

**ZERO MERCURY WORKING GROUP  
ACTION CHALLENGE INTERIM REPORT**

**Introduction**

At the Diplomatic Conference last October, the Zero Mercury Working Group (ZMWG) issued an Action Challenge, calling on certain governments to complete priority mercury reduction activities before the end of 2015. The activities relate to mercury supply and trade, mercury products and processes, and mercury air emissions. The Action Challenge can be found at [www.zeromercury.org](http://www.zeromercury.org).

In this report, we summarize the status of the Action Challenge, and provide an interim **global** grade based on the progress made to date in each of the issue areas, to the best of our knowledge. Our grading criteria are as follows:

<i>Activity successfully completed -</i>	
<i>Significant progress made toward completion and successful conclusion anticipated before the end of 2015 -</i>	
<i>Some progress made but outlook for completion uncertain -</i>	
<i>No significant progress made thus far -</i>	
<i>No significant progress made thus far and such progress is unlikely before the end of 2015 -</i>	

Grades were based on both government actions and any significant global trends or global activities. Global trends and activities affected two of the grades in particular. The global grade on ASGM activities was elevated based upon the breadth of activities underway in anticipation of early Convention implementation. The global grade on mercury supply and trade was lowered, because of a significant number of disturbing international developments, identified below, which reinforce the critical importance of immediate and decisive national actions in this area.

The developments on supply and trade also have important implications for INC 6. They highlight the need for timely information on mercury production and trade, which the INC should take into account as it considers the draft materials related to Article 3, and the draft Article 21 reporting form. We also urge governments to request the Interim Secretariat to update the global supply, demand and trade report in advance of INC 7.

ZMWG ACTION CHALLENGE	CURRENT STATUS	OVERALL GRADE AND COMMENTS
<b>MERCURY SUPPLY AND TRADE</b>		
China mercury export ban	No formal action taken or underway.	<p data-bbox="1066 840 1348 929"><i>Global Grade</i> </p> <p data-bbox="1066 952 1460 1198">This grade accounts for several countries which are considering export bans (including Canada), but also considers the lack of action in other countries, and the disturbing trends in global supply and trade specified below.</p>
Japan mercury export ban	Export ban is among the mercury issues under consideration as part of the interagency consultation process initiated in 2014 under the joint auspices of the Central Environmental Council and the Industrial Structure Council. <sup>1</sup> A final policy decision is anticipated in 2015.	
Switzerland mercury export ban	Export ban is under consideration by the government, but it is unclear whether a final policy decision will be made before the end of 2015.	
Singapore mercury export ban	Status unknown. Efforts to obtain information from local sources were unsuccessful.	
Kyrgyzstan plan to phase out mercury mine	No formal action taken or proposed. A Request for Proposals (RFP) to further study the socio-economic consequences of ceasing mercury production was published in August 2014. <sup>2</sup>	

<sup>1</sup> <http://www.env.go.jp/council/05hoken/yoshi05-12.html>.

<sup>2</sup> [http://nature.gov.kg/index.php?option=com\\_content&view=article&id=678%3A2014-08-15-14-10-48&catid=32%3Alatest-news&Itemid=59&lang=ru](http://nature.gov.kg/index.php?option=com_content&view=article&id=678%3A2014-08-15-14-10-48&catid=32%3Alatest-news&Itemid=59&lang=ru).

## ZMWG ACTION CHALLENGE

## CURRENT STATUS

## OVERALL GRADE AND COMMENTS

### MERCURY PRODUCT PHASE-OUTS

USA general product phase-out	Initial investigations begun, but no formal actions taken or underway. <sup>3</sup>	<p><b>Global Grade</b> </p> <p>This grade reflects the mixed results thus far on products. Given the potential capability for producing substantial quantities of non-mercury medical devices for export, we urge India to accelerate the transition to mercury free medical devices.</p>
Canada general product phase-out	Activities are currently underway to realign the 2011 proposed regulations with Convention requirements, but it is unclear when the proposed regulations will be finalized.	
India medical device phase-out	No formal action taken or underway. A 2010 national order to terminate purchases of mercury medical devices at government hospitals under the central ministries is in place.	
South Africa medical device phase-out	Initial steps underway to develop an action plan to phase out mercury use in the health care sector. It is unclear at the present time whether a formal policy directive will be issued before the end of 2015.	
EU Battery Phase-out	Adopted on November 20, 2013. <sup>4</sup> The prohibition on use of mercury applies to all button cell batteries, effective October 1, 2015. A prior directive already prohibited mercury use in other batteries.	
EU dental amalgam phase-out proposal	A European Commission (EC) scientific committee issued a preliminary opinion in 2014 recommending mercury free alternatives for children primary teeth and pregnant women. <sup>5</sup> A 2012 EC commissioned study recommended banning the use of mercury in dentistry by 2018, coupled with improvements in enforcement of EU waste legislation concerning dental amalgam. <sup>6</sup> No formal action has been taken yet, but a proposal is anticipated in 2015.	
Lebanon initiate dental amalgam phase down implementation	No formal action was taken or is underway, but stakeholder discussions have begun.	
Philippines initiate dental amalgam phase-out implementation.	The Department of Health (DOH) issued a draft Administrative Order calling for a national phase out of dental amalgam. The DOH is consulting with stakeholders and a second hearing is planned for the last quarter of 2014. Although there is no formal deadline for finalization of this Order, final action can be reasonably anticipated in 2015.	

<sup>3</sup> <http://www.epa.gov/mercury/pdfs/productsstrategy.pdf>.

<sup>4</sup> See <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013L0056>.

<sup>5</sup> See [http://ec.europa.eu/health/scientific\\_committees/consultations/public\\_consultations/scenihr\\_consultation\\_24\\_en.htm](http://ec.europa.eu/health/scientific_committees/consultations/public_consultations/scenihr_consultation_24_en.htm).

<sup>6</sup> See [http://ec.europa.eu/environment/chemicals/mercury/pdf/final\\_report\\_110712.pdf](http://ec.europa.eu/environment/chemicals/mercury/pdf/final_report_110712.pdf).

ZMWG ACTION CHALLENGE	CURRENT STATUS	OVERALL GRADE AND COMMENTS
<b>MERCURY CELL CHLOR-ALKALI PHASE-OUT</b>		
Brazil issue phase-out requirement	No formal action taken or underway.	<p data-bbox="1070 837 1337 920"><i>Global Grade</i> </p> <p data-bbox="1070 943 1461 1223">In assigning this grade, we took into account the large proportion of global mercury cell production capacity in the EU, and the finality of the action already taken. Nevertheless, we encourage other countries to move aggressively to phase out mercury use in this sector.</p>
EU issue binding phase-out obligation	BAT reference document issued in December 2013 indicating mercury cell process is not BAT, triggering the phase-out over the next four years. <sup>7</sup>	
Russia issue phase-out requirement	Status unknown. Efforts to obtain information from local sources were unsuccessful.	
USA issue phase-out requirement	No formal action taken or underway to finalize the March 2011 proposal. <sup>8</sup>	

<sup>7</sup> See [http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2013.332.01.0034.01.ENG](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2013.332.01.0034.01.ENG).

<sup>8</sup> <http://yosemite.epa.gov/opei/rulegate.nsf/byRIN/2060-AN99#1>.

ZMWG ACTION CHALLENGE	CURRENT STATUS	OVERALL GRADE AND COMMENTS
<b>ASGM National Action Plan Development and Implementation</b>		
Brazil	Initial planning steps underway to gather data on baseline situation.	<p data-bbox="1066 896 1337 981"><i>Global Grade</i> </p> <p data-bbox="1066 996 1465 1281">In assigning this grade, we note the breadth of activities identified here and in other ASGM countries. However, the progress here further highlights the concerns in the area of supply and trade, given much of that mercury is destined for ASGM countries.</p>
Colombia	Initial National Action Plan (NAP) completed in December 2013, although further refinements to the NAP may be made.	
Cote D'Ivoire	Initial baseline inventory to be completed by the end of 2014. NAP development to be initiated in 2015.	
Indonesia	A NAP was completed in 2013. Activities and plans for implementation are underway.	
Tanzania	Baseline situation assessment underway. NAP development to be initiated in 2015.	
Philippines (Implementation)	In 2014, the Philippine government started a project to address three key areas of the Philippine NAP: phase out of mercury in ASGM through the introduction and training of miners with mercury free techniques; helping miners organize; and public awareness and training of rural health workers. Steps are underway to update the NAP as well.	

ZMWG ACTION CHALLENGE	CURRENT STATUS	OVERALL GRADE AND COMMENTS
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**MERCURY EMISSION STANDARDS AND CONTROLS**

EU issue emission standards for coal-fired power plants	BAT reference document is under development for large coal combustion power plants, and includes mercury emission controls. <sup>9</sup>	<p><b>Global Grade C+</b></p> <p>This grade reflects the significant steps taken by China in promulgating new mercury emission standards, but also reflects the lack of concrete progress in other countries and the challenges facing China in applying these standards at the source.</p>
India issue emission standards for coal-fired power plants	No formal action taken or underway.	
South Africa issue emission standards for coal-fired power plants	No formal action taken or underway. Preliminary steps initiated to assess the costs and benefits of mercury emission controls.	
China issue emission standards for coal-fired industrial boilers	Emission standard issued on May 30, 2014. <sup>10</sup>	
China issue emission standards for cement plants and municipal waste incinerators	Emission standard for cement plants issued on December 27, 2013. <sup>11</sup> Emission standards for municipal waste incinerators issued on May 30, 2014. <sup>12</sup>	
China ensure enforcement of 2010 emission standards for lead and zinc smelters	Significant challenges remain in enforcing the 2010 standards. According to experts at a recent Beijing seminar, company concerns regarding available monitoring and testing methods have impeded progress in applying the standards.	
EU limit national annual mercury emissions	No formal action taken or underway.	

<sup>9</sup> See [http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP\\_D1\\_June\\_online.pdf](http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP_D1_June_online.pdf).

<sup>10</sup> [http://kjs.mep.gov.cn/hjbhzbz/bzwb/dqjhjbh/dqgdwrywrwpfbz/201405/t20140530\\_276318.htm](http://kjs.mep.gov.cn/hjbhzbz/bzwb/dqjhjbh/dqgdwrywrwpfbz/201405/t20140530_276318.htm).

<sup>11</sup> <http://kjs.mep.gov.cn/hjbhzbz/bzwb/dqjhjbh/dqgdwrywrwpfbz/201312/W020131231370229586806.pdf>.

<sup>12</sup> [http://kjs.mep.gov.cn/hjbhzbz/bzwb/gthw/gtfwwrkzbbz/201405/t20140530\\_276307.htm](http://kjs.mep.gov.cn/hjbhzbz/bzwb/gthw/gtfwwrkzbbz/201405/t20140530_276307.htm).

## DISTURBING TRENDS IN GLOBAL MERCURY SUPPLY AND TRADE

### 1. China's mercury production is significantly rising, notwithstanding ongoing demand reduction activities:

- a. In 2013, China produced 1613 MT of mercury, 817 MT from primary mercury mining, and 796 MT from secondary sources including recycled mercury catalyst from the production of PVC.<sup>13</sup> This represents nearly a 20% increase over 2012 production.<sup>14</sup> Production over the first eight months of 2014 increased over 27% versus the comparable period of 2013.<sup>15</sup>
- b. Current domestic demand for mercury in China should be significantly less than 1,600 MT/yr, given the recent demand reduction activities. According to the Twelfth Five Year Plan for Industrial Clean Production Practices, annual mercury consumption will be reduced to 638 MT/yr by 2015,<sup>16</sup> due to increased utilization of low mercury catalysts in PVC production, and mercury use reductions in battery and lamp manufacturing. If the goal of the Plan is achieved, mercury demand would be substantially less than half of current mercury production.



**Where is the excess mercury going, and why is mercury production still increasing?**

### 2. New trading centers are emerging due to export bans in the US and EU:

- a. Hong Kong exported 31 MT in 2010; over 211 MT in 2011; over 244 MT in 2012; and almost 153 MT in 2013. The exports largely went to other mercury trading hubs (Singapore, India) and ASGM countries. Hong Kong is importing mercury from international sources in comparable quantities, including reported shipments from countries where an export ban was in effect at the time.
- b. According to UN COMTRADE data, Singapore exported over 444 MT of mercury in 2011, over 478 MT in 2012, and over 293 MT in 2013. Substantial exports were directed toward ASGM countries. Singapore imported huge quantities of mercury from the USA and EU before their export bans went into effect, and significant quantities from Russia, Japan, and Switzerland during this time period. Media reports indicate at least one large European mercury trader relocated its operations to South-east Asia to avoid the EU export ban.<sup>17</sup>
- c. Canada imported 99 MT and exported 72 MT of mercury in the first quarter of 2014 alone.<sup>18</sup> The imported mercury reportedly came from Malaysia, which received over 55 MT from Singapore in 2013. In 2013, only 1 MT of mercury was imported into Canada.



**Additional national export bans are needed to reduce the global supply of mercury, particularly mercury destined for ASGM.**

<sup>13</sup> Presentation by expert from China Nonferrous Research Institute, at seminar organized by China Nonferrous Society, August 28, 2014, Beijing, China.

<sup>14</sup> See [http://cnm.minmetals.com.cn/default.jsp?column\\_no=0306](http://cnm.minmetals.com.cn/default.jsp?column_no=0306).

<sup>15</sup> See <http://cnm.minmetals.com.cn/default.jsp>.

<sup>16</sup> See <http://ghs.miit.gov.cn/n11293472/n11294974/n11296797/n14484271.files/n14484198.pdf>.

<sup>17</sup> <http://www.businessweek.com/articles/2012-05-24/the-slippery-market-for-mercury#p4>.

<sup>18</sup> <http://ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=2928F002-1>.

### 3. Mexico has become a new mercury supply source:

- a. According to UN COMTRADE data, Mexico exports surged from 134.2 MT in 2011 to almost 262 MT of mercury in 2012, and almost 268 MT of mercury in 2013, most going to ASGM countries in South America. At the same time, imports were less than 14 MT in 2011, 27 MT in 2012, and less than 1 MT in 2013.



**While mercury production from reclamation of silver mine tailings and “informal” primary mercury production was previously reported as a Mexico supply source,<sup>19</sup> the huge increase in the quantities involved and other information points to new or increased primary mercury mining.**

### 4. Constant vigilance will be needed to enforce export bans and Convention restrictions on trade:

- a. According to media reports, hundreds of metric tons of mercury were illegally exported from Germany to Switzerland over the course of several years, and then re-exported overseas, in violation of the EU export ban.<sup>20</sup> The mercury was covered with soil in Germany giving the impression it was mercury-containing waste, in an attempt to bypass the EU export ban. The Swiss government is still investigating the magnitude of the illegal transactions, and the ultimate destinations of the mercury.
- b. In 2013, almost 337 MT of “sulfide” was exported from the USA to Indonesia. This trade was originally reported as elemental mercury, but was subsequently recoded to sulfide, including potentially mercury sulfide. To our knowledge, no investigation has been performed to conclusively determine whether these exports were sham transactions intended to circumvent the USA export ban, like the Germany-Switzerland shipments. There is reason for concern since a prior report from US EPA on mercury compounds did not indicate domestic production potential of this magnitude,<sup>21</sup> and Indonesia ASGM activities consume a substantial quantity of mercury.<sup>22</sup>

— END —

[www.zeromercury.org](http://www.zeromercury.org)

<sup>19</sup> <http://www3.cec.org/islandora/en/item/11208-assessment-primary-and-secondary-mercury-supplies-in-mexico>.

<sup>20</sup> <http://www.bernerzeitung.ch/region/thun/Oberlaender-Firma-erhielt-500-Tonnen-illegales-Quecksilber/story/30997943>

• <http://www.derbund.ch/bern/kanton/Giftige-Vorwuerfe-gegen-Berner-Unternehmen-/story/15237074>

• <http://www.bernerzeitung.ch/region/thun/Recyclingfirma-brachte-Gift/story/20782812>

• [http://www.beobachter.ch/justiz-behoerde/buerger-verwaltung/artikel/entsorgung\\_schweizer-firma-in-quecksilber-skandal-verwickelt/](http://www.beobachter.ch/justiz-behoerde/buerger-verwaltung/artikel/entsorgung_schweizer-firma-in-quecksilber-skandal-verwickelt/)

<sup>21</sup> <http://www.epa.gov/hg/pdfs/mercury-rpt-to-congress.pdf>.

<sup>22</sup> By letter dated October 16, 2014, the Natural Resources Defense Council requested US EPA and US Immigration and Customs Enforcement to undertake a joint investigation of these exports.