



**Latin America and Caribbean (LAC) Mercury Storage Project
Regional Consultation (RC)
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LAC Mercury Storage Project RC INF 2

Assessment Report of Excess Mercury Supply in the LAC region, 2010-50

Note by the secretariat

1. In order to quantify the excess mercury supply that will be available in the LAC region from 2010-20, an assessment report was commissioned by UNEP. The report provides quantifiable estimates of excess mercury supply that the region needs to address, in particular the facility requirement for safely storing such quantities in the long term. The full report is available at http://www.chem.unep.ch/mercury/storage/LAC%20Mercury%20Storage%20Assessment_Final_1July09.pdf
2. The present note describes the highlights of the Assessment Report for Excess Mercury Supply in the LAC from 2010 to 2050 for the information of participants in the current meeting.

Highlights of the Assessment Report of Excess Mercury Supply in the LAC region, 2010-50

The “Assessment Report for Excess Mercury Supply in Latin America and the Caribbean 2010-50” revealed mercury supply and consumption in 2005 and projections for 2050. **In 2005, sources of mercury supply come from mercury mining and/or processing of mine tailings (about 30 tonnes), decommissioned chlor alkali facilities (unknown quantity), by product mercury from zinc smelting, by product mercury from gold smelting (about 150 tonnes) and recycled mercury from products (3% of 140-215) .** The evolution of LAC mercury supply from 2010-2050 would come from mercury mining and/or processing of mine tailings (30-40 tonnes/yr, decreasing as regional demand decreases), decommissioned chlor alkali facilities (1,480 tonnes of mercury from decommissioned mercury cells becomes available during 2010-25), by product mercury from zinc smelting (80 tonnes/yr by 2015 and 120 tonnes/yr by 2020), by product mercury from gold (150 tonnes increasing to 200 tonnes/yr by 2015) and recycled mercury from products (10% of consumption by 2020 and 25% by 2040). In terms of mercury consumption in 2005, small scale gold mining accounted for 150-300 tonnes in South America, 15-30 tonnes in Central America and the Caribbean and a total of 165-330 tonnes in the entire LAC region. Other areas of mercury consumption in decreasing order were from dental application, chlor alkali production, measuring and control devices, batteries, lamps, electric and electronic devices, and other applications. Assumptions for future mercury consumption from 2010 to 2050 would be in artisanal small scale gold mining (50% reduction over 10 years then declining after that of 5% per year,) in chlor alkali production (assume no new plants will be constructed, phase out between 2010 and 2022), batteries (75% reduction by 2015 and phase out by 2025), dental uses (15% reduction by 2015 and phase out by 2050) measuring and control devices (60% reduction by 2015, and phase out fever thermometers and sphygmomanometers by 2017, and phase out of remaining demand by 2025) lamps (20% reduction by 2015 and 80% by 2050), electrical and electronic devices (55% reduction by 2015, and phase out by 2050), other applications (25% reduction by 2020, and another 50% by 2050).

Two scenarios were presented: base case scenario and minimum storage scenario. Assumptions under the base case scenario include the LAC region as a single closed region, only regional sources and uses of mercury are considered, there are no exports from or imports to the region, Mexico continues to produce a modest amount of mercury from small mines and tailings, there is gradual increase in mercury recovered as a by product from regional gold and other mining operations, there is gradual increase of mercury recovery by major non-ferrous metal smelters. Under the **“base case” scenario, it is estimated that the LAC region will have a rough supply and demand equilibrium by 2013, with an accumulated excess of more than 8,000 tonnes of mercury from 2013- 2050.** However, it might be reasonable to assume that by product mercury from industrial gold mining will stay in the region. In a minimum storage scenario, assumptions would be the same as in a base case scenario except an additional assumption would be that 150 tonnes per year by product mercury from gold mining is exported to the US is stored in the LAC region or in the US, and that less mercury is recovered from zinc smelting than previously assumed. **Under the “minimum storage” scenario, LAC regional supply-demand equilibrium is reached at about 2019. There will be accumulated excess of about 2000 tonnes of mercury from 2019-2050 plus perhaps additional 5000 tonnes by-product of industrial gold mining.**

It was pointed out that in a “base case scenario” where the assumption is that there are no exports and imports in the region, and mercury recovered from regional gold and mining operations as well as major non-ferrous metals mining, the LAC regional supply-demand equilibrium will happen in 2013 with an accumulated excess of more than 8000 tonnes of mercury from 2013-50. In a “minimum storage scenario” where 150 tonnes per year by product from gold mining is exported, and less mercury is recovered from zinc smelting, the supply-demand equilibrium is reached at about 2019. There would be accumulated excess of more than 2000 tonnes of mercury from 2019-50 plus possibly 5000 tonnes by product of industrial gold mining.