 25 %, poursuit l'étude, en rappelant les risques de contamination des poissons destinés à la consommation.

Les ONG de défense de l'environnement se sont déclarées "décues" par la faiblesse des mesures prévues à l'encontre des deux principales sources de contamination : les petites mines d'or et les centrales électriques au charbon. Par ailleurs, la Convention ne prévoit pas l'interdiction du mercure dans certains vaccins. De même, aucune date d'interdiction de ce

métal dans les amalgames dentaires n'a été précisée, sous la pression du lobby des dentistes qui ont cependant admis que son utilisation doit diminuer.

(AFP)

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U.N. clinches global deal on cutting mercury emissions

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A general view of Rangeley Lake, which is being monitored for mercury levels, in Rangeley, Maine in this file photo taken August 23, 2005.

Credit: Reuters/Brian Snyder

By Tom Miles and Emma Farge
GENEVA | Sat Jan 19, 2013 2:28pm EST

([Reuters](#)) - More than 140 countries have agreed on the first global treaty to cut mercury pollution through a blacklist of household items and new controls on power plants and small-scale mines, the [United Nations](#) said on Saturday.

The legally-binding agreement aims to phase out many products that use the toxic liquid metal such as batteries, thermometers and some fluorescent lamps, through banning global import and exports by 2020.

The treaty will require countries with coal-fired power plants such as India and [China](#) to install filters and scrubbers on new plants and to commit to reducing emissions from existing operations to prevent mercury from [coal](#) reaching the atmosphere.

"We have closed a chapter on a journey that has taken four years of often intense but ultimately successful negotiations and opened a new chapter towards a sustainable future," said Fernando Lugris, chair of the negotiations.

The deal also includes measures to reduce mercury use in small-scale gold mining, although stopped short of an all-out ban. Gold prices near \$1,700 a metric ton have spurred the use of mercury as a catalyst to separate gold from its ore.

Emissions of mercury from artisanal and small-scale gold mines, which are usually unofficial and often illegal, more than doubled to 727 metric tons in 2010 from 2005 levels, overtaking coal-fired power plants as the main source of pollution from the metal.

The Minamata Convention on Mercury - named after the Japanese city where people were poisoned in the mid-20th century from industrial discharges of mercury - needs ratification from 50 countries and is expected to be formalized later this year.

The treaty requires governments to draw up national rules to comply and could take between three to five years to take effect.

As mercury, also known as quicksilver, is released to the air or washed into rivers and oceans, it spreads worldwide, and builds up in humans mostly through consumption of fish. The brains of fetuses and infants are particularly vulnerable to damage from mercury.

Officials said the financing required to bring in cleaner technology for industry and help developing countries come up with local solutions was one of the major sticking points of the six-day negotiations.

"Financing was agreed very early this morning and it was one of the most difficult aspects," said Lugris.

[Japan](#), [Norway](#) and Switzerland have made initial pledges totaling \$3 million in financing and an interim financial arrangement will be discussed in April by the Global Environment Facility, said Tim Kasten, head of the chemicals branch of UNEP.

Countries failed to agree on including vaccines where mercury is sometimes used as a preservative.

SOFT LANGUAGE?

While negotiators celebrated the deal reached after all-night talks in the fifth and final round of talks, the response from some non-governmental organizations (NGO) was more muted.

"The treaty will not bring immediate reductions of mercury emissions. It will need to be improved and strengthened, to make all fish safe to eat," said David Lennett from the Natural Resources Defense Council.

NGO IPEN, which aims to reduce the health risk of chemicals, described the language of the treaty as "soft" and "somewhat voluntary in nature" and said it was unlikely to result in a global reduction of mercury releases.

"Countries that do not want to do this can escape quite easily," said IPEN's Joe DiGangi.

In one notable climbdown, countries abandoned their goal of setting concrete targets for pollution levels from coal-fired power plants and cement factories, but negotiators said they would defer these discussions to a later meeting.

For mining, the treaty requires action from governments to reduce mercury use where artisanal and small-scale gold mining is "more than insignificant" but has no list of countries.

Alternatives to mercury in small mines are available, such as magnetic sluices, but developing countries have complained about the cost of implementation.

Many developing countries including [Brazil](#) and Mali strongly resisted attempts to limit imports of mercury, according to IPEN, because of the economic importance of small mines.

"The supply is still available, the practice of artisanal mining is still polluting and we are left with a mess at the end and there is no funding to clean it up," said DiGangi.

Artisanal and small gold mines now account for around 35 percent of global mercury pollution, according to a study by the U.N. Environment Programme published last week.

Other NGOs welcomed the number of products included in the treaty.

"The list of products was much longer than we expected," said Elena Lymberidi-Settimo, a coordinator at Zero Mercury Working Group. "The treaty sends the right market signal and will eventually lead to less exposure worldwide."

Many nations have already tightened laws - the United States barred exports of mercury from January 1, 2013. The European Union, until 2008 the main global exporter, barred exports of the liquid metal in 2011.

(Reporting by Emma Farge and Tom Miles; Editing by Sophie Hares)

<http://www.reuters.com/article/2013/01/19/us-mercury-idUSBRE90I06020130119>

***Groundbreaking mercury treaty adopted by 140 countries (Update)
January 19, 2013 by Nina Larson Enlarge An amalgam of mercury and gold —the toxic metal is used to extract the gold particles from the silt—in Delta Uno camp, department of Madre de Dios, southeast Lima, Peru, in the forest bordering with Brazil on November 16, 2009. More than 140 countries agreed Saturday on a ground-breaking treaty to rein in the use and emission of health-hazardous mercury, the UN said, but environmental activists lamented it did not go far enough.
google_protectAndRun("render_ads.js::google_render_ad", google_handleError, google_render_ad);Ads by GoogleLe Nucléaire & La Planète - Quel est l'enjeu du nucléaire sur la planète? Trouvez la réponse ici! - www.nucleairforum.be/Environnement The world's first legally binding treaty on mercury was reached after a week of thorny talks and ends four years of heated discussions on how to cut global emission levels of the toxic heavy metal, which poses risks to human health and the environment. "This was a herculean task .. but we have succeeded," Achim Steiner, UN under-secretary general and head of the UN Environment Programme (UNEP), told reporters in Geneva. The treaty has been named the Minamata Convention on Mercury, in honour of the Japanese town where inhabitants for decades have suffered the consequences of serious mercury contamination. It will be signed in Minamata in October and will take effect once ratified by 50 countries—something organisers expect will take three to four years. Mercury, also known as quicksilver, is found in products ranging from electrical switches, thermometers and light-***

bulbs, to amalgam dental fillings and even facial creams. Large amounts of the heavy metal are released from small-scale gold mining, coal-burning power plants, metal smelters and cement production. "It is quite remarkable how much mercury in a sense has entered into use in our lives... We've been creating a terrible legacy," Steiner said. "Mercury accumulates in the food chain through fish... It is released through coal fired power stations and it travels sometimes thousands of kilometres. It affects the Inuit in Canada just as it affects the small-scale artisanal gold miner somewhere in southern Africa," he said. Serious mercury poisoning affects the body's immune system and development of the brain and nervous system, posing the greatest risk to foetuses and infants. The treaty sets a phase-out date of 2020 for a long line of products including mercury thermometers, blood pressure measuring devices, most batteries, switches, some kinds of fluorescent lamps and soaps and cosmetics. EnlargeActivists wear mock lamps as headgear as they distribute leaflets to vendors and consumers along a street in Manila on October 22, 2009 to alert people to the dangers of dumping or burning mercury lamp waste. Delegations from some 140 countries have agreed to adopt a groundbreaking treaty limiting the use of health-hazardous mercury, the Swiss foreign ministry said on Saturday. It makes exceptions, however, for some large medical measuring devices where no mercury-free alternatives exist. In a controversial move, it also excluded vaccines that use mercury as a preservative. google_protectAndRun("render_ads.js::google_render_ad", google_handleError, google_render_ad); Ads by Google Rural energy regulation - A resource for EU policymakers on lower carbon resources - www.freechoices.eu/ The risk from these vaccines is considered low and for many developing nations, removing them would entail losing access to vaccines altogether, Tim Kasten, head of UNEP's chemicals division explained. Amid pressure from dentist groups, the treaty also did not provide a cut-off date for the use of dental fillings using mercury amalgam, but did agree that the product should be phased down. The text gives governments 15 years to end all mercury mining. While welcoming the treaty, a number of non-governmental groups said they were disappointed it did not go further. The text, many said, fell short in addressing the

greatest sources of mercury in the environment: artisanal small-scale gold mining, which directly threatens the health of the some 10-15 million people working in this field and contaminates water and air, as well as emissions from coal-burning power plants. "We're disappointed... The two biggest sources of mercury have only weak controls on them," Joe DiGangi, a science advisor with the IPEN advocacy group, told AFP. For coal-fired power plants, the treaty calls only for control and reduction of mercury emissions "where feasible", which is "vague and very discretionary," he said. As for small gold mining activities, using mercury will still be allowed, meaning imports and exports of the metal for this process will be legal, and governments will only be required to control the activity if they deem it "more than insignificant—whatever that means," DiGangi said. Richard Gutierrez, the head of Ban Toxics!, agreed. "With the current text, it seems the mercury use in (small-scale gold mining) may go on indefinitely," he said in a statement. Steiner acknowledged the criticism but stressed the treaty "is a dynamic instrument" and would evolve over time to address all concerns. Switzerland and Norway, which initiated the process a decade ago, with Japan pledged an initial \$3.0 million (2.2 million euros) to get things started. Once up and running, the treaty will provide funds to ease the transition away from mercury through the UN's existing Global Environment Facility (GEF), and probably also a second mechanism, organisers said. (c) 2013 AFP

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http://www.lemonde.fr/planete/article/2013/01/19/pollution-au-mercure-un-traite-international-voit-enfin-le-jour_1819447_3244.html

Pollution au mercure : un traité international voit enfin le jour

LE MONDE | 19.01.2013 à 11h08 Par Gilles van Kote - Genève (Suisse), envoyé spécial



La première convention internationale sur le mercure est née, samedi 19 janvier au petit matin, à Genève, au terme de quatre ans de gestation, d'une semaine d'intense travail de négociations et d'une longue nuit d'accouchement. Les délégués de 130 pays présents en [Suisse](#) ont poussé un soupir collectif de soulagement autant que d'épuisement. De l'avis quasi général, le texte *"n'est pas parfait, mais il a le mérite d'exister"*.

La plus spectaculaire des mesures adoptée est la disparition programmée de l'extraction du mercure (la [Chine](#) en est le premier producteur mondial) dans un délai de quinze ans à [partir](#) de la ratification de la convention par le pays concerné. L'importance des stocks et les possibilités de recyclage devraient toutefois [prolonger](#) la commercialisation de ce métal toxique bien au-delà de cette échéance.

Une liste de produits contenant du mercure et devant disparaître au plus tard en 2020 (sauf exemption, d'une durée maximale de dix ans) a également été adoptée. Elle comprend, entre autres, certaines catégories de piles et de batteries, d'ampoules basse [consommation](#), de pesticides, de produits cosmétiques et d'instruments de mesure comme les thermomètres.

Ce cycle de négociations avait été lancé par le Programme des Nations unies pour l'environnement (PNUE), en février 2009, en vue de [doter](#) la communauté internationale d'un "instrument juridiquement contraignant" de lutte contre les dégâts environnementaux et sanitaires provoqués par le mercure. L'inhalation ou l'ingestion de ce métal peuvent [provoquer](#) de graves problèmes de santé et troubles du développement, en particulier chez les enfants.

L'ORPAILLAGE, PREMIÈRE SOURCE DE POLLUTION MONDIALE AU MERCURE

Entre dix et quinze millions d'orpailleurs à travers le monde en utiliseraient sans précaution pour [extraire](#) l'or du minerai, inhalant ainsi des vapeurs toxiques, selon le PNUE. Mais le risque sanitaire le plus répandu provient de la consommation de poissons situés en bout de chaîne alimentaire, dont l'organisme concentre le méthylmercure, [forme](#) organique particulièrement nocive du mercure relâché dans l'environnement par l'homme. Les Inuits canadiens et du Groenland présentent ainsi des concentrations de mercure particulièrement élevées, alors qu'ils vivent loin des centrales à charbon qui constituent la deuxième source mondiale de pollution, après l'exploitation de l'or.

"Notre objectif est de réduire, et quand c'est possible d'éliminer, les émissions et rejets de mercure provoqués par les activités humaines", avait rappelé [Achim Steiner](#), le directeur exécutif du PNUE en préambule à [la réunion](#) de Genève. *"Les mesures qui figurent dans le traité ne sont pas à la hauteur des objectifs : elles permettront de ralentir l'augmentation des émissions, pas de réduire celles-ci",* déplore Joe DiGangi, du Réseau [international](#) pour l'élimination des polluants organiques persistants (IPEN).

Si les centrales à charbon devront améliorer leurs performances en matière de filtration des émissions de mercure, la convention n'empêchera pas un Etat d'en [ouvrir](#) de nouvelles et d'[augmenter](#) éventuellement ainsi ses émissions en valeur absolue.

Concernant l'exploitation artisanale de l'or, les pays estimant qu'il s'agit chez eux d'une activité "significative", un terme assez flou, devront [mettre](#) en place des plans nationaux afin d'en améliorer les pratiques, mais l'usage du mercure restera autorisé.

"LE TEXTE COUVRE TOUT LE CYCLE DE VIE" DU MÉTAL

"Globalement, le texte est assez satisfaisant, d'autant qu'il couvre tout le cycle de vie du mercure, de l'extraction aux déchets, en passant par les émissions," déclare un délégué de l'[Union européenne](#). *Il n'est pas très contraignant, mais on pourra le [faire](#) évoluer avec le temps."*

"Pour que la convention soit plus ambitieuse, il aurait fallu que les pays du Nord mettent davantage d'argent sur la table", estime un représentant du PNUE. Les questions financières

ont été l'un des principaux points d'achoppement dans la dernière ligne droite, tout comme les modalités de mise en place d'un comité de suivi de l'application de la convention.

La plupart des pays du Sud réclamaient la mise en place d'un nouvel outil financier doté d'un budget propre, mais se sont heurtés au refus de ceux du Nord, partisans de [confier](#) le financement des actions menées dans le cadre de la convention au Fonds pour l'environnement mondial (FEM), sans augmentation des ressources de ce dernier. La Suisse, la [Norvège](#) et le [Japon](#) ont cependant promis de débloquer environ un million de dollars (750 000 euros) chacun.

La convention entrera en vigueur quand au moins cinquante Etats l'auront ratifiée. Sur proposition du Japon, elle a été baptisée convention de Minamata, du nom de la ville japonaise dont des milliers d'habitants furent frappés, dans les années 1950, par une terrible maladie provoquée par une pollution maritime, d'origine industrielle, au mercure.

Minamata Convention Agreed by Nations Sat, Jan 19, 2013

Global Mercury Agreement to Lift Health Threats from Lives of Millions World-Wide

| [Français](#)

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Geneva/Nairobi, 19 January 2013 - International effort to address mercury-a notorious heavy metal with significant health and environmental effects-was today delivered a significant boost with governments agreeing to a global, legally-binding treaty to prevent emissions and releases.

Further Resources

- [Background to the fifth session of the INC5](#)
- [Global Mercury Assessment 2013](#)
- [Time to Act](#)

The Minamata Convention on Mercury-named after a city in Japan where serious health damage occurred as a result of mercury pollution in the mid-20th Century-provides controls and reductions across a range of products, processes and industries where mercury is used, released or emitted.

These range from medical equipment such as thermometers and energy-saving light bulbs to the mining, cement and coal-fired power sectors.

The treaty, which has been four years in negotiation and which will be open for signature at a special meeting in Japan in October, also addresses the direct mining of mercury, export and import of the metal and safe storage of waste mercury.

Pinpointing populations at risk, boosting medical care and better training of health care professionals in identifying and treating mercury-related effects will also form part of the new agreement.

Mercury and its various compounds have a range of serious health impacts including brain and neurological damage especially among the young.

Others include kidney damage and damage to the digestive system. Victims can suffer memory loss and language impairment alongside many other well documented problems.

Initial funding to fast track action until the new treaty comes into force in the expected three to five years' time has been pledged by Japan, Norway and Switzerland.

Support for developing countries is also expected from the Global Environment Facility and a programme once the convention is operational.

Achim Steiner, UN Under-Secretary General and Executive Director of the UN Environment Programme (UNEP) which convened the negotiations among over 140 member states in Geneva, said at the close: "After complex and often all night sessions here in Geneva, nations have today laid the foundations for a global response to a pollutant whose notoriety has been recognized for well over a century."

"Everyone in the world stands to benefit from the decisions taken this week in Geneva- in particular the workers and families of small-scale gold miners, the peoples of the Arctic and this

generation of mothers and babies and the generations to come. I look forward to swift ratification of the Minamata Convention so that it comes into force as soon as possible," he said.

Fernando Lugris, the Uruguayan chair of the negotiations, said : " Today in the early hours of 19 January 2013 we have closed a chapter on a journey that has taken four years of often intense but ultimately successful negotiations and opened a new chapter towards a sustainable future. This has been done in the name of vulnerable populations everywhere and represents an opportunity for a healthier and more sustainable century for all peoples".

Ambassador Franz Perrez of the Federal Ministry for the Environment, Switzerland said:"Switzerland, which initiated with Norway the negotiations for a mercury convention, is very pleased about this impressive success. It will help us to protect human health and the environment all over the world and is a proof that multilateralism can work when political will exists."

"This treaty will not bring immediate reductions of mercury emissions. It will need to be improved and strengthened, to make all fish safe to eat," said David Lennett from the Natural Resources Defense Council representing the Zero Mercury Working Group a global coalition of environmental NGOs "Still, the treaty will phase out mercury in many products and we welcome it as a starting point."

The decision to launch negotiations was taken by environment ministers at the 2009 session of the UNEP Governing Council and the final and fifth negotiation took place this week in Geneva.

The scope of the new treaty which puts in controls and also reduction measures in respect to mercury is as follows.

Products

Governments have agreed on a range of mercury containing products whose production, export and import will be banned by 2020.

These include:-

- Batteries, except for 'button cell' batteries used in implantable medical devices
- Switches and relays
- Certain types of compact fluorescent lamps (CFLs)
- Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps
- Soaps and cosmetics

Certain kinds of non-electronic medical devices such as thermometers and blood pressure devices are also included for phase-out by 2020.

Governments approved exceptions for some large measuring devices where currently there are no mercury-free alternatives.

- Vaccines where mercury is used as a preservative have been excluded from the treaty as have products used in religious or traditional activities
- Delegates agreed to a phase-down of the use of dental fillings using mercury amalgam.

Artisanal and Small-Scale Gold Mining

The booming price of gold in recent years has triggered a significant growth in small-scale mining where mercury is used to separate gold from the ore-bearing rock.

Emissions and releases from such operations and from coal-fired power stations represent the biggest source of mercury pollution world-wide.

Workers and their families involved in small-scale gold mining are exposed to mercury pollution in several ways including through inhalation during the smelting.

Mercury is also being released into river systems from these small-scale operations where it can contaminate fish, the food chain and people downstream.

- Governments agreed that the treaty will require countries to draw up strategies to reduce the amount of mercury used by small-scale miners
- Nations with artisanal and small-scale gold mining operations will draw up national plans within three years of the treaty entering into force to reduce and if possible eliminate the use of mercury in such operations
- Public awareness campaigns and support for mercury-free alternatives will also be part of the plans

From Power Stations to Cement Factories

The new treaty will control mercury emissions and releases from various large industrial facilities ranging from coal-fired power stations and industrial boilers to certain kinds of smelters handling for example zinc and gold.

Waste incineration and cement clinker facilities are also on the list.

Nations agreed to install the Best Available Technologies on new power plants and facilities with plans to be drawn up to bring emissions down from existing ones.

The negotiations were initially looking to set thresholds on the size of plants or level of emissions to be controlled. But it was decided this week to defer this until the first meeting of the treaty after it comes into force.

Notes to Editors

Background to the fifth session of the Intergovernmental Negotiating Committee to prepare a global legally binding instrument on mercury (**INC5**)

<http://unep.org/hazardoussubstances/Mercury/Negotiations/INC5/tabid/3471/Default.aspx>

Global Mercury Assessment 2013

http://www.unep.org/publications/contents/pub_details_search.asp?ID=6282

Time to Act http://www.unep.org/publications/contents/pub_details_search.asp?ID=6281

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Mercury treaty fails to offer poor gold miners a quicksilver solution

New measures may not go far enough to help artisanal gold miners, who face significant health risks from mercury exposure

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Mercury rising ... New measures agreed in Geneva offer little solace to gold miners such as those at Kilomoto in north-east Congo. Photograph: Finbarr O'Reilly/Reuters

The [new mercury treaty](#) will rewrite the rules on how the toxic element can be used around the world. But it remains unclear how the treaty will affect those facing some of the greatest health risks from the substance: small-scale gold miners in the developing world.

"The scientific evidence is so incontestable ... and the health impacts are so debilitating," says Achim Steiner, executive director of the UN Environment Programme (Unep). "We want to find a way in which mercury can be taken out of the small-scale gold mining sector. Unbeknown to many of the people who are engaged in this gold mining, it is a very harmful compound."

The mercury treaty, which was finalised in Geneva after a five-day negotiating marathon that finished early on Saturday morning, will regulate the supply, trade and use of the substance. Under the terms of the treaty, governments will be encouraged – but not obliged – to take measures to manage the health impacts of mercury exposure. In countries where [artisanal gold mining](#) takes place, governments will be required to draft national action plans to reduce its use.

Mercury has long been used in thermometers, dental fillings, batteries and fluorescent lamps. The metallic element can also be a by-product of industrial processes including coal combustion, cement production and waste incineration. But, [according to Unep \(pdf\)](#), the biggest source of global mercury [pollution](#) is small-scale gold mining, an activity that [sustains the livelihoods](#) of as many as 15 million people in 70 countries, mostly poor ones.

Mercury emissions – which have no taste or smell – contaminate water, where they accumulate in fish and the animals that eat them. Consumption of mercury-laced fish can impair neurological development in children and unborn babies. In high doses, it can cause brain damage in adults. But mercury does most harm when people encounter it directly, either by exposing their skin to the element or inhaling its fumes. Many small-scale gold miners do both of those things on a regular basis – and the [health impacts are starting to show](#) (video).

"In communities where [small-scale gold mining] is a prevalent practice, you can see people who have tremors, who have difficulty walking, who have a lot of uncontrolled eye movements – things that are external symptoms of neurological impacts," says Susan Keane, a senior environmental analyst at the [Natural Resources Defence Council](#). "One big problem in these communities is that doctors aren't trained to recognise the symptoms or the problems of mercury pollution, so they don't even know what they're dealing with."

With gold at near-record prices, more people – [including many children](#) – have been drawn into artisanal gold mining, which is responsible for as much as 20% of the world's supply of the metal. Most miners use mercury to separate gold from the surrounding ore and debris. According to Unep, artisanal and small-scale gold mining puts roughly 700 tonnes of mercury into the environment every year.

"Today, mercury is still used [in small-scale gold mining] because it's very easy, it requires very little technical skills and it's widely available," says Rickford Vieira, the head of Guyana's geology and mines commission. "There are alternatives which are more expensive and require more technical expertise."

The treaty falls short of banning the use of mercury in gold mining, instead requiring governments to come up with strategies to phase it out gradually. Those plans have yet to be written, but observers say they are likely to include measures to encourage the adoption of new technologies, or support recycling mercury where miners still use it.

"The objective of the treaty is not to stop people from engaging in artisanal gold mining," says Steiner, who warns it would be unwise to "legislate against [miners'] livelihoods".

Banning the use of mercury outright would risk creating a black market for the substance, warns Keane. But not everyone agrees that a softer approach is the way to go.

"While national action plans will foster reduced use of mercury in [gold mining], the treaty fails to include a provision to require an eventual end to this polluting practice," says Richard Gutierrez, the director of [Ban Toxics!](#), an NGO based in the Philippines. "With the current text, it seems that mercury use in [mining] may go on indefinitely."

The mercury treaty, which was negotiated over four years by delegates from more than 140 countries, will be signed at a diplomatic conference in Minamata, Japan, in October. The treaty, which will be known as the Minamata convention, will take effect as soon as 50 nations ratify it.

Financing arguments put global mercury deal on brink

Jan 17 ([Reuters](#)) - Agreement may be near on a global treaty to reduce the use of toxic mercury, but arguments about a few tens of millions of dollars are taking the talks to the brink, a U.N. official involved in the Geneva negotiations said on Thursday.

Another official predicted that the talks were likely to bring a deal late on Friday or in the early hours of Saturday, but it was still unclear whether the eventual text would be "a Swiss cheese" - full of holes.

The agreement as it stands would commit countries to phasing out mercury thermometers, some kinds of lightbulbs and small "button" batteries, with 2018 the earliest possible deadline, according to officials involved in the closed-door talks of 146 nations.

But other products, such as dental amalgam used as fillings for teeth, are likely to be excluded from the initial treaty coverage.

"The negotiations are now in their most critical and volatile phase," said the U.N. official, who spoke on condition of anonymity, calling the state of talks "a high-wire act".

"People have agreed a great deal and they're now homing in on the issues most difficult to address. Amongst them is [finance](#) and also the level of ambition in terms of what is in and what is out, or how long actions are deferred.

"There is still a possibility that three years of extremely intense negotiations, and countries looking for compromise solutions, could fall apart."

MILLIONS AGAINST BILLIONS

One participant said the developed countries were together being asked to contribute about \$30-40 million per year to help with a problem that was likely to cost developing countries tens of billions.

"It's not aid that we're talking about here," said a third official involved in the talks, adding that the health of people all around the world was affected by mercury emissions.

Mercury is mainly emitted by gold mining, where it helps to separate gold from ore, and by coal-fired power plants.

As it is released to the air or washed into rivers and oceans, it spreads worldwide, and builds up in humans mostly through consumption of fish. The brains of fetuses and infants are particularly vulnerable to damage from mercury.

While [China](#) and India would have to install filters and scrubbers on their coal-fired power stations to prevent mercury in the [coal](#) reaching the atmosphere, Chile would have to stop the relatively large amount of mercury in its copper reserves leaking out when it mines the copper.

The treaty would also be likely to force a change in small-scale and artisanal gold mining, which doubled its mercury emissions between 2005 and 2010 as the gold price soared.

Mercury from such gold mines now makes up 35 percent of total global emissions, according to a study by the U.N. Environment Programme published last week.

The talks in Geneva are the fifth and final round of negotiations. If a deal is struck, the resulting convention is expected to be approved at a conference later this year in Minamata, [Japan](#), the site of one of the world's worst industrial mercury releases in the 1950s.

Treaty Sought To Limit Damaging Effects Of Mercury

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Fishmongers inspect large bluefin tuna before auction at Tokyo's Tsukiji fish market. Mercury levels abound in top predators like tuna after they work their way up the food chain.

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TEXT SIZE
January 14, 2013

Delegates from more than 130 countries and dozens of nongovernmental organizations are attending a weeklong conference to forge a global, legally binding treaty aimed at limiting the damaging effects of mercury on health and the environment.

The UN Environment Program (UNEP) is overseeing this fifth and final round of treaty talks.

UNEP reports that the global threat to human and environmental health from mercury is growing. A new report finds that worldwide, nearly 2,000 tons of mercury is emitted into the air from human activities every year. Much of this toxic substance is subsequently deposited on vegetation, in the soil, and in oceans, lakes, and rivers.

The deputy head of UNEP's Chemical Branch, David Piper, tells VOA that much human exposure to mercury is through the consumption of contaminated fish.

He says mercury may be converted by organisms into toxic organic forms, which work their way up the food chain.

"Microorganisms are eaten by small fish, the small fish are eaten by big fish, the big fish are eaten by us," Piper says. "If we have a fish-based diet, we can end up with a significant load of mercury in our bodies and, therefore, being at great risk from mercury poisoning."

Mercury affects the brain and nervous system and can cause physical and mental development problems in children. Pregnant women who ingest mercury can pass the toxic effects to their unborn children.

The UNEP finds the global demand for mercury is decreasing somewhat, with many developed countries taking measures to reduce mercury use. But it notes mercury use is increasing in developing countries.

It says small-scale gold mining and coal burning are the major sources of mercury emissions into the air. It says Asia contributes almost half of these global emissions because of increasing industrialization.

The report says annual emissions from small-scale gold mining are estimated at 727 tons, or 35 percent of the global total. Piper says this poses a direct threat to the health of millions of people in Africa, Asia, and South America.

"At the moment, artisanal and small-scale gold mining is a feature of probably around 70 countries with 10-15 million miners. I think that is probably an underestimate these days. It is very often driven by the gold price and by poverty. This is poor people looking for a source of livelihood."

Piper says the best way of reducing the risk of mercury to human health and the environment is to stop using it as soon as possible. This is unlikely to happen. So he says delegates are drafting a legally binding treaty that aims to control emissions of mercury into the atmosphere.

He says the draft treaty stresses the need for industries to work on pollution control and to avoid the spread of products containing mercury. The treaty calls on rich countries to provide financial support to poor countries and outlines a series of mechanisms to ensure compliance and implementation of the measures.

The treaty is scheduled to be adopted toward the end of the year in Japan.

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Talks have begun in Geneva on an agreement to ban the use of mercury. The metal is a threat to the health of millions, especially in developing countries. Every year, 2,000 tons of mercury end up in the human environment. Mercury is a highly toxic heavy metal which gets into the food chain via water, where it concentrates particularly in the bodies of fish. It attacks the heart and the circulatory system and, if it is ingested regularly, can lead to kidney failure, respiratory arrest and death.

This week, in Geneva, a fifth and decisive round of negotiations has begun on an agreement to improve protection from the effects of mercury poisoning.

"We hope that these negotiations will lead to a strong international agreement, which will bring about a significant reduction in the global level of mercury pollution," Sarah Häuser, chemicals expert with Friends of the Earth Germany told Deutsche Welle. Specifically, that would mean that "new mercury mines would be banned and existing mines closed."

In addition, mercury should no longer be used in industrial products such as batteries and energy-saving light bulbs.

"The use of mercury in small goldmines must also be banned," said Häuser. "That is a big problem in developing countries."



Mercury is used in the process of mining gold

Human Rights Watch estimates that 13 million people working in small goldmines around the world come into unprotected contact with mercury. Among them are many children, who are particularly susceptible to mercury's damaging effects. According to a report published ahead of the meeting by the UN's development agency UNEP, mercury emissions in the gold-mining industry have doubled since 2005, and the UNEP expects consumption of gold to rise as a result of the increase in the price of the commodity.

Health protection

Human Rights Watch supports a demand that any mercury agreement should include a clause dealing specifically with the protection of health.

"There has to be much better education about the effects of mercury on children and adults, as well as about how one can protect oneself," Juliane Kippenberger of HRW told DW. Such education could be carried out by local health authorities and health centers.

HRW criticizes the fact that industrial countries have been emphasizing the issue of environmental protection in the negotiations: "It would be desirable if the Western countries, including Germany, would change their position and commit themselves to including a well worked out strategy on health issues in the agreement," says Kippenberger. "This is about the human right to health."



Coal-fired power stations need modern filters

But for that, doctors and other medical staff in developing countries would have to be better trained, so that they could educate others and diagnose the symptoms of mercury poisoning accurately. "It's clear to us that one can't use the mercury agreement to reform the health systems in the countries of the South - that would be expecting far too much of it."

Asia- producer and victim

Almost half the world's mercury emissions come from Asia, particularly from coal-fired power stations fitted with inadequate filters. The main threat to humans comes from polluted rivers and lakes with contaminated fish. The UNEP report says that, in the last 100 years, the amount of man-made mercury pollution in the top 100 meters of the sea has doubled.

But, according to Elena Lymberidi-Settimo of the European Environmental Bureau, which brings together 140 environmental organizations, it's Asia which provides most of the opposition to binding regulations. "China and India want voluntary measures; they've so far rejected binding limits for mercury emissions, as the EU member states demand."

EU has to take responsibility



Energy-saving lamps contain mercury and need careful

disposal

Another stumbling block in the negotiations is the matter of finance. "The donor countries and the developing countries are on opposite sides on this," says Lymberidi-Settimo, who has set up a "No Mercury" campaign. "The issue of financial support for developing countries will be decisive, but it will only be dealt with at the end."

Developing countries face the challenge of replacing mercury, which is still relatively cheap, not just in gold mining, but also in such areas as dentistry or in thermometers. Coal-fired power stations will have to be fitted with modern filters.

Sarah Häuser of Friends of the Earth Germany also demands that "industrial countries must support developing countries to develop alternative production processes and technologies."

But she admits that the EU has played a positive role in these negotiations, which began in Stockholm in 2010: "Compared with the rest of the world, the EU has made huge progress and has committed itself to a strong agreement."


Minamata Convention

Lymberidi-Settimo hopes that a mercury agreement will provide significant impulses for similar agreements on other chemicals. "One major improvement in comparison with earlier agreements is that commitment to keep to the agreement is linked to financial benefits," she points out.

Delegates from 147 states will be attending the talks in Geneva until January 18 under the auspices of the UNEP. The agreement will be known as the Minamata Convention, after a Japanese town at the center of a region whose population was severely affected by decades of mercury pollution of the sea. The convention will come into effect, at the earliest, in one or two years' time.

DW.DE

UN Mercury Emissions Treaty Discussed To Set Limits On Highly-Toxic Metal Pollution

By JOHN HEILPRIN 01/13/13 01:07 PM ET EST 

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Achim Steiner (R), UNEP Executive Director talks on January 10, 2013 during a joint press conference with Richard Mwendandu, Kenya's Environment ministry's Director of mineral resources in Nairobi, Kenya, where he said that mercury, which exists in various forms remains a global threat to human health and the environment.

GENEVA — Delegates from more than 130 nations began a final round of negotiations on Sunday that are expected to lead to the creation of the first legally binding international treaty to reduce mercury emissions.

The treaty would set enforceable limits on the emissions of mercury, a highly-toxic metal that is widely used in chemical production and small-scale mining, particularly artisanal gold production.

Swiss diplomat Franz Perrez, whose nations helped prompt the call for the treaty, told reporters on Sunday in Geneva that "we are confident that we'll be able to conclude here this week" with a final document that nations will adopt later this year.

Fernando Lugris of Uruguay, who chairs the negotiations, said the six-day conference that has drawn almost 900 delegates and dozens of non-governmental organizations from around the world already has agreed on a draft text to be used this week for negotiations.

The U.N. environment program reported last week that mercury pollution in the top layer of the world's oceans has doubled in the past century, part of a man-made problem that will require international cooperation to fix.

The report by the U.N. Environment Program, which is helping to sponsor the treaty talks, showed for the first time that hundreds of tons of mercury have leaked from the soil into rivers and lakes around the world.

Communities in developing countries face increasing health and environmental risks linked to exposure to mercury, which comes from sources such as coal burning and the use of mercury to separate metal from ore in small-scale gold mining, the U.N. agency says.

About 70 countries are involved in so-called artisanal gold mining, putting up to 15 million miners at risk of exposure to mercury, including 3 million women and children, said David Piper of the U.N. Environment Program.

But the risk of mercury exposure in gold mining "cannot be solved through a ban," said Perrez, who called that aspect of the negotiations "a special situation" that requires a more complex approach.

Mercury concentrations pose the greatest risk of nerve damage to pregnant women, women of childbearing age and young children.

As a naturally occurring element, mercury comes from the earth's crust and, like some other elements, cannot be created or destroyed. Some natural processes, like volcano eruptions and weathering of rocks, release mercury into the environment. But about 30 percent of mercury emissions come from human causes, which the treaty would seek to reduce.

Once it gets into the land, air and water, mercury accumulates in fish and wildlife and goes up the food chain. Most of it isn't removed until ocean or lake sediments bury it, or other mineral compounds trap it.

(for IPEN) Huffington post



[Robert F. Kennedy Jr.](#)

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We Need a Mercury Treaty With Teeth

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Co-authored by Marc A. Yaggi, cross-posted from [The Guardian](#)

Next week, [diplomats from around the world will gather in Geneva](#) to negotiate a treaty on global emissions of mercury - a lethal neurotoxin that includes, among an inventory of grim effects, brain damage and the loss of IQ points in unborn children, injuries to kidneys and heart, and results in tens of billions of dollars in healthcare costs every year in the US alone. The Geneva conference is the final of five meetings, with a treaty expected soon thereafter.

While global mercury emissions are on the rise, negotiators, unfortunately, appear to be leaning towards a treaty with soft measures unlikely to prevent continued catastrophic impacts from this deadly and debilitating poison. Ironically, signatories propose to ink their treaty in [Minamata, Japan, a town that famously suffered widespread mercury poisoning](#).

Health experts first described mercury poisoning, then called "[Minamata disease](#)", in Minamata city, in [Japan](#), in 1956. Mercury discharges from the Chisso chemical plant contaminated finfish and shellfish, devastating the community's human and animal population for decades. Many of the region's citizens died and tens of thousands of people suffered mercury-related illnesses.

A former Japanese prime minister proposed naming the treaty the "Minamata Convention" to inspire delegates to reach an agreement that would prevent future mercury poisoning. Sadly, the treaty does not require identification or remediation of contaminated sites, does not require polluters to pay for health damages or environmental clean-up, or provide for protection from similar disasters occurring anywhere in the world. In fact, the treaty is not expected to reduce global levels of mercury in fish and seafood at all.

Poisonous mercury raining down from [coal](#)-fired power plants has contaminated fish in every US state. Now, a [new report from the Biodiversity Research Institute \(BRI\) in Maine and IPEN](#), a network of 700 public interest organizations in 116 countries, shows the devastating global impacts of mercury [pollution](#) from coal-burning power plants and other mercury sources. The [IPEN-BRI Global Hotspots report](#) finds that coal-fired power plants, artisanal small-scale gold mining, chlor-alkali plants, and other industrial sources contaminate humans and fish around the world with mercury levels that exceed health advisory levels.

Mercury levels in fish from sites in Japan and Uruguay were so high that no consumption is recommended, according to US EPA guidelines, and 95% of the human hair samples taken from individuals tested in Tokyo, Japan exceeded the US EPA reference dose. The report demonstrates the need for a treaty that effectively addresses mercury releases.

The US is only now starting to see progress in reducing mercury emissions. In America, citizen action forced EPA to adopt the first ever [mercury and air toxics](#) rule in 2012. This rule will prevent 90% of the mercury in coal burned at power plants from being emitted into the air. Experts estimate the rule will, among other things, prevent annually up to 6,000 heart attacks, 130,000 asthma attacks, 3,000 cases of chronic bronchitis, and 4,000-11,000 premature deaths.

Moreover, experts predict the rule will save \$40-70bn in healthcare costs annually. Imagine the benefits if these reductions were implemented globally.

Coal barons and mining magnates are profiting from poisoning the rest of us. As coal consumption dwindles in the US, these companies are exporting their deadly product to the rest of world. A [recent report from World Resources Institute \(WRI\) estimates](#) that almost 1,200 additional coal-fired plants are planned for development around the world.

But the mercury treaty is likely to call simply for reductions on a per facility basis, rather than an overall reduction in mercury emissions to air and [water](#). As a result, the treaty could legitimize *increased* mercury pollution as the number of coal-fired power plants increases globally. Moreover, there is no agreement that the treaty should even require existing facilities to apply the best available techniques to reduce mercury releases.

We need a mercury treaty that actually reduces global mercury pollution. A treaty that fails to include mandatory mercury reductions overall will dishonor the victims of Minamata disease and accelerate mercury poisoning across the globe.

Those of us who care about public health and clean water must stand strong and shame the spineless diplomats in Geneva into crafting a treaty that truly prevents the devastating environmental and public health impacts of mercury.

(for IPEN) from The guardian

Mercury poisoning is a growing global menace we have to address

As the US knows to its cost, coal-fired power is a major cause of mercury pollution. The world needs a treaty tough on emissions

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Minamata sufferer Suemi Uemura, with benumbed legs stretched out, in her home in Izumi, Japan. Minamata disease is caused by industrial mercury pollution. Photograph: Katsumi Kasahara/AP

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- Editor's note: a number of minor editorial changes were made after publication at the request of the authors; none substantively altered the meaning of the article

Unep highlights mercury risks ahead of treaty talks

Chlor-alkali industry asks for 'achievable' phase out deadlines

10 January 2013 / Multinational bodies, Europe

Developing countries are facing increasing health and environmental risks because of exposure to mercury, according to a study published by the United Nations Environment Programme (Unep) ahead of negotiations to finalise a new international treaty on mercury. A second report by the organisation insists that the time to act on mercury is now.

"Mercury has been known as a toxin and a hazard for centuries, but today we have many of the alternative technologies and processes needed to reduce the risks for tens of millions of people, including pregnant mothers and their babies," says Achim Steiner, Unep executive director. "A global, legally binding treaty translated into national laws and supported by creative financing, can accelerate and scale-up such responses and put the planet and its people on track to a more sustainable world."

Talks will begin on 13 January in Geneva between Unep and national governments to try to thrash out a global legally binding treaty on mercury. Mr Steiner highlights that "the WHO has concluded there are no safe limits in respect to mercury and its organic compounds," yet parts of Africa, Asia and South America are likely to see increasing emissions of mercury into the environment.

According to Unep's *Global Mercury Assessment 2013* this increase is due mainly to the use of the substance in small-scale gold mining and through the burning of coal for electricity generation. This study and the organisation's *Mercury: Time to Act* report will be presented at the meeting.

Unep argues that a globally binding treaty would "reduce cases of neurological and behavioural disorders, and other health problems linked to mercury, as well as the contamination of soils and rivers caused by man-made emissions of the metal." A study

published in the open-access journal *Environmental Health* earlier this week forecast that reducing human exposure to methylmercury could save the EU up to €10bn per year ([CW 8 January 2013](#)).

Much human exposure to mercury is through the consumption of contaminated fish. Unep shows that in the past 100 years, man-made emissions have caused the amount of mercury in the top 100 metres of the world's oceans to double. Concentrations in deeper waters have increased by up to 25%, says the report. The study also highlights significant releases of mercury into the environment from contaminated sites and deforestation, estimating that 260 tonnes of the substance that was previously held in soils are currently being released into rivers and lakes. A letter sent this week by the Zero Mercury Working Group (ZMWG) to delegates urging them to support "a strong international agreement on mercury," highlights a recent report on global mercury seafood contamination ([CW 4 December 2012](#)).

The Unep publications likewise highlight other sources of potential mercury contamination, including consumer products such as electronic devices, switches, batteries, energy-efficient light bulbs and certain cosmetics, dentistry, plastic production, and the chlor-alkali industry.

"During the negotiations, the World Chlorine Council will make it clear that the agreed deadlines to phase out mercury have to be achievable," Dolf van Wijk, director of science and regulatory affairs at Euro Chlor, the European chlor-alkali industry association, told *Chemical Watch*. "Our member companies have no problem moving from mercury to membrane technology as it is ultimately more energy and cost efficient, but the changeover is costly and takes time."

According to Mr van Wijk, "in India, where its economy is growing fast, new plants investments have a shorter pay-back time than in more mature markets such as the EU."

He also highlighted a Unep partnership report "*The Economics of conversion*," which shows that, based on realistic cases, it takes more than ten years to balance the costs of this change, if no additional benefits are applicable. Unep must therefore take this into consideration."

Philippa Jones

Chemical Watch

Pressure mounts to cut global mercury pollution

Calls for measures to reduce mercury pollution around the world abounded this week ahead of the final round of international negotiations on a legally-binding treaty. The one-week talks will begin on Sunday in Geneva, Switzerland.

In its latest Global Mercury Assessment released on Thursday, the UN's environment programme, UNEP, showed that artisanal and small-scale gold mining represented 37% of global anthropogenic mercury emissions in 2010.

"While taking into account the impacts on national development, we must move to set national goals and reduction targets," said Fernando Lugris, chair of the inter-governmental negotiating committee. "Other efforts should work towards the formalisation of a sector that is largely unregulated," he added.

In a [note](#) issued on Wednesday, the Swiss environment ministry said Switzerland will push for a comprehensive regulatory framework covering mercury production, uses and waste disposal. The country has been at the forefront of action to promote greener gold extraction practices through projects in Equator, Bolivia and Peru.

According to the UNEP report, the second biggest emitter of mercury is the coal-fired power sector with 24% of global emissions, followed by metal production (18%).

UNEP estimates that just under 2,000 tonnes of mercury were released to the environment that year. Geographically, nearly 40% came from south eastern Asia, compared with 4.5% and 3.1% in the EU27 and North America respectively.

On Saturday, the NGO coalition the Zero Mercury Working Group (ZMWG) will present new findings on mercury seafood contamination during a pre-treaty event in Geneva to show that strong action to reduce pollution is urgent.

In [December](#), the ZMWG highlighted that the consumption of ordinary amounts of fish with higher mercury levels, such as swordfish or king mackerel, can cause health risks to pregnant women and children. It urged national governments and the World Health Organization should lower their acceptable intake levels for mercury in fish.

A legally-binding deal to reduce global mercury pollution is likely to be agreed by the negotiators next week, following five rounds of [talks](#) since 2009.

"In the last round of negotiations countries were dragging their feet on taking tough action on mercury," stated Richard Gutierrez of NGO Ban Toxics! "If the global community does not agree on mandatory emission cuts or meaningful reductions in mercury use and trade by the end of the week, this treaty will be a failure."

Follow Up:

UNEP's latest [Global Mercury Assessment](#) and [press release](#). See also [EEB press release](#) and Geneva mercury talks [webpage](#)

Tough talk over mercury treaty

Nations debate how to share the costs of cutting emissions.

- [Jane Qiu](#)

09 January 2013

Governments are on the verge of agreeing the first legally binding, global treaty to tackle mercury pollution. It aims to clean up the legacy of centuries of untrammelled emissions of the toxic metal, and to limit future contamination from sources as diverse as coal-fired power plants and gold mining.

Delegates from 128 countries are expected to meet next week in Geneva, Switzerland, for a fifth and final round of treaty negotiations. All agree that action is needed urgently to reduce mercury emissions, which pose risks to the environment and human health. But consensus on how to achieve that will not come easily. The current top emitters, in Asia, want to know why they should shoulder the burden of clean-up when much of the world's mercury pollution is due to the past economic growth of developed nations — an argument that parallels one of the main stumbling blocks to an international greenhouse-gas agreement.

Yet with mercury able to drift freely through air, soil, rivers and oceans, it is crucial that the negotiations deliver "a global treaty that is going to be implementable in all the countries", says Fernando Lugris, chairman of the Intergovernmental Negotiating Committee of the United Nations Environment Programme (UNEP), which is coordinating the treaty.

According to a draft version of UNEP's 2013 Global Mercury Report, about 6,500 tonnes of mercury was emitted into the air in 2010. Roughly 30% came from human activities, and a further 15% from natural sources such as volcanoes and erosion. The remainder was from the re-emission from soils, water and vegetation of mercury released into the environment decades ago. "Once emitted into the air, it's like a genie that has escaped the bottle," says David Streets, an environmental scientist at Argonne National Laboratory in Illinois. "It takes decades or even centuries to get it fixed."

The UNEP report points out that mercury concentrations in the upper 100 metres of the oceans have doubled in the past century; top marine predators in the Arctic Ocean contain up to 12 times more mercury than in pre-industrial times, and contaminated seafood is a significant source of human exposure.

The World Health Organization (WHO) rates mercury as one of the top ten chemicals of major public health concern — it can damage the brain and is a particular hazard for fetuses.

Streets estimates that human activity has released a grand total of about 350,000 tonnes of mercury, with roughly 40% of those emissions occurring before 1850 (see [‘Quicksilver quantified’](#)). Much of the rest came from silver and gold mining in the late nineteenth century, when mercury was used to extract precious metals. However, emissions have soared in recent decades, propelled by small-scale, or artisanal, gold mining in Africa and Latin America, and rapid industrialization in Asia ([D. G. Streets et al. *Environ. Sci. Technol.* 45, 10485–10491; 2011](#)). China is now the biggest emitter, contributing 30% of global anthropogenic emissions.

Expand

Source: D. G. Streets et al. *Environ. Sci. Technol.* 45, 10485–10491 (2011)/UNEP

Cleaning up industrial processes, for example by capturing mercury released from burning coal, involves costly technology. In the negotiations, “the biggest contention is who should pay”, says Ludovic Bernaudat, a mercury expert at the United Nations Industrial Development Organization in Vienna. “There are a lot of tensions right now.”

Before the latest round of negotiations, in June 2012, the discussions aimed at an agreement for all countries to cap mercury emissions. But developing nations such as China and India — second only to China as an emitter — were adamant that this would be unfair unless developed nations helped with the cost and technologies. Common measures for controlling air pollution have the potential to reduce mercury emissions from coal plants by about 36%, “but to go further you’d need specific mercury-control technologies that can remove 90% of emissions, which are only available in developed countries”, says Wang Shuxiao, an environment scientist at Tsinghua University in Beijing, who is part of the Chinese delegation.

Developed nations seem unlikely to commit to funding the transfer of such technologies. Negotiators may settle on an agreement that requires countries to set national targets that they can meet with the best mercury-control measures available to them, and to beef up monitoring programmes. UNEP predicts that such measures could reduce emissions in industrial regions by 25% by 2020, compared with an increase of up to 25% under a business-as-usual scenario.

The treaty also aims to limit emissions from artisanal gold mining, which is largely unregulated. Miners soak crushed ore in mercury to form an amalgam that leaves impurities behind; heating the amalgam frees the gold, but releases mercury into the air. “Most of them are unaware of the health hazards of mercury vapour and nobody wears a mask,” says Nicola Pirrone, director of the Institute of Atmospheric Pollution Research in Rome. The treaty is likely to recommend that countries register and monitor mining, and will encourage technologies that capture mercury vapour or use jets of water and air to separate gold from ores (see [Nature 486, 306–307; 2012](#)).

In late February, at the Global Ministerial Environment Forum in Nairobi, UNEP’s governing council will debate the draft treaty that will emerge from next week’s meeting. UNEP expects countries to ratify the treaty later this year. Even if the treaty does not set binding caps, “it should still build enough momentum for countries to commit to serious efforts to tackle the problem”, says John Munthe, an environment-policy

researcher at the Swedish Environmental Research Institute in Stockholm. “There are plenty of low-hanging fruits that could make a big difference in reducing global mercury emissions.”

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