

Inception Workshop for the Project
“Management of Mercury and Mercury-Containing Waste”

***Initial observations from
national mercury inventories***

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4 March 2009 - Siem Reap, Cambodia

Outline

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2. Brief overview of Toolkit
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Introduction

- Scope
 - Provide initial review of the national mercury inventories
 - Offer feedback on strengths and gaps
 - Suggest steps forward and recommendations for improvement/update

Brief overview of Toolkit

- Intended to guide the users in inventory development while recognizing that all country situations are different.
- Using the toolkit should save the user unnecessary effort by providing an immense amount of background data directly.
- A first rough sketch of mercury release estimates can be developed by applying the calculation tool, using the default factors, and entering country activity rates (indicating the magnitude of the sectors and other mercury sources in the country).

Brief overview of Toolkit

- Users can progressively improve the estimates of the most important releases with more accurate activity rates, specific national input factors (such as mercury concentration in a raw material), or details of specific release reduction filters, etc.
- Unfortunately the Toolkit does not yet provide default factors for all mercury release source categories, but this may be a part of future improvements.

Inventory results

Cambodia

Cambodia

- Mercury task team established
 - *Were members of NGOs, academia and civil society included?*
- Training technical workshop
- Field survey conducted in 10 provinces and 2 municipalities (out of 24)
 - *What activities take place in those which were not included?*
 - *Were other sectors involved in questionnaire development?*
- Inventory adopted as official baseline information
 - *Considering shortcomings in first approach, to what extent can policy and decision making move forward?*

Cambodia

- | | |
|--|---|
| • Mineral oils-extraction, refining and use | • Production of recycled ferrous metals |
| • Natural gas-extraction, refining and use | • Production of other recycled metals |
| • Biomass fired power and heat production | • Incineration of municipal/general waste |
| • Gold and silver extraction with mercury amalgamation processes | • Incineration of medical waste |
| • Production of lime and light weight aggregates | • Informal dumping of general waste |
| • Thermometers with mercury | • Waste water system / treatment |
| • Batteries with mercury | • Crematoria |

Cambodia

- Main sources were selected based on toolkit, consultations and consideration of local conditions
 - Health sector (hospitals, clinics)
 - Landfill (municipal waste)
 - Gold mining
- Other potential sources considered
 - Secondary ferrous and non-ferrous metal production
 - Energy sources
 - Waste burning (industrial, medical)
 - Cell batteries
 - Lime production

Cambodia

- Total releases from preliminary survey
 - Min 769.51 Kg
 - Max 14845.178 Kg
- Source one: consumer products w/intentional use of mercury (8485.362 Kg)
- Source two: waste disposal with mercury content (4665.56 Kg)
- Source three: gold extraction (1182 Kg)
 - ***Update in official records and surveys (e.g. workers and locations) might be necessary to recalculate this data***

Cambodia

- Max release considered feasible as other sources could not be quantified (e.g. electrical/electronic switches, biocides, pesticides, paints, cosmetics, pharmaceuticals)
- A management plan is non-existent at the national level nor specific provisions for mercury or other chemicals of concern
- Existing legislation mainly covers pesticides and municipal waste management
- Further assistance required (technical, financial)

Cambodia

- Several constraints and barriers found
 - National data was unavailable or unclear for certain sources (e.g. fossil fuels, certain mercury-containing products, informal waste disposal)
 - *Involvement of other sectors may improve data gathering/collection*
- Potential hot-spots (from UNEP toolkit)
 - None considered relevant except from mine tailings
 - *Field work may provide further guidance on other potential hot-spots (e.g. informal waste disposal)*

Cambodia

No	Category and Sub-category	Activity rate	Input factor		Amount (Kg Hg/y)	
			Min	Max	Min	Max
1	Extraction and use of fuel/energy sources					
1.1	Use of crude oil (Power plant)	240748 t/y	10 mg/t	300 mg/t	2.407	72.224
1.2	Use of gasoline, diesel and other distillates (Power plant)	186344.87 t/y	1 mg/t	100 mg/t	0.186	18.634
1.3	Use of gasoline, diesel and other distillates (transportation)	284737.85 t/y	1 mg/t	100 mg/t	0.285	28.474
1.4	Use of pipeline gas (consumer quality)	34176062.25 Nm³	0.03 µg/Nm³	0.40 µg/Nm³	0.001	0.014
1.5	Biomass fired power and heat production	5,511,201 t/y	0.007 mg/t	0.03 mg/t	0.039	0.165
2	Primary metal production					
2.1	Maximum mercury use per year	6,000 miners	N/A	N/A	34.5	1182
3	Production of other minerals and materials with mercury impurities					
3.1	Lime production	240	0.009 g/t	0.055 g/t	0.002	0.013
4	Intentional use of mercury in industrial purposes					
5	Consumer products with intentional use of mercury					
5.1	Thermometers	6141 items/y	0.5 g/item	1.5 g/item	3.071	9.212
5.2.1	Batteries	635.599 t/y	0.25 Kg/t	10 Kg/t	158.900	6355.99
5.2.2	Other type batteries	13.251 t/y	3.4 Kg/t	160 Kg/t	45.053	2120.16
6	Other intentional products/process uses					
6.1.1	Amalgam fillings in capsule	0.8 g per capsule	2790 capsules	141224 capsules	2.232	112.979
6.1.2	Free metal mercury consumption		5.741 Kg	50.040 Kg	5.741	50.040
7	Production of recycled metals (secondary metal production)					
7.1	Production of recycled ferrous metal (iron and steel)	8,358.80 t/y	N/A		0	0
7.2	Production of other recycled metals (aluminum, copper, etc.)	2,197 t/y	N/A		0	0
8	Waste incineration					
8.1	Incineration of municipal/general waste	3,525.60 t/y	1 g/t	10 g/t	3.526	35.256
8.2	Incineration of medical waste	801.82 t/y	8 g/t	40 g/t	6.415	32.073
9	Waste deposition/land filling and waste water treatment					
9.1	Solid waste disposal	466,556 t/y	1 g/t	10 g/t	466.556	4665.56
9.2	Waste water treatment	N/A	0.5 mg/m³	10 mg/m³	0	0
10	Crematoria and cemeteries					
10.1	Cremation	40,596 corpse/y	1g/corpse	4g/corpse	40.596	162.384
11	Identification of potential hot-spots					
	Total release from all categories				769.51	14845.178

Inventory results

Pakistan

Pakistan

- Stakeholder team established
 - *Were other sectors included, besides Government and Academia?*
- Identification of mercury and mercury products uses and releases
 - *Was survey conducted with support of a questionnaire?*
- Collection of water, air and soil samples
 - *Statistical analysis, sample representativeness?*
- Laboratory analysis
 - *QA/QC ; Interpretation of results*

Pakistan

- Data collection – markets/industry

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_14191

