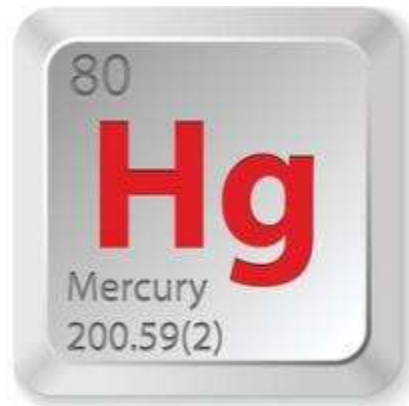




Current Activities and Challenges for the Reduction of Mercury Releases from Waste

THE PHILIPPINES





POLICIES, RULES AND REGULATIONS

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RA6969: Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990

- **DAO 92-29: The Implementing Rules and Regulations**
 - Title II- Toxic Substances (Chemicals) Management [PICCS, PMPIN, PCL, CCO-Hg, CN, Asbestos, ODSs, PCB]
 - Title III- Hazardous Waste Management

- **DAO 2004-36: Procedural Manual for Hazardous Waste Management**
 - Table 1-1: Classification of Hazardous Waste
 - Wastes with Inorganic Chemicals- Mercury and Mercury Compounds (D407)





Title II: Management of Chemicals and Toxic Substances

- **Philippine Inventory of Chemicals and Chemical Substances (PICCs)**
 - 40,000 chemicals and substances

- **Pre-Manufacture and Pre-Importation Notification (PMPIN)**
 - Detailed Form
 - Abbreviated Form

- **Priority Chemical List (PCL)**
 - DAO 2005-27 (48 chemicals & substances)
 - **DAO 98-58 (28 chemicals & substances)**

- **Chemical Control Order (CCO)**
 - Five (5) DAOs has been issued since 1997





Chemical Control Orders (CCOs)

- **DAO 97-38 (CCO for Mercury and its compounds)**
 - regulated or limited use

- **DAO 97-39 (CCO for Cyanide and its compounds)**
 - regulated or limited use

- **DAO 2000-02 (CCO for Asbestos)**
 - regulated or limited use – Rotterdam Convention

- **DAO 2000-18 (CCO for Ozone Depleting Substances)**
 - phase-out (2010) – Montreal Protocol

- **DAO 2004-01 (CCO for Polychlorinated Biphenyls)**
 - phase-out (2014) – Stockholm Convention





Health Department Directive

- **DOH Administrative Order No. 2008-0021
(Gradual Phase-Out of Mercury in all Philippine Healthcare Facilities and Institutions)**
- Thermometers (December 2009)
 - Sphygmomanometers (December 2010)
 - Guidelines for setting up a proper temporary mercury storage area
 - Specific storage requirements and standards





Joint Directive of the DENR and the Department of Energy

- **Joint DENR-DOE Administrative Order (JAO 2013-09-0001) (Lighting Industry Waste Management Guidelines)**
 - The JAO aims to regulate the end-of-life disposal of lighting products to control the dispersion of **mercury** and other toxic substances into the environment for the protection of public health and the environment
 - The implementation of the Extended Producer Responsibility (EPR) for lighting products and the operationalization of a Lamp Waste Management Facility (LWMF) is part of the Philippine Energy Efficiency Project (PEEP) of the DOE





Executive Order No. 79, s. 2012

- **Institutionalizing and Implementing Reforms in the Philippine Mining Sector Providing Policies and Guidelines to Ensure Environmental Protection and Responsible Mining in the Utilization of Mineral Resources**
 - Section 2: Full enforcement of environmental standards in mining
 - Section 11: Measures to Improve Small-Scale Mining Activities
 - The use of mercury in small-scale mining shall be strictly prohibited.





PROGRAMS / PROJECTS

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Management of Mercury and Mercury-Containing Wastes

Implementing Agency:

Environmental Management Bureau

Department of Environment and Natural Resources

Funding Agency:

Division of Technology, Industry and Economics (DTIE)

Chemicals Branch

United Nations Environment Programme

Duration: February 2009 – June 2010

Output: National Action Plan on Mercury and Mercury-Containing Wastes

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Action Plan for Mercury and Mercury Containing Wastes

Goals and Objectives

Minimize and, where feasible, eliminate mercury releases to air, water, and land from mercury wastes by adopting Environmentally Sound Management (ESM) of these wastes (following a lifecycle management approach)

Objective 2 - Minimization

Objective 3 - Inventory &
Database

Objective 4 – Controls from
Emissions & Discharges

Objective 5 – EOL
Management

Objective 5 – Continuous
Research & Development

Objective 1 – Legal & Regulatory Strengthening





Artisanal and Small Scale Gold Mining (ASGM)

Implementing Agency:

Environmental Management Bureau

Department of Environment and Natural Resources

Funding Agency:

Division of Technology, Industry and Economics (DTIE)

Chemicals Branch

United Nations Environment Programme

Duration: September 2009 – December 2010

Output: National Strategic Plan for the Phase-out of Mercury in
Artisanal and Small-Scale Gold Mining in the
Philippines

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National Strategic Plan for the Phase-out of Mercury in ASGM

Priority Goal, Objectives and Implementation strategies:

- Effectively reduce mercury use in the ASGM sector;
- Develop and implement coherent national policies and regulations;
- Establish a legal and organized group of ASGM miners with a national constituency and representing the needs of the ASGM sector;
- Build and strengthen institutional capacity of PMRBs, LGUs and other ASGM support institutions;
- Enhance cooperation and partnership of all levels among miners, industry sector, NGOs, Church, Academic institutions;
- Develop and promote the safe handling and long term storage of excess mercury from the ASGM sector.



Philippine Energy Efficiency Project (PEEP)

Implementing Agency:

Department of Energy

Funding Agency:

Asian Development Bank

Project Components:

DOE is transforming the lighting industry market by promoting the use of energy efficient lighting (EELs) products and recognizes that EELs such as fluorescent lamps contain mercury; thus DOE intends to:

- operationalize a Lamp Waste Management Facility (LWMF) that will recovery mercury from lamp wastes
- Implement an Extended Producer Responsibility (EPR) for lighting products

Collaborative Output:

Joint DENR-DOE Administrative Order on Lighting Industry Waste Management Guidelines

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Department of Environment and Natural Resources

Department of Energy



Joint DENR-DOE

Administrative Order No. JAO 2013-09-0001

SUBJECT: Lighting Industry Waste Management Guidelines

Pursuant to Republic Act (RA) 6969, otherwise known as "The Toxic Chemicals and Hazardous and Nuclear Wastes Control Act of 1990"; RA 9003, also known as "The Ecological Solid Waste Management Act of 2000"; Executive Order (EO) No. 192 (1987), or "The Reorganization Act of the Department of Environment and Natural Resources (DENR)", and RA 7638, otherwise known as the "Department of Energy Act of 1992", and in line with the Memorandum of Agreement between Department of Energy (DOE) and DENR on lamp waste management, the following guidelines on development, implementation, and monitoring of the Lighting Industry Wastes Management Guidelines are hereby issued.

Section 1.0 Basic Policy and Rationale

In consonance with the avowed policy under RA 6969, the State shall regulate the importation, manufacture, processing, handling, storage, transportation, sale, distribution, use and disposal of chemical substances and mixtures that present unreasonable risk or injury to health or to the environment in accordance with national policies and international commitments.

Lighting products contain mercury, arsenic, and other compounds that are toxic to human and aquatic life even at low concentrations.

This Order shall regulate the end-of-life disposal of lighting products to control the dispersion of these toxic substances into the environment to avoid these adverse consequences for the protection of the environment and public health.

Additionally, pursuant to RA 9003, it is the policy of the State to adopt a systematic, comprehensive and ecological solid waste management program, which shall:

- 1) Ensure the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of the best environmental practices in ecological waste management excluding incineration;
- 2) Encourage greater private sector participation in solid waste management;
- 3) Encourage cooperation and self-regulation among waste generators through the application of market-based instruments, and;
- 4) Institutionalize public participation in the development and implementation of national and local integrated, comprehensive and ecological waste management programs.

DENR-DOE JAO on LIGHTING INDUSTRY WASTE MANAGEMENT GUIDELINES

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Philippine Efficient Lighting Market Transformation Project (PELMATP)

Implementing Agency:

Department of Energy

Funding Agency:

United Nations Development Programme

Collaborative Outputs:

Guidebook on the Management of Mercury-Containing Lamp Wastes

Poster on the Health and Environmental Effect of Mercury

Primer on Lamp Waste Management

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Philippine Electric Light and Power Corporation
Product - Product Management Office (PELMPPO-PMO)
 Department of Energy
 Meralco Road, Fort Bonifacio
 Taguig City, Philippines
 Telephone Numbers: (02) 846-1411 to 21 local 384
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 website: <http://pelmpo.doe.gov.ph>
<http://www.ulpd.org>
 e-mail: pelmpo@ulpd.gov.ph

A PRIMER ON MERCURY-CONTAINING LAMP WASTE MANAGEMENT

Mercury-Containing Lamp Waste Management

A MANAGEMENT GUIDEBOOK

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CHALLENGES

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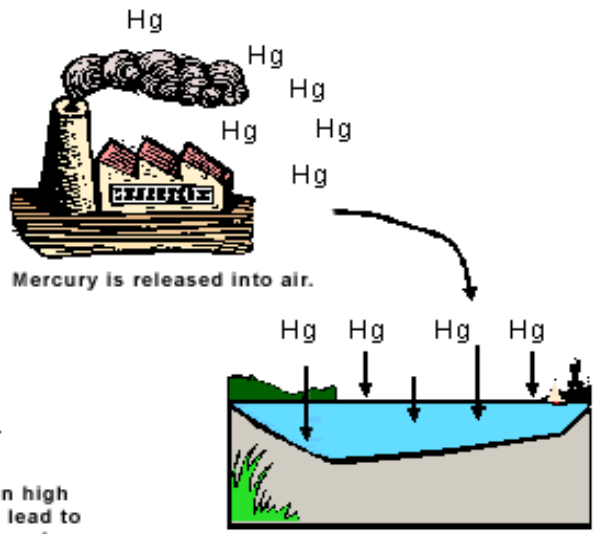
CHALLENGES

- Final disposal of mercury
- Review existing regulations such as the Chemical Control Order (CCO) for Mercury
- Implement the National Action Plan for Mercury and Mercury-containing wastes and the National Strategic Plan for the Phase-out of Mercury in ASGM





Lifecycle of Mercury and its Health Effects



Excessive amounts in high risk populations can lead to numbness sensation and ultimately nervous system damage.

Methylmercury is passed into our bodies when we eat fish.

Fish absorbs methylmercury as they feed on aquatic organisms and small fish. This can build up over time.



Children with Congenital Minamata Disease due to intrauterine methylmercury poisoning (Harada 1986).

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Minamata Disease Victims



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Minamata Disease Victims



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Minamata Disease Victims



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Let's Save the Future!!!

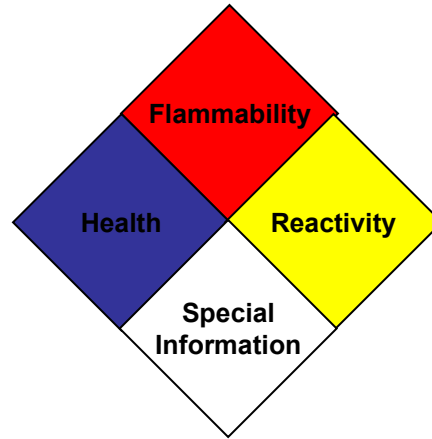


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Ethylene oxide –
colorless gas
(flammable, reactive,
and explosive)



or

