

US EPA ARCHIVE DOCUMENT

Commodity-Grade Mercury

Changes in Global Demand



Commodity-Grade Mercury Stakeholder Meeting
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Purpose

- Illustrate the recent changes in global demand for commodity-grade mercury
- Discuss the emerging trends in supply, demand, and movement of commodity-grade mercury



Global Demand

- Global estimates:

- Current demand >3,400 mt/yr

- Current supply >3,600 mt/yr

- Maxson allows for variability of 15-20 percent.

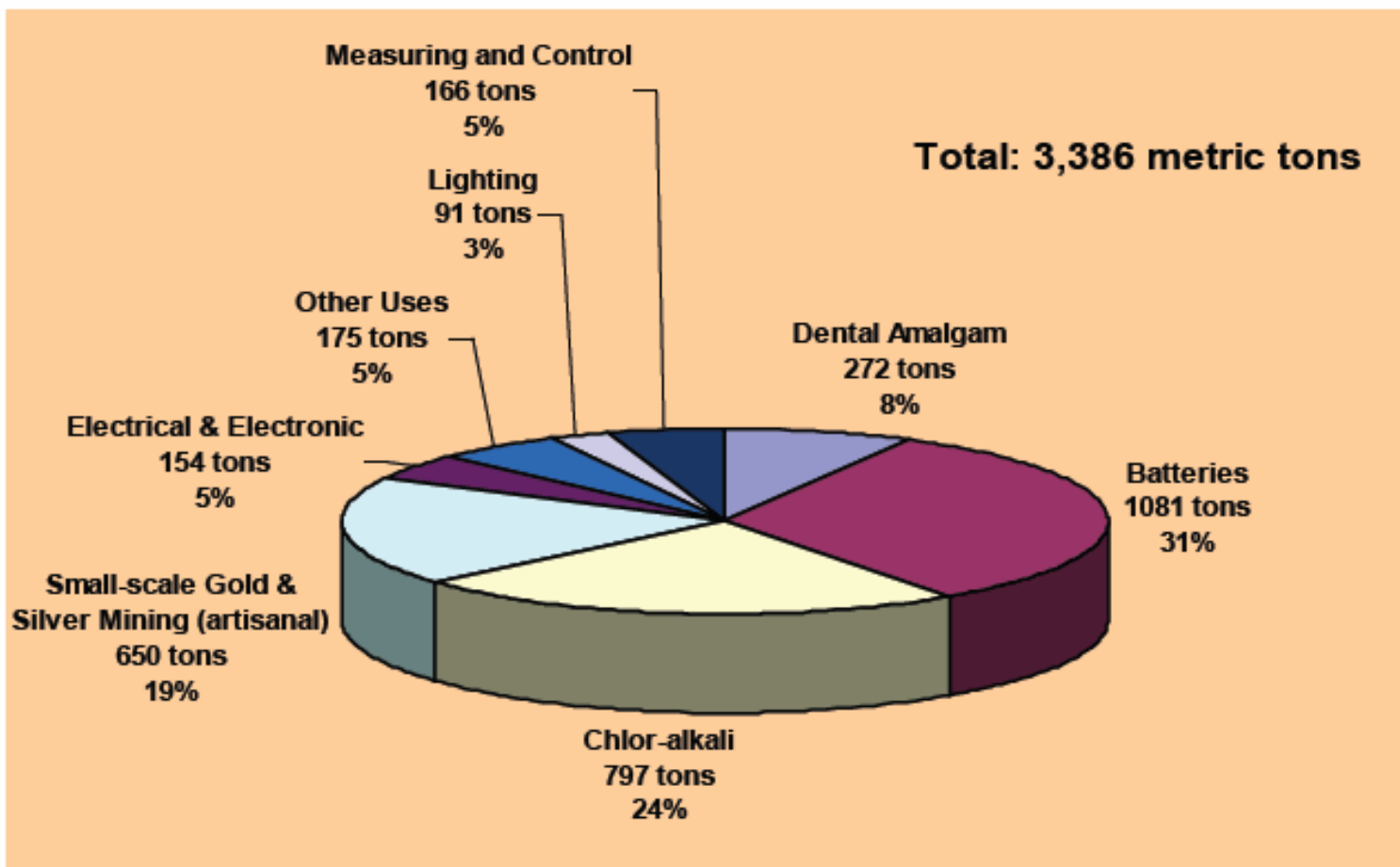
- Current trade value \$64 M/yr

- $(\$650/\text{flask}) \times (3,400 \text{ mt/yr}) \times (1 \text{ flask}/0.0345 \text{ mt})$
 - \$650/flask reflects 2006 USGS estimate.



Global Demand (cont'd)

Global Mercury Demand (2000)

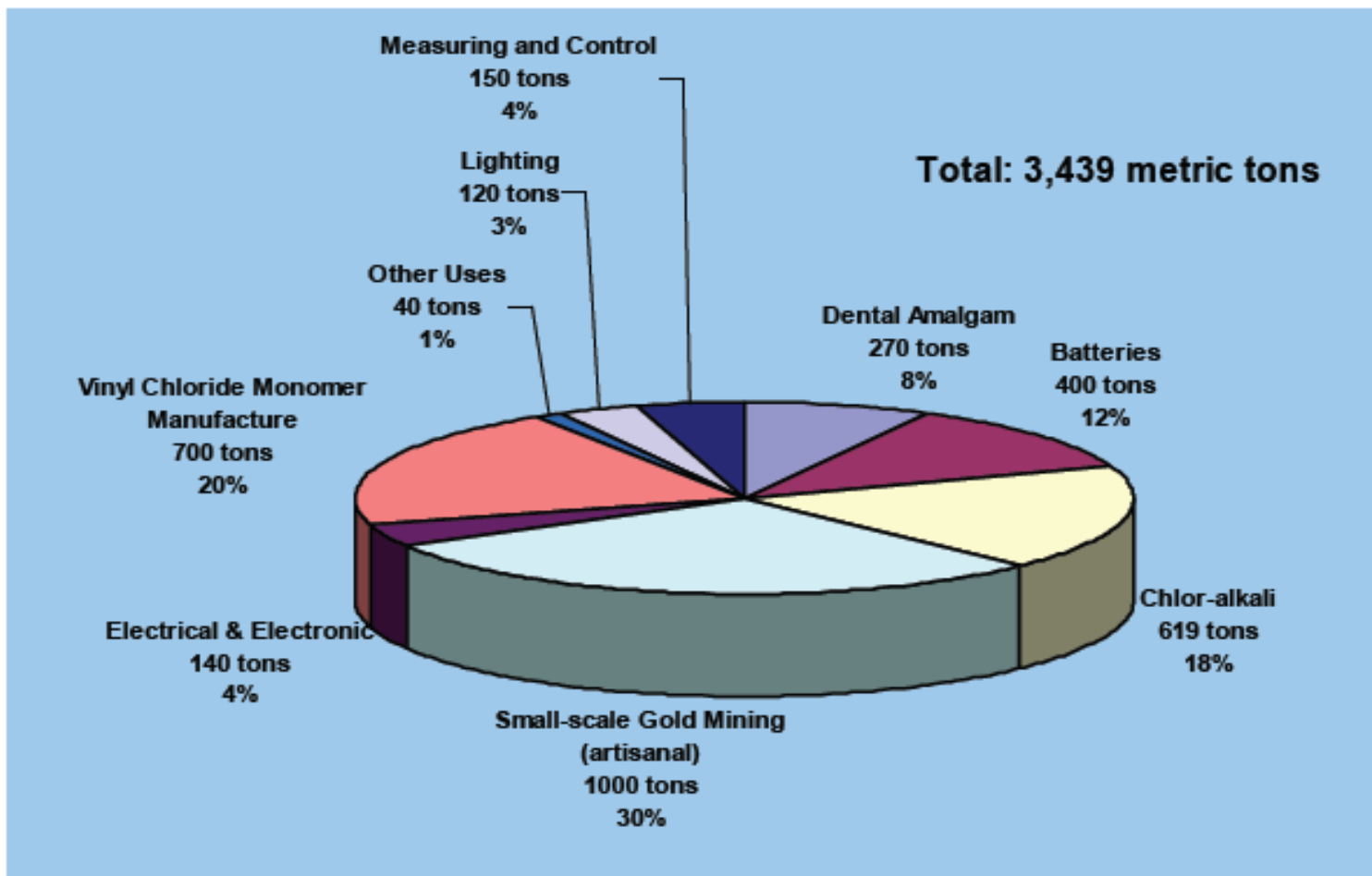


Maxson, P.A., 2004, Mercury Flows Report: Mercury Flows in Europe and the World, the Impact of Decommissioned Chlor-alkali Plants. European Commission. Accessible at: <http://ec.europa.eu/environment/chemicals/mercury/pdf/report.pdf>.



Global Demand (cont'd)

Global Mercury Demand (2005)



Maxson, P.A., 2006, "Mercury Flows and Safe Storage of Surplus Mercury." Accessible at: http://ec.europa.eu/environment/chemicals/mercury/pdf/hg_flows_safe_storage.pdf

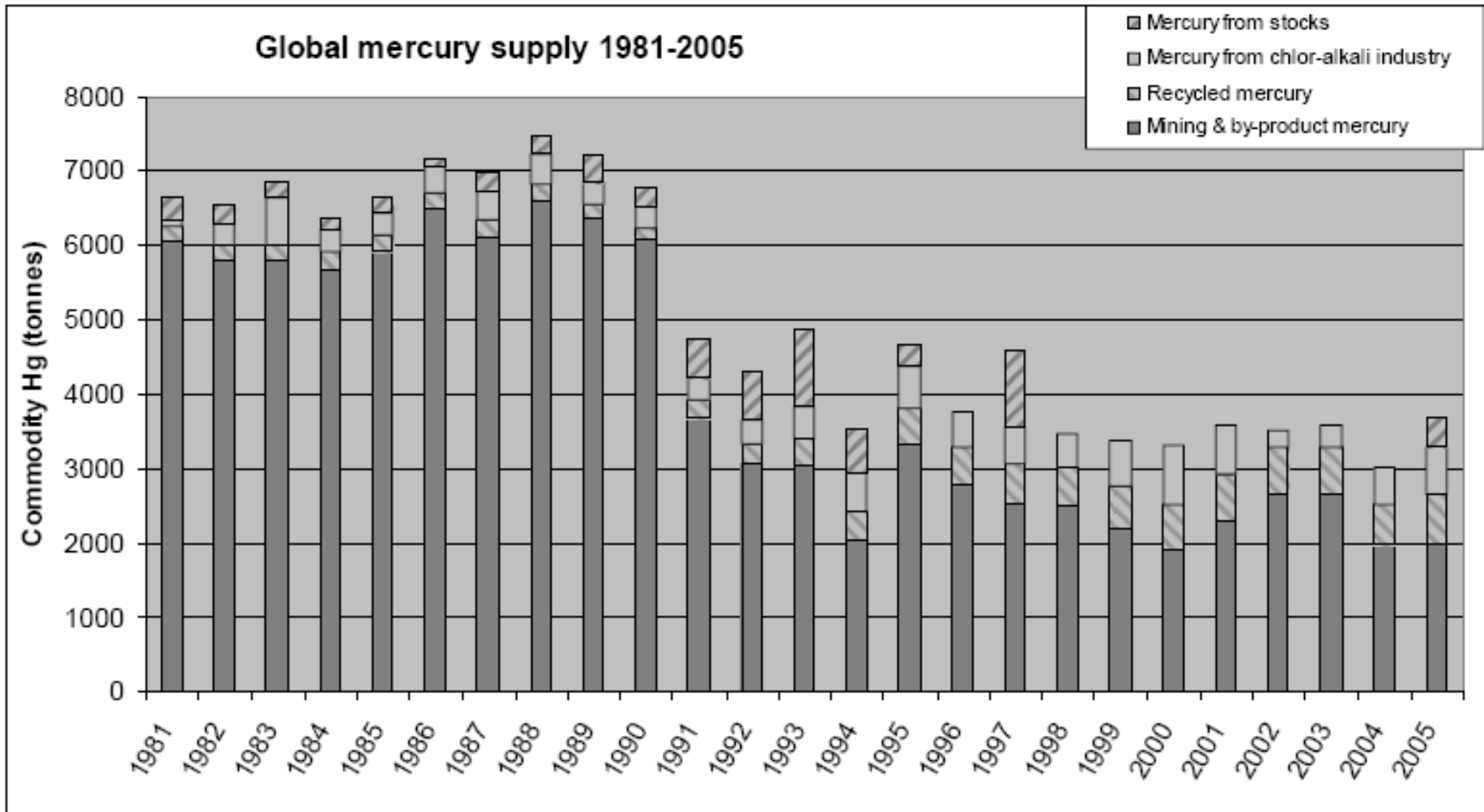


Global Demand (cont'd)

- Percent Change (2000-2005)
 - Decrease
 - Other 79 percent
 - Batteries 63 percent
 - Chlor-alkali Production 22 percent
 - Measuring/Control Devices 9 percent
 - Electrical/Electronic Devices 9 percent
 - Dental Amalgam <1 percent
 - Increase
 - Artisanal Mining 54 percent
 - Lighting 32 percent
 - VCM Production N/A
 - Not listed in 2000; 20 percent of global total in 2005.



Movement and Trends



Source: UN Governing Council. Summary of Supply, Trade, and Demand Information on Mercury (November 2006), available at <http://www.chem.unep.ch/MERCURY/Trade%20report%20final%20PDF.pdf>, p. 5.



Movement and Trends

- Historical Trends
 - Variable demand as products/processes developed or become obsolete.
 - Result is movement of supply/demand from developed nations to developing nations:
 - Developed nations
 - Decreases in supply/demand with increased mercury substitution in products.
 - Chlor-alkali production, electronic/measuring devices, electrical lighting.
 - Developing nations
 - Increases in demand/supply with shifting of product production/end-use from developed nations.
 - Artisanal mining, cosmetics, cultural/traditional uses, paints, agricultural chemicals.
 - » Mercury demand for artisanal mining is influenced by price of gold.



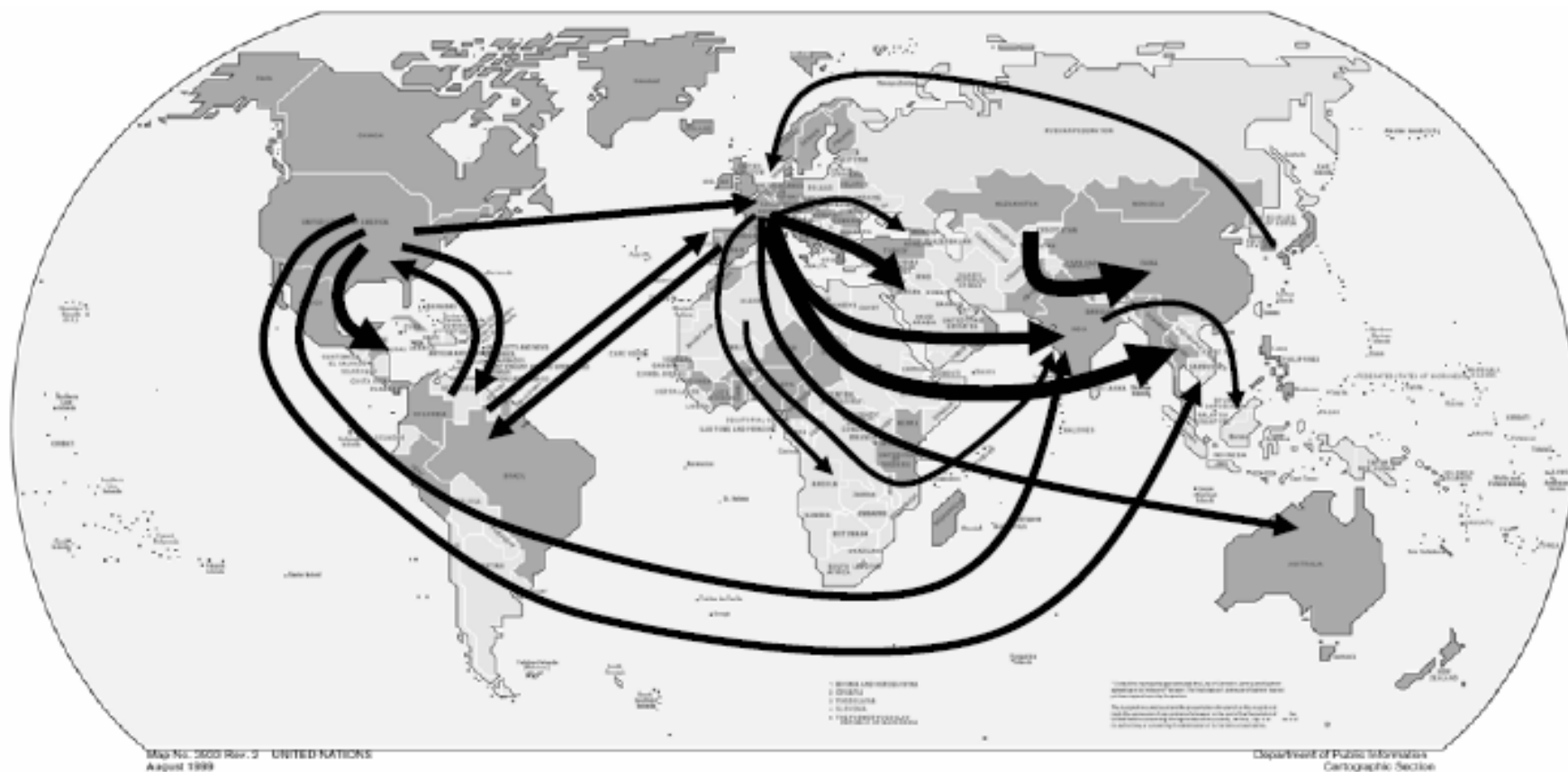
Movement and Trends (cont'd)

- Modern Trends
 - Global Demand
 - 1960s ~9,000 m.t./yr
 - 1980s ~7,000 m.t./yr
 - 1990s <4,000 m.t./yr
 - 2005 ~3,400 m.t./yr
 - Most product categories consumption declining, except lighting.
 - Most process categories consumption decreasing, except VCM production and artisanal mining.



Movement and Trends (cont'd)

Commodity-Mercury Shipments Among Global Regions (2004)



Summary of Supply, Trade, and Demand Information on Mercury (November 2006), available at <http://www.chem.unep.ch/MERCURY/Trade%20report%20final%20PDF.pdf>, p. 13.