



UNEP
GLOBAL
MERCURY
PARTNERSHIP

Mercury waste
management Area*



“Treating Mercury Wastes: Tools and Technologies”

Online webinar, 15 February 2022

Views expressed are those of speakers and do not reflect those of UNEP or the Global Mercury Partnership Secretariat

Smooth running of the meeting - Few tips

- All participants are now muted
- Participants can also use the “Chat” to ask technical questions or share views with panelists and participants (select the option to “everyone” if you wish to send a chat to all attendees, including panelists)
- The meeting will be recorded, presentation slides and recorded video will be available after the event on the UNEP Global Mercury Partnership website

UNEP GLOBAL MERCURY PARTNERSHIP

Mercury waste management Area*



Provisional Agenda

Opening remarks

Teeraporn Wiriwutikorn, Ministry of Natural Resources and Environment, Thailand, Co-chair of the Global Mercury Partnership Advisory Group

Session 1: Resources available for the sound management of mercury wastes, introduced by Misuzu Asari, Kyoto University, Lead of the Global Mercury Partnership Area on Waste Management

- ❖ *Overview of tools and guidance: “Catalogue of Technologies and Services on Mercury Waste Management” and “Technical guidelines on the ESM of mercury wastes” under the Basel Convention by Junko Nishikawa, Ministry of the Environment, Japan, lead of the Global Mercury Partnership Area on Waste Management*
- ❖ *Development of Factsheets on the Environmentally Sound Management of certain mercury waste streams by Nicolas Humez, International Solid Waste Association*
- ❖ *Question and Answer Session*

Session 2: Technologies for solution, introduced by Immaculate Javia, Sustainable Alluvial Mining Services

- ❖ *Mercury waste technologies and case studies for the oil & gas and chlor-alkali sectors by Reinhard Schmidt, econ industries services GmbH*
- ❖ *Example of technologies and international cooperation with stakeholders for ensuring the ESM of mercury-containing lamps by Hiroki Iwase, Nomura Kosan Ltd*
- ❖ *Mercury Stabilization – Security and Traceability of Treatment and Practical Applications by Nick Morgan, BATREC*
- ❖ *Question and Answer Session*

Closure

Rodges Ankrah, United States Environmental Protection Agency, Co-chair of the Global Mercury Partnership Advisory Group



Opening Remarks

*Teeraporn Wiriwutikorn
Ministry of Natural Resources and Environment,
Thailand, Co-chair of the Global Mercury Partnership
Advisory Group*



Session 1: Resources available for the sound management of mercury wastes

*Introduced by Misuzu Asari
Kyoto University, Lead of the Global Mercury
Partnership Area on Waste Management*

Overview of tools and guidance

Catalogue of Technologies and Services on Mercury Waste Management and
Technical guidelines on the ESM of mercury wastes under the Basel Convention

Junko Nishikawa, Ministry of the Environment, Japan



Treating Mercury Wastes; Knowledge and Technology

15th February

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Overview of the Waste Management area under the UNEP-Global Mercury Partnership

Overview of the Waste Management area (WMA)

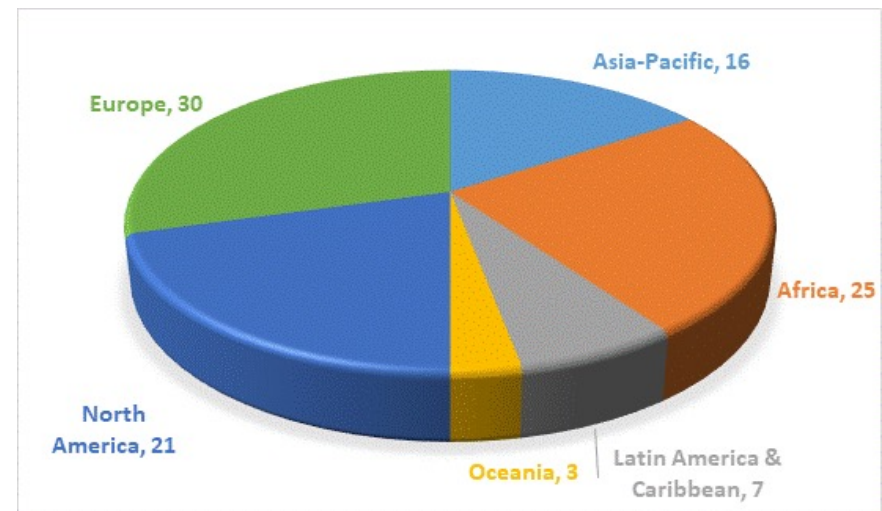
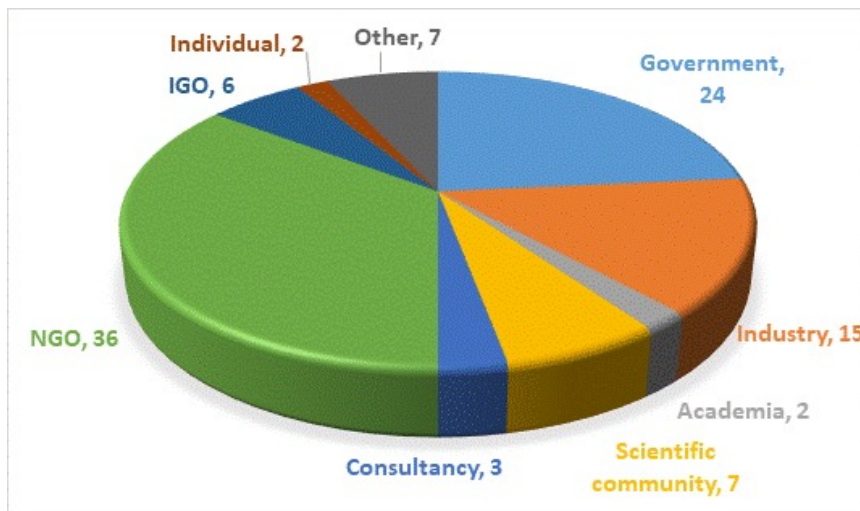
- Established in 2008 with over 100 partners (as of December 2021)

- Objective (revised):**

“To promote the environmentally sound management of mercury wastes by developing and disseminating relevant materials, enhancing capacities and awareness and providing specific solutions at the global, regional, national and local levels.”

- Lead:** Misuzu Asari (Associate Professor, Kyoto University)
Ministry of the Environment, Japan (MOEJ)

- Partners**



Future activities of the WMA (2022-2024)

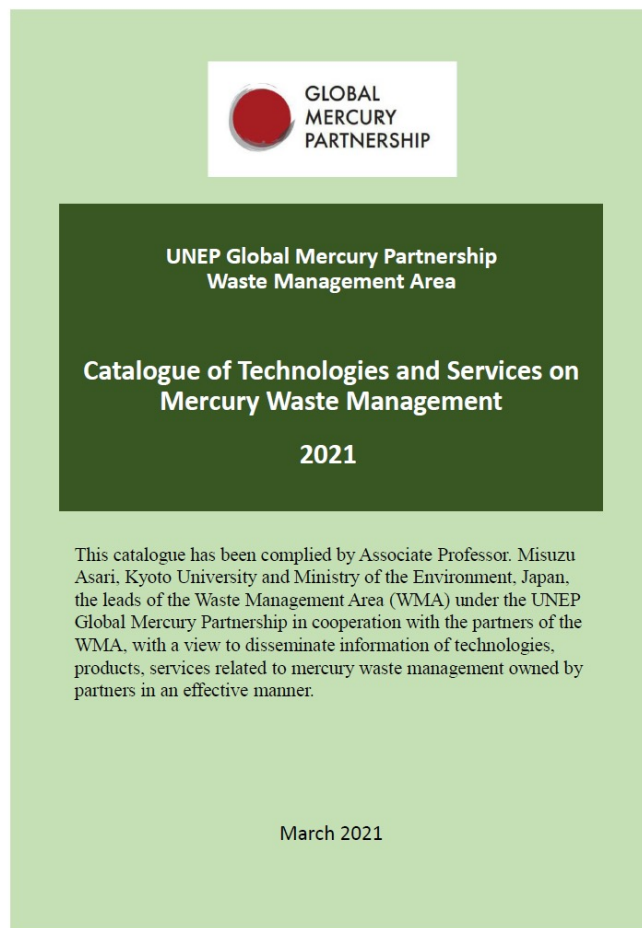
- Recently established three Working Groups will undertake activities while maximizing synergies to promote the ESM of mercury wastes at all levels.

Topic	Leader	Future activity (draft)
Resource development (WG1)	Nicolas Humez (International Solid Waste Association)	<ul style="list-style-type: none">• Development of factsheets for certain types of mercury wastes• Updates of the Catalogue of Technologies and Services on Mercury Waste Management• Communication and outreach
Capacity-building and awareness-raising (WG2)	Immaculate Javia (Sustainable Alluvial Mining Services) Reinhard Schmidt (econ industries services GmbH)	<ul style="list-style-type: none">• Promotion of understanding on the requirements under the Convention• Training for different sectors
Solution exchange (WG3)	Mick Saito (UNEP Regional Office for Asia and the Pacific)	<ul style="list-style-type: none">• Consideration of principles and operation procedures for solution exchange• Background survey on available resources• Pilot solution exchange• Communication and outreach

Catalogue of Technologies and Services on Mercury Waste Management

- The Catalogue contains mercury waste treatment technologies and services owned by 12 Partners of the WMA, including the technologies to treat different types of mercury wastes (wastes consisting of, containing and contaminated with Hg).
 - ✓ Profiles
 - ✓ Overview of technology / product / services
 - ✓ Strengthening / Advantage
 - ✓ Applicability

- The Catalogues has been updated annually and available at the website of the UNEP-Global Mercury Partnership.




Available at:
<https://www.unep.org/globalmercurypartnership/resources/tool/catalogue-technologies-and-services-mercury-waste-management-2021-version>

Catalogue of Technologies and Services on Mercury Waste Management

- The Catalogue consists of technologies/services on mercury wastes followed by related technologies.
- Updates of the Catalogue including the possible digitalization and mapping of mercury waste treatment facilities will be considered by the WG1.

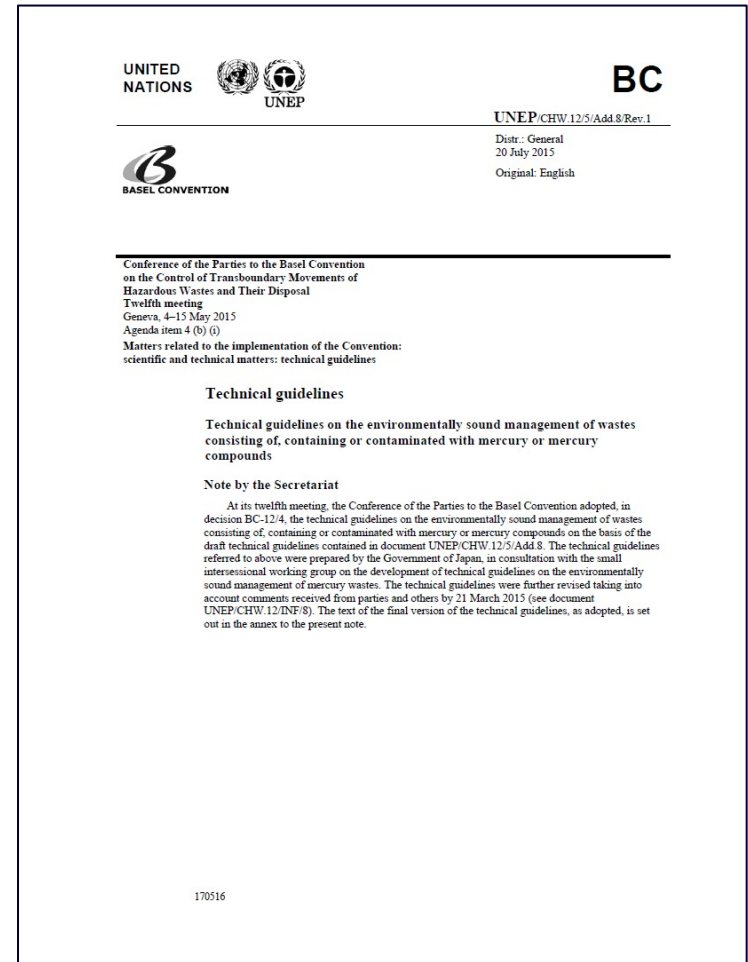
Section	No.	Technology/service holder	Keyword
Technologies and services on mercury waste management	1	APPELGLOBAL	Recovery, removal, decontamination, monitoring, amalgam, mining residue, mercury-free gold extraction
	2	Association of Lighting and Mercury Recyclers	Separation, recovery, mercury product waste, engineering design, fluorescent lamps
	3	BATREC Industrie AG	Stabilization, recovery, product waste, adsorbents, amalgams, mining residues, oil & gas, chlor-alkali
	4	ECOCYCLE PTY LTD	Mining residue, recovery, separation, product waste, distillation, crushing, oil & gas
	5	Ecologic, S. A.	Recovery, product waste, disposal, circular economy, e-waste, scrap metal
	6	econ industries services GmbH	Recovery, stabilization, solidification, engineering design, distillation, on-site conversion
	7	International Dental Manufacturer's Association	Amalgam, collection, separation
	8	Nomura Kohsan Co., Ltd	Stabilization, solidification, recovery, disposal, product waste, oil & gas
	9	REMONDIS QR	Recovery, disposal, stabilization, distillation, Basel export license
	10	TerraCycle Regulated Waste, LLC	Separation, recovery, product waste, fluorescent lamps
Related technologies and services	11	CURIUM	Removal, decontamination, engineering design, monitoring, contaminated sites, chlor-alkali
	12	SICK AG	Reduction, removal, adsorbent, mercury compounds, engineering design, monitoring

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Technical guidelines on the ESM of mercury wastes under the Basel Convention

Technical guidelines on the ESM of mercury wastes

- Article 11 of the Minamata Convention requires Parties to manage mercury wastes in an environmentally sound manner, taking into the guidelines under the Basel Convention and in accordance with requirements that the COP shall adopt.
- The Basel Convention COP14 in 2019 established a small intersessional working group (SIWG) to assist the update (lead country: Japan).
- The SIWG developed a draft updated version of the guidelines* for its consideration at the OEWG12 (in April 2022) and possible adoption at the COP15 (in June 2022).



The current version adopted in 2015
(UNEP/CHW.12/5/Add.8/Rev.1)

*UNEP/CHW.15/6/Add.6, <http://www.basel.int/TheConvention/ConferenceoftheParties/Meetings/COP15/tabid/8392/Default.aspx>

Technical guidelines on the ESM of mercury wastes

- The draft updated guidelines cover both mercury wastes categorized as hazardous wastes or other wastes as defined under the Basel Convention and mercury wastes as defined under the Minamata Convention, while addressing provisions under the both Conventions.

- The guidelines provide guidance on ESM, including but not limited to
 - ✓ Legislative and regulatory framework
 - ✓ Identification and inventory
 - ✓ Sampling, analysis and monitoring
 - ✓ Waste prevention and minimization
 - ✓ Handling, separation, collection packaging, labelling, transportation and storage
 - ✓ Environmentally sound disposal
 - ✓ Reduction of mercury releases from thermal treatment and landfilling of waste
 - ✓ Management of contaminated sites



Thank you for the attention.



Development of Factsheets on the ESM of certain Mercury Waste Streams

Nicolas HUMEZ
GMP-WMA 15/02/2022



Context

- Revision of the Technical Guidelines on ESM of Mercury Wastes - Technical but not Practical
- Concerns from developing countries
- Same concerns appeared through the result of the GMP-WMA Survey

**To provide practical and comprehensive answers
for safe management of relevant mercury waste streams
based on Fact-Sheets**

Organisation

- Elaboration of a dedicated project within ISWA HWWG
- Exchanges with the GMP-WMA for cooperation

To join forces and expertise with co-authoring of the Factsheets

Road Map

- Step 1: List of priority mercury wastes based on criteria (Minamata lists - 3 categories, lack of operational informations, technical complexity of ESM, high risks of Hg releases/emissions, ...)
- Step 2: Template for the Factsheet
- Step 3: Drafting Fact-Sheets (based on top 1 priority waste stream)
- Step 4: Validation & Communication

Objective: Steps 1&2 finalised by mid March 2022 with Introductory Document

Draft factsheet template

- Introduction (Description/Occurrence/Figures/Risks/Links to relevant legislation)
- Classification
- Collection (best practices)
- Packaging, labelling & transport
- Storage (best practices, includes cases of accidents, leakages and spillages)
- Environmentally sound treatment (from pre-treatment to final treatment)

Priority List of Mercury Waste Streams

Discussion in progress, not finalised

Draft based on the outcome of the GMP-WMA Survey

Category A

- Elemental mercury from different sources

Category B

- Fluorescent bulbs
- Non-electronic measuring devices
- Dental amalgam
- Batteries/accumulators

Category C

- Tailings from ASGM
- Other waste from manufacturing processes

Nicolas HUMEZ

Chair of the ISWA Hazardous Waste Working Group

ISWA is the world's leading network promoting professional and sustainable waste- and resource management.

ISWA represents all aspects and stakeholders within the waste management sector: the public, the private and the academic.

With more than 1,300 Members in 109 countries, ISWA has a unique global network.



**To Promote and Develop
Sustainable and
Professional Waste
Management Worldwide
and the transition to a
Circular Economy**



Questions and Answers
