



汞水俣公約執行 措施研討會

 International Conference on
Implementation Measures for
Minamata Convention on Mercury
2019

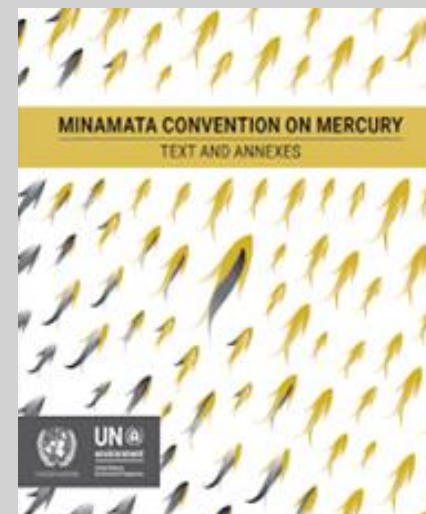
Compliance with Minamata Convention on Mercury: Strategies and Implementation Plan in Taiwan

Presented by Chi-Fu Lin
Technical Specialist



Toxic and Chemical Substances Bureau,
Environmental Protection Administration,
Taiwan

Date: August 8, 2019



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An Implementation Plan for the Minamata Convention in Taiwan



A Recent Report for the Implementation Plan



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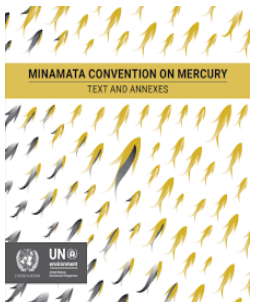
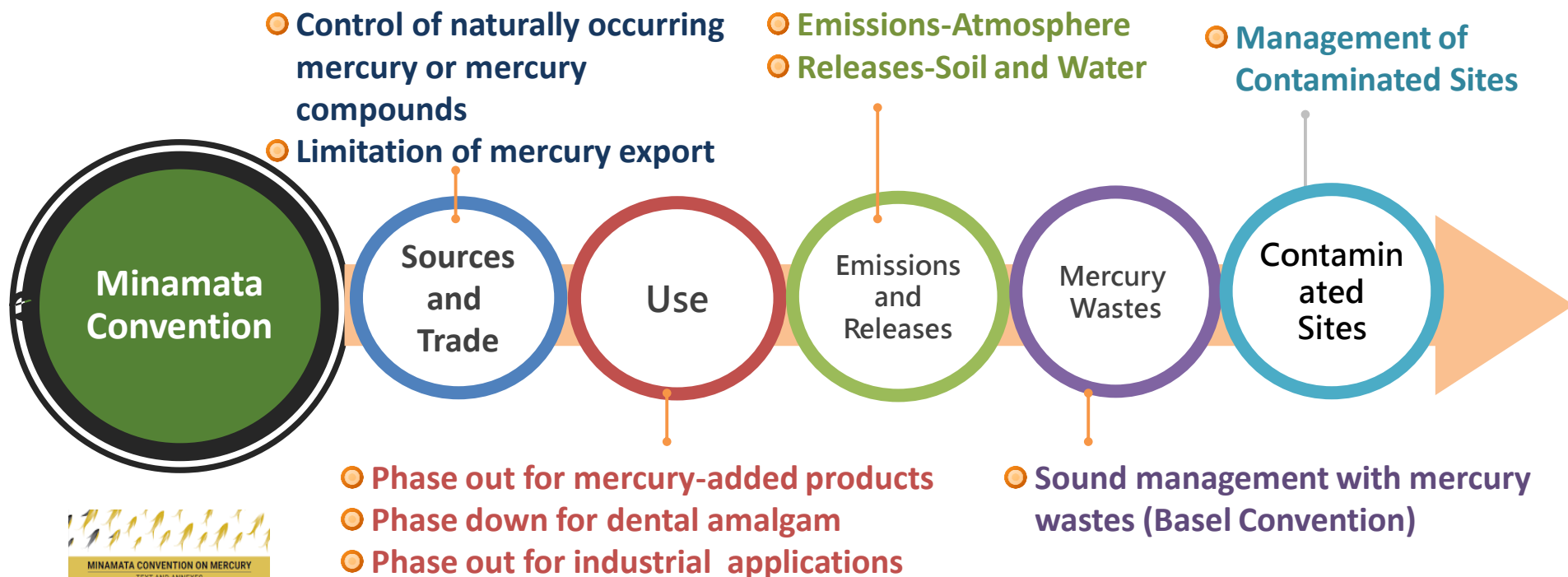


Prospective

Minamata Convention on Mercury

Objective:

Protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.



Minamata Convention includes **35** Articles and **5** Annexes.

128 (parties) signatures and **111** ratifications. (Till July 31, 2019)

Article 20 Implementation plans

1. Each Party may, following an initial assessment, develop and execute an implementation plan, taking into account its domestic circumstances, for meeting the obligations under this Convention.
2. Each Party may review and update its implementation plan, taking into account its domestic circumstances and referring to guidance from the Conference of the Parties and other relevant guidance.

The Implementation Plan for Minamata Convention on Mercury

The inter-ministerial task team and implementation plan have been established and approved since June 27, 2016 in Taiwan.

Implementation Plan in Taiwan (Article 20)



Task Team Members of Implementation Plan



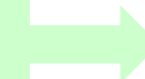
Environmental Protection
Administration (EPA)



Toxic and Chemical Substances Bureau
Dept. of Environmental Sanitation & Toxic Substances
Management
Dept. of Air Quality Protection & Noise Control
Dept. of Water Quality Protection
Dept. of Waste Management
Soil & Groundwater Remediation Fund Management Board
Recycling Fund Management Board
Dept. of Supervision Evaluation & Dispute Resolution
Dept. of Environmental Monitoring & Information
Management
Environmental Analysis Laboratory
Bureau of Environmental Inspection



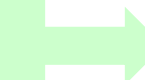
Ministry of Health and
Welfare (MOHW)



Food and Drug Administration
Health Promotion Administration
Dept. of Chinese Medicine and Pharmacy
Dept. of Mental and Oral Health



Ministry of Economic Affairs
(MOEA)



Industrial Development Bureau
Bureau of Foreign Trade
Bureau of Standards Metrology and Inspection
Bureau of Mines

Task Team Members of Implementation Plan (conti. 1)



Council of Agriculture (COA)

Dept. of Animal Industry
Agriculture and Food Agency
Fisheries Agency
Bureau of Animal and Plant Health Inspection and Quarantine
Agricultural Chemicals and Toxic Substances Research Institute



Customs Administration (CA)

Customs Administration



Occupational Safety and Health Administration (OSHA)

Occupational Safety and Health Administration



Inter-ministerial meeting and task team members



Formulate or amend mercury-related regulations



Mercury reduction in uses, emissions and releases

Recycling programs

Mercury waste treatment technology



Mercury-added products regulations

Mercury-free alternatives



Periodical inspection and monitoring for products, food and environment



Information, education, and awareness for the public

Strategies of Implementation Plan (Article 20)

Overview of Taiwan Implementation Plan

1. SOURCES
2. USES
3. ENVIRONMENTS
4. HEALTH
5. COMMUNICATIONS
6. OUTREACHING



SOURCES

Source and
trade
(Article 3)



Artisanal and small-
scale gold mining
(Article 7)



USES

Mercury-added products
(Article 4)



Manufacturing processes in which
mercury compounds are used
(Article 5)



Toxic and Concerned Chemical Substances Control Act,
Waste Disposal Act, Environmental Agent Control Act



Commodity Inspection Act, Mining Act,
Foreign Trade Act, Goods Import/Export
Management Regulations



Customs Coordinated with
Import and Export Trade
Management Regulations



Cosmetic Hygiene and Safety Act

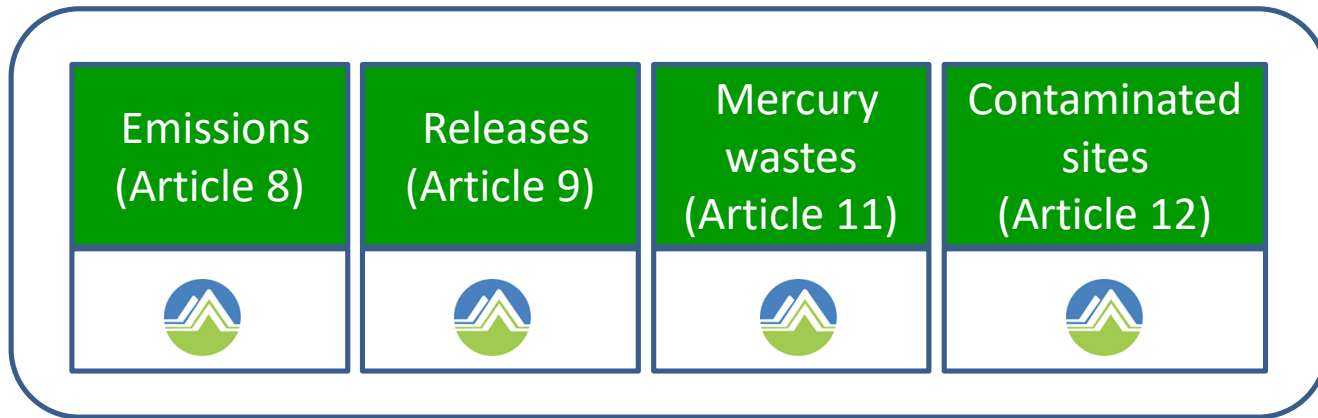


Agro-pesticides Management Act



Occupational Safety and Health Act

ENVIRONMENTS



Air Pollution Control Act
Stationary Pollution Sources
Emission Standards



Waste Disposal Act



Water Pollution Control Act,
Effluent Standards,
Groundwater Pollution Act,
Drinking Water Management Act,
Drinking Water Quality Standards,
Groundwater Pollution
Monitoring Standards,
Soil Pollution Control Standards



Soil and Groundwater
Pollution Remediation Act

HEALTH

Health aspects
(Article 16)



Food Safety and Hygiene
Management Act

Occupational Safety and
Health Act

Research, development, and monitoring
(Article 19)



Environmental distribution,
Environmental quality (air, water
body, soil, river sediments)
monitoring, Environmental
analytical and sampling standard
methods



Food Inspection on the Market
Implement research and
development on the public health
projects



Inspection on commodities on the market
Set up National Standards for some commodities
Promote research and development for mercury-
free products in industry



Agricultural products and
aquacultural products
inspection on the farms and
the fishery market



Inspection on the workplace

COMMUNICATIONS

Information exchange (Article 17)
Public information, awareness and education (Article 18)
Implementation plans (Article 20)
Reporting (Article 21)



Environmental Protection
Administration (EPA)



Ministry of Health and
Welfare (MOHW)



Ministry of Economic Affairs
(MOEA)



Council of Agriculture (COA)



Customs Administration (CA)



Occupational Safety and
Health Administration (OSHA)

OUTREACHING

Capacity-building,
technical assistance, and
technology transfer
(Article 14)



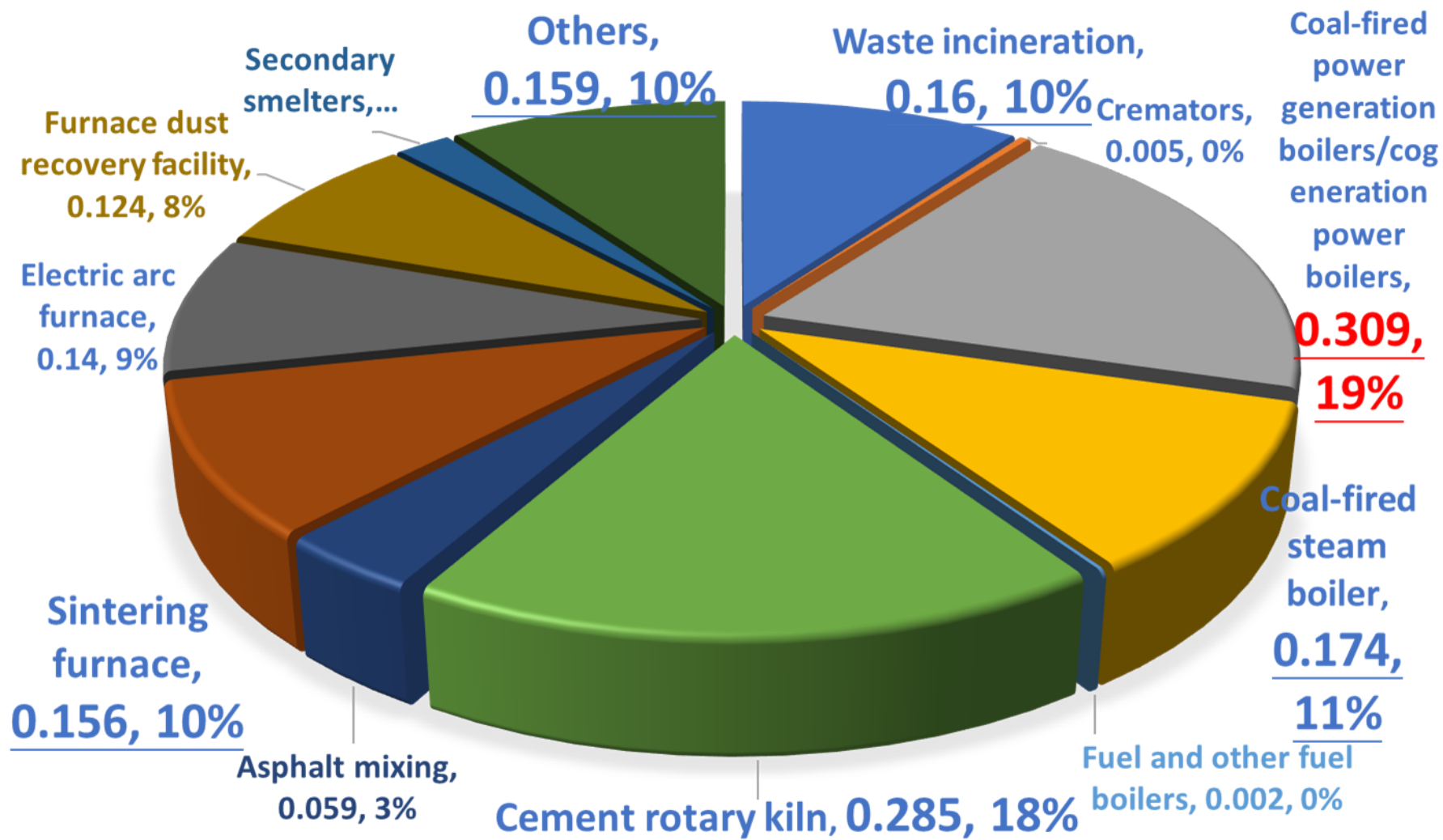
East Asia



Asia Pacific Mercury Monitoring Network (APMMN)

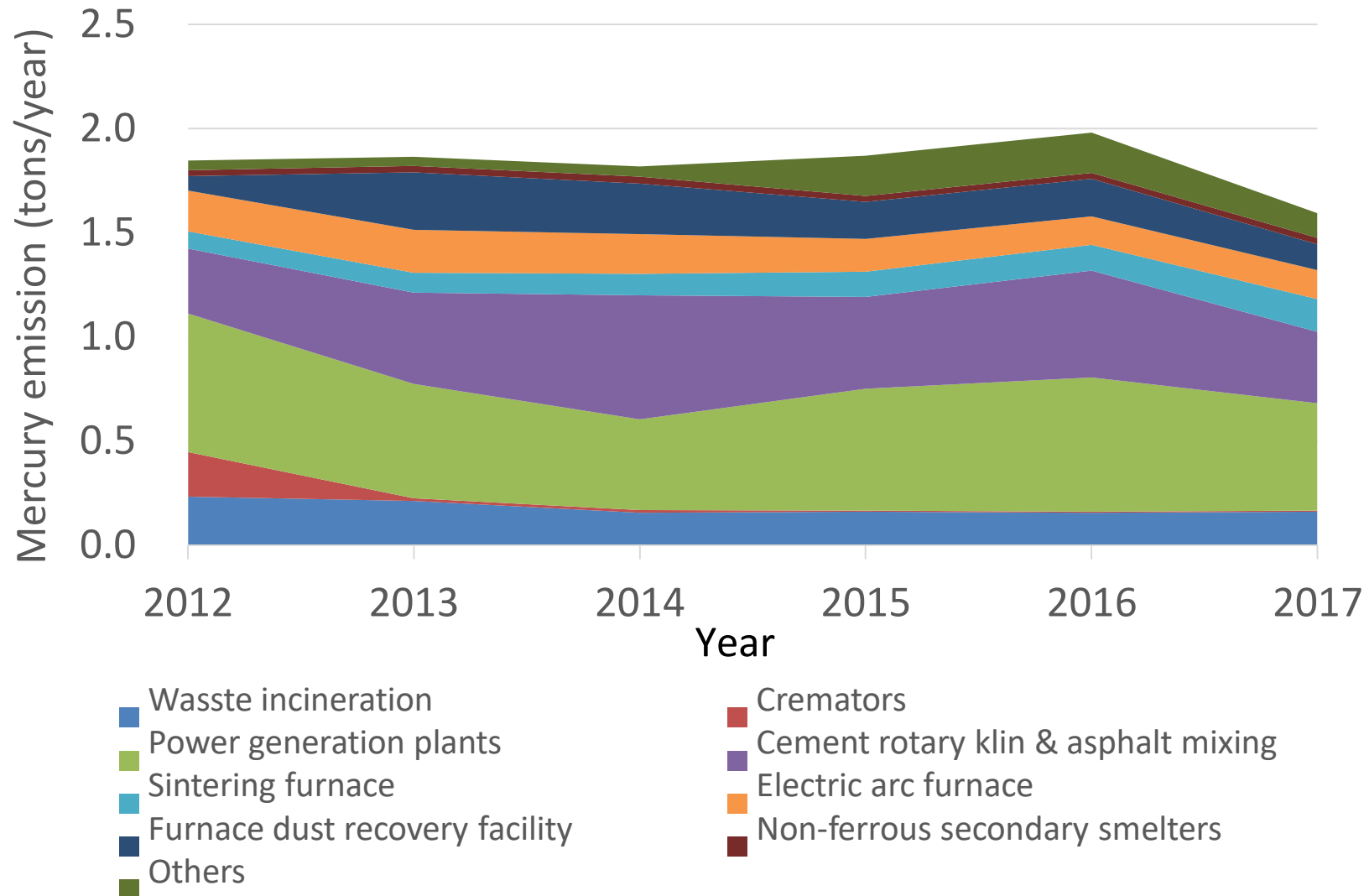


- **Initiator** : Taiwan EPA, USEPA since 2012 to establish
- **Goal** : Systematically monitor wet deposition and atmospheric concentrations of mercury in a network of stations throughout the Asia-Pacific region
- **Partner** : Vietnam, Indonesia, Thailand, Philippine and Sri Lanka so far.



Annual Report of Emissions: (Article 8)
Inventory of mercury in Taiwan (Year 2017),
total quantity= 1.604 tons/year

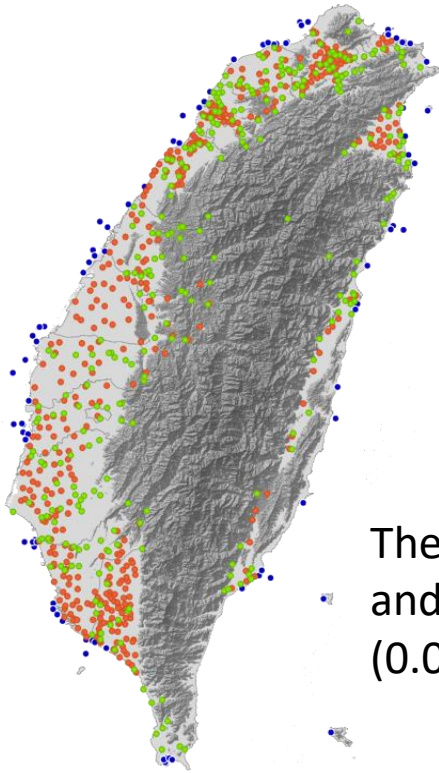




**Annual Report of Emission (Article 8):
Mercury emission histogram in Taiwan
(Year 2012-Year 2017)**

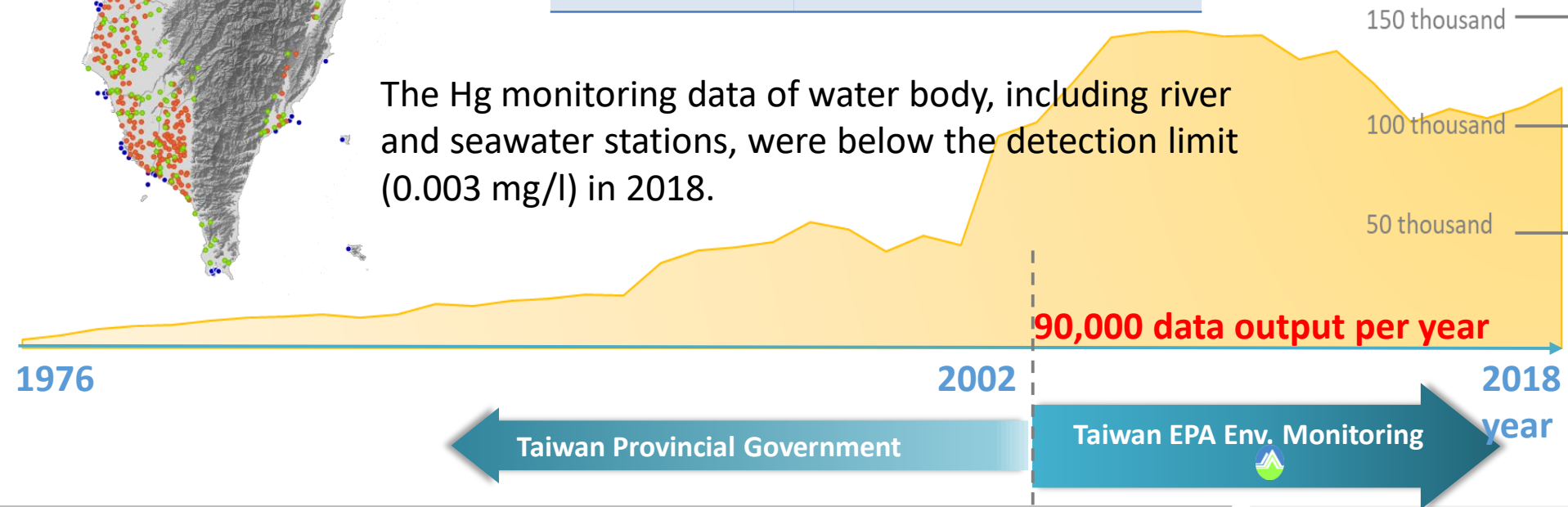


The distribution of water monitoring stations for Hg



Water Body	Monitoring Frequency
River	303 stations / Month
Seawater	105 stations / Season
Groundwater	447 stations / Season

The Hg monitoring data of water body, including river and seawater stations, were below the detection limit (0.003 mg/l) in 2018.

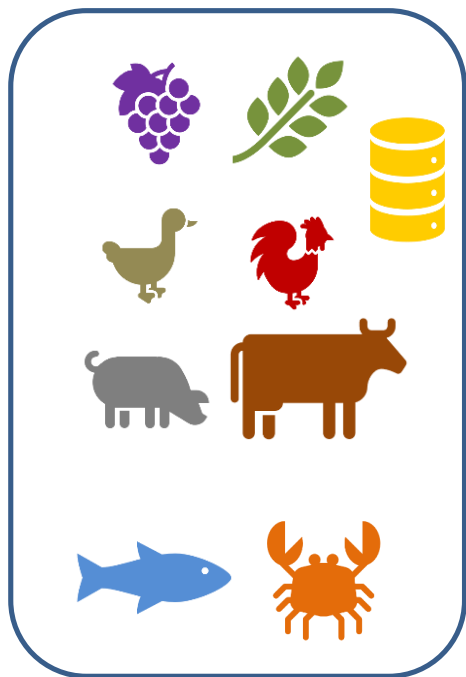


Annual Report of Mercury in water body monitoring in Taiwan





Prohibit organo-mercury pesticides in manufacturing, import, processing, sale, and use.



Year 2018



Set up mercury content standards of supplement of livestock feeding.



Monitor mercury content of agricultural, aquacultural products, and livestock feedings and supplement.

items	No. of Samples	Results	Remark
Aquacultural products	2,061	3 (failed)	
Vegetable, fruit, and rice	581	All pass	(ND~0.021 mg/kg)
Supplement	51	All pass	< 0.5 ppm

**Annual Report of Implementation Plan:
Council of Agriculture**





Prohibit addition of mercury into cosmetics.



Set up mercury content of rice, aquacultural products, and limit of methylmercury standards, and implement post-market inspection, etc.



**Set up mercury content of Chinese medicine and limit of methylmercury standards
Implement post-market inspection.**



Phase down the Hg use percentage of dental amalgam (teeth fillings material) to 3% in 2018.



Raise the health and diet awareness of mercury to the susceptible groups (e.g., pregnant, breastfeeding women, and children aged under 6 years old.

**Annual Report of Implementation Plan:
Ministry of Health and Welfare**



Mercury standards in rice and aquatic animal

Standards	Food items	Limit (ppm)
Standard for the tolerance of heavy metals in rice (mercury)	Rice	0.05
Sanitation standard for aquatic animal (methyl mercury)	whale, shark, swordfish, tuna, oil-fish.	2
	grenadier, plain bonito, pandora, atlantic, catfish, anglerfish, red seabream, megrim, mullet, rays, scabbard fish, red seabream, snack mackerel, butterfish, sturgeon, spotted butter fish, eel, pike.	1
	other fish	0.5
	shellfish	0.5
	Cephalopod (except organ)	0.5
	Crustaceans	0.5



**Reporting of Implementation Plan:
Ministry of Health and Welfare**





Prohibit mercury ore mining activity.

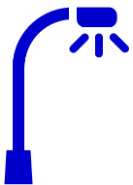
Mercury amalgamation is not used in artisanal and small-scale gold mining and processing.



Set up the Declaration of Conformity under the Commodity Inspection Act (including mercury-added products) and implement post-market commodity inspection.



The mercury content of compact fluorescent lamps comply with the Minamata Convention.



Promote LED lamps to replace mercury-added lamps



Phase out of Mercury-added Products for Minamata Convention on Mercury



1. Batteries



2. Switches and Relays



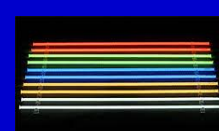
3. Compact Fluorescent Lamps



4. Linear Fluorescent Lamps



5. High Pressure Mercury Vapor Lamps



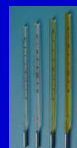
6. CCFL及EEFL for Electronic Display



7. Cosmetics



8. Pesticides, Biocides and Topical antiseptics



9. Non-electronic measuring devices
Thermometers Sphygmomanometers
Barometers Hygrometers Manometers



Part I: Annex A Products subject to Article 4, paragraph 1 (Minamata Convention)-Current Status in Taiwan

Mercury-added Products	Manufacture	Import	Export	Phase-out date
1. Batteries	✓	✓	✓	-
2. Switches and Relays	✓	△	△	12/31/2020
3. Compact fluorescent lamps (CFLs)	✓	✓	✓	12/31/2020
4. Linear fluorescent lamps (LFLs)	✓	△	△	12/31/2020
5. High pressure mercury vapor lamps	✓	△	△	12/31/2020
6. CCFL and EEFL for electronic displays	✓	△	△	12/31/2020
7. Cosmetics	✓	✓	✓	-
8. Pesticides, biocides and topical antiseptics	✓	✓	✓	-
9. Non-electronic measuring devices – thermometer	✓	✓	✓	-
barometers, hygrometers, manometers, sphygmomanometers	✓	△	△	12/31/2020

✓ : comply with Minamata Convention ; △ : in processing

Prospective

- Collaboration with inter-ministerial administrations to comply with the Minamata Convention on Mercury.
- International collaboration with Japan, USA, and European Unions and other international non-governmental organizations for further technical and regulatory information exchange.
- Extension of the ASEAN collaboration for environmental protection subjects on mercury.



- **Thank you for
your attention.**

國際化學品與汞管理研討會
International Chemical and
Mercury Management Conference 2019



汞水俣公約執行
措施研討會

International Conference on
Implementation Measures for
Minamata Convention on Mercury
2019