



MINAMATA  
CONVENTION  
ON MERCURY



# UNEP and mercury inventories

## *Introduction to the UNEP Mercury Toolkit*

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## Inventories are relevant for several articles in Minamata, e.g.:

- Article 7: ..to be able to determine whether ASGM in the country is more than insignificant
- Article 8: .....Within 5 years of entry into force, the Party shall establish and maintain an inventory of relevant sources
- Article 9: .....Parties shall establish and maintain an inventory of releases
- Article 12: .....shall develop strategies to identify and assess contaminated sites

# Purpose of inventories?

- To identify priorities for actions (sources/risks)
- Support the verification of global inventories
- Effectiveness evaluation
- The process will build capacity and improve communication between stakeholders

# Global Mercury Assessment 2013

Mandated by the UNEP Governing Council in 2009  
Total anthropogenic emissions of mercury to air in 2010 estimated at 1960 tonnes

## Content

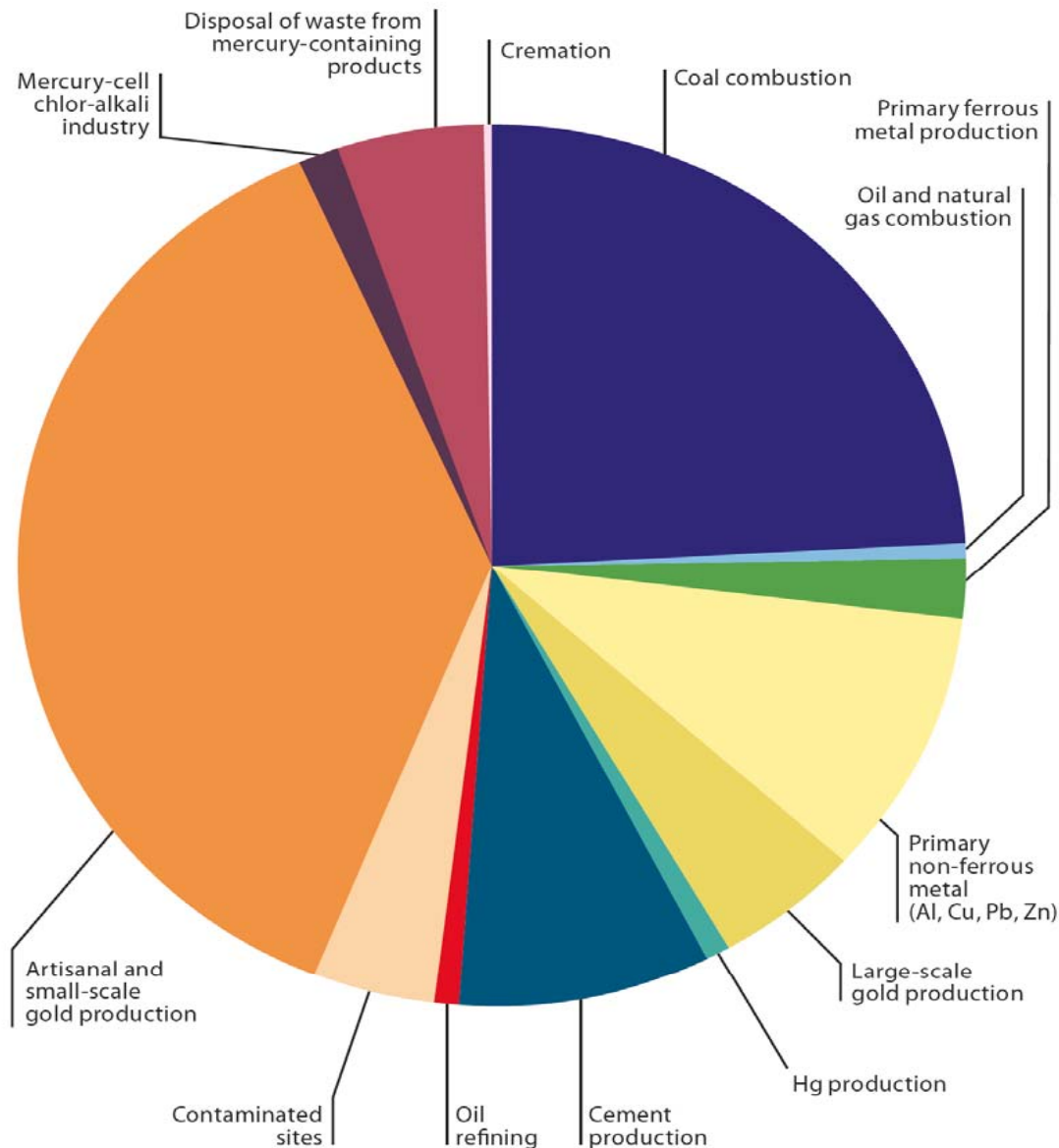
- Sources
- Human emissions of Hg to air and aquatic environments
- Trends in Hg emission
- Atmospheric chemistry, transport and fate
- Aquatic Pathways, Transport and fate
- Gaps, key findings



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# Anthropogenic emissions - by Sector



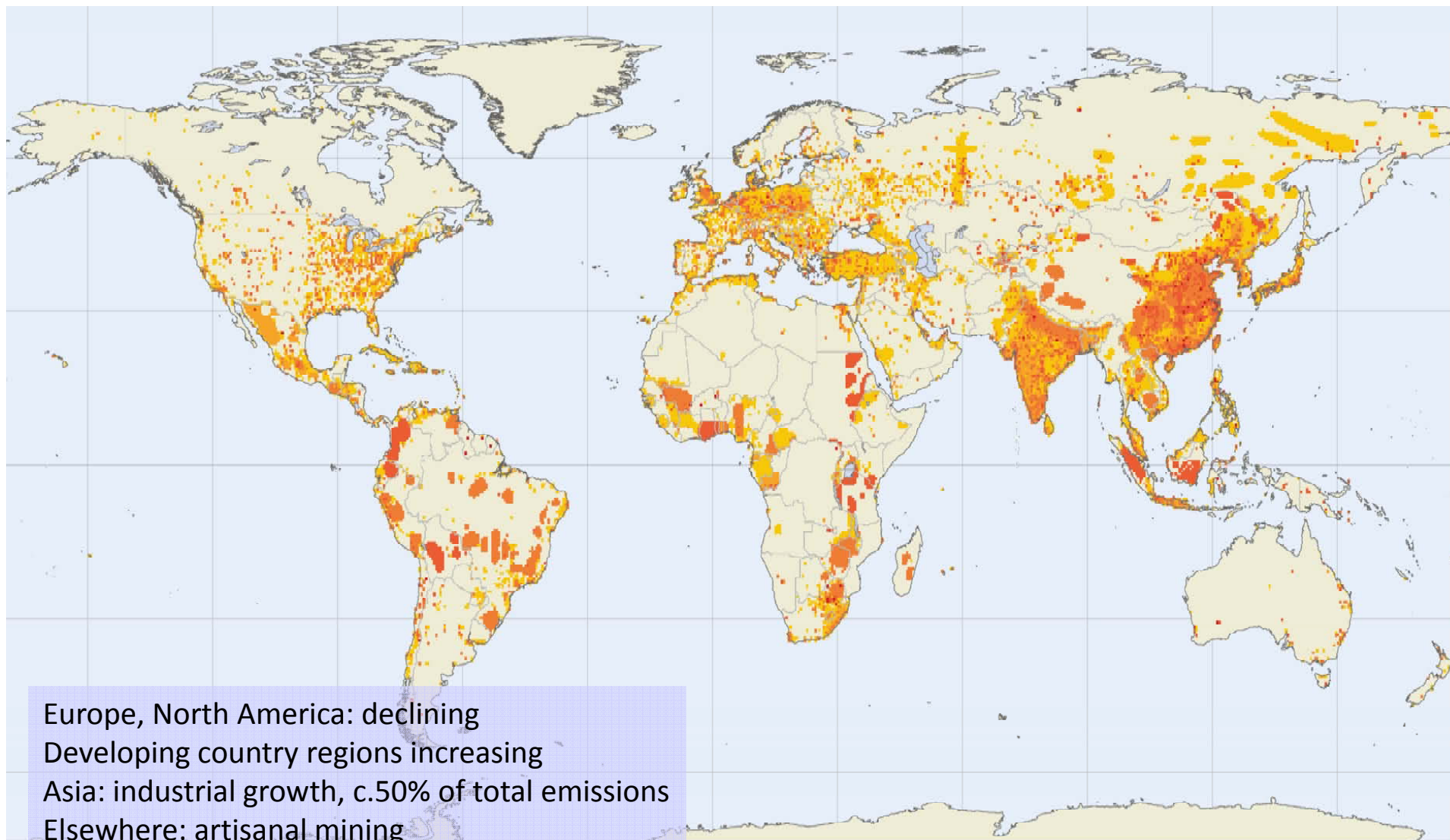
About half of emissions from industries using raw materials with natural traces of mercury:

- Coal
- Non-ferrous metals
- Cement

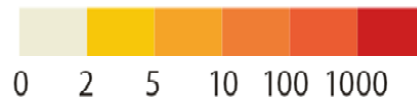
About half of emissions from industries using mercury in processes and products:

- Artisanal and small-scale gold mining
- Chlor-alkali
- Waste disposal of mercury containing products

# Global distribution of Hg emissions



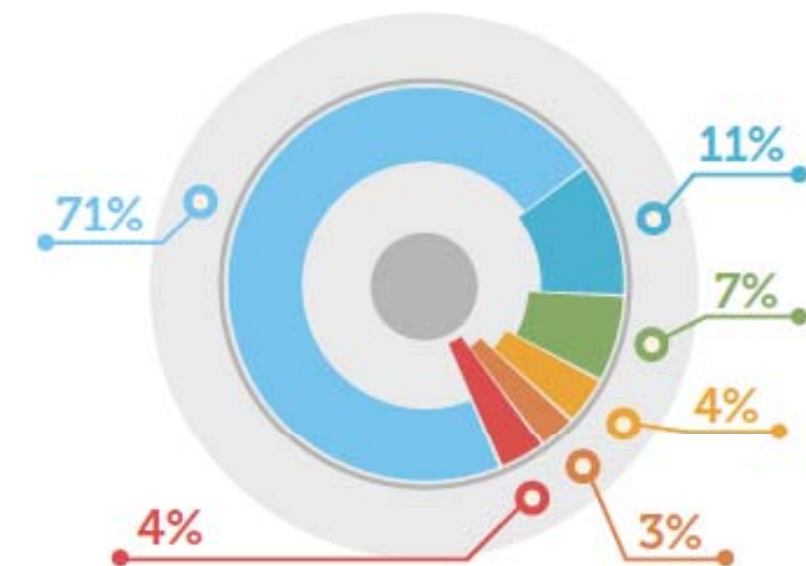
Mercury emission 2010, g/km<sup>2</sup>





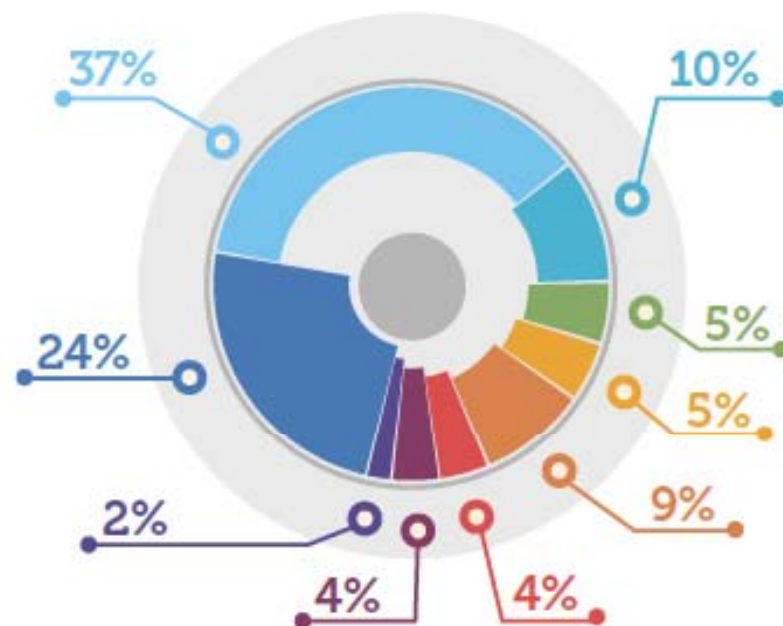
# Global vs. Latin America and the Caribbean

Distribution of LAC emissions of Hg



- Artisanal and small-scale gold mining
- Production of non-ferrous metals
- Large-scale gold production
- Waste from consumer products
- Cement production

Distribution of global emissions of Hg



- Others
- Contaminated sites
- Production of ferrous metals
- Coal combustion

Source of data: UNEP Global Mercury Assessment, 2013

# Mercury inventories with UNEP Toolkit

- Inventories are the basis for prioritizing actions

UNEP Toolkit for the identification and quantification of mercury releases:

- Assists governments in conducting their mercury release inventories
- Provides information about the characteristics of mercury sources
- Standard methodology for comparable data



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# UNEP toolkit - key principles

- Mass balance principle:
  - Mercury inputs
  - Mercury output distribution
- Mercury releases in the whole life cycle of product/material
- Mercury releases to all media/pathways



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# UNEP toolkit – 2 levels

## Level 1:

- Default factors and guidance provided
- Simplified and standardized procedure and tools for basic inventories

## Level 2:

- Standardized procedure but open framework - encourages use of specific national data (default factors can be used when data is absent)

➤ Level 1 and 2 can be combined



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# Mercury: Learn platform

UNEP-UNITAR Joint initiative

[mercury.unitar.org](http://mercury.unitar.org)

## Objectives

- To increase dissemination of the UNEP Toolkit methodology to prepare mercury emissions inventories
- To increase interest by stakeholders and countries on preparing these inventories
- Provide a space for countries and experts to exchange information and knowledge on their experiences preparing inventories
- To ensure links to resources on different aspects of mercury emissions inventories
- To ensure coordination of inventory-development activities, in support to the UNEP Global Partnership on Mercury

# Mercury: Learn platform

## Features

- Online training modules on how to develop inventories
- Online forums
- Document posting
- Interactive map of worldwide initiatives
- Repository of documents and other resources
- Calendar of events
- Links to other related websites

# Mercury: Learn platform

## Mercury:Learn

Training platform on mercury inventories



UNEP United Nations Environment Programme



unitar  
United Nations Institute for Training and Research



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### Registration and login

Hi, JPon

### Calendar of Events

April 2014						
S	M	T	W	T	F	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3

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# Mercury: Learn platform

## Mercury:Learn

Training platform on mercury inventories



United Nations Environment Programme



unitar  
United Nations Institute for Training and Research

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**INVENTORY LEVEL 1**

Welcome to the Inventory Level 1 training modules



0:00 / 3:30

MODULE 1 - Introduction to mercury and mercury releases

MODULE 2 - Getting started on the Toolkit methodology

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# Mercury: Learn platform



[http://www.youtube.com/watch?v=DpTksBoWdgo&feature=player\\_embedded](http://www.youtube.com/watch?v=DpTksBoWdgo&feature=player_embedded)

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# UNEP inventory projects

- UNEP supports the implementation of national and regional projects to develop inventories and action plans on mercury
- Some on-going projects:
  - Development of national inventory and action plan on Hg in **Russia**
  - Pilot project on the development of a mercury inventory in **China**
  - Developing of mercury inventories and action plans in **Latin America and the Caribbean**

# UNEP inventory projects: China

Population: 1.351 billion (2012)

Gross domestic product: 8.227 trillion USD (2012)



Project status:

- National inventory of two priority sectors (VCM and coal) and inventory of all sectors in two provinces (Guizhou and Hunan).
- Draft inventories available
- Project expected to be concluded by December 2014

# UNEP inventory projects: Russia

Population: 143.5 million (2012)

Gross domestic product: 2,118 trillion USD (2013)



Project status:

- Nation-wide inventory
- Emissions will be measured, to complement the inventory
- A second phase will be requested
- Project expected to be ready by end of 2015

# UNEP inventory projects: Russia

Project Components
Component 1: Identification of Initial guidance on Hg management
Component 2: Development of mercury inventories by industrial sector
Component 3: Assessment and strengthening of existing monitoring capacity for mercury analysis in the environment and humans
Component 4: Prioritization of mercury sources, mercury management gap analysis and development of initial action plan.
Component 5: Lessons learned, final report, and strategies for needs to reduce mercury agreed
Component 6: Project Management and supervision

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# Available inventories at UNEP website

Regional inventories:

- Artic countries (2005)

Industry-specific inventories:

- Cement industry (2005)

National inventories:

- Australia, Burkina-Faso, Cambodia, Dominican Republic, Ecuador, Madagascar, Mexico, New Zealand, Panama, Pakistan, Peru, Philippines, Russia, Syria, Yemen

<http://www.unep.org/chemicalsandwaste/Mercury/Informationmaterials/ReleaseInventories/tabid/79332/Default.aspx>

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**Thanks!**

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