



Quick Start Guide for managing mercury trade in artisanal and small scale gold mining

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UN 
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Environment Programme



**GLOBAL
MERCURY
PARTNERSHIP**



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About the document

The Minamata Convention on Mercury is a global treaty that aims to protect human health and the environment from the adverse impacts of mercury. Parties to the Minamata Convention on Mercury with more than insignificant artisanal and small scale gold mining (ASGM) using mercury must develop and implement an ASGM National Action Plan to reduce, and where feasible eliminate, the use of mercury in the sector. In order to address the complexity of the sector and comply with the requirements of the Minamata Convention, each National Action Plan must include “Strategies for managing trade and preventing the diversion of mercury and mercury compounds from both foreign and domestic sources to use in ASGM”. In addition, the use of primary mined mercury in ASGM is prohibited, and the re-use of mercury from closing or converting chlor-alkali plants is severely restricted.

This guide for managing mercury trade in ASGM has been developed as part of UN Environment Global Mercury Partnership technical support to countries developing NAPs, in response to requests from countries. The guide provides an overview of the current state of knowledge on mercury supply, demand and trade. Furthermore, it aims to familiarize the reader with the provisions relevant to mercury trade in the Minamata Convention. Finally, it suggests practical steps to understand mercury trade at the national level and recommends approaches to developing the National Action Plan strategy to manage mercury trade in ASGM.

CHAPTER 1



Sources and supply of mercury

Main mercury sources

Global mercury supply comes from main five sources:



Primary mercury mining of cinnabar ore



By-product mercury recovery from non-ferrous metal mining or oil and gas processing



Decommissioning of mercury-cell chlor-alkali facilities



Recycling of mercury-added products



Net **change** in government or private **stocks of mercury**

CHAPTER 1

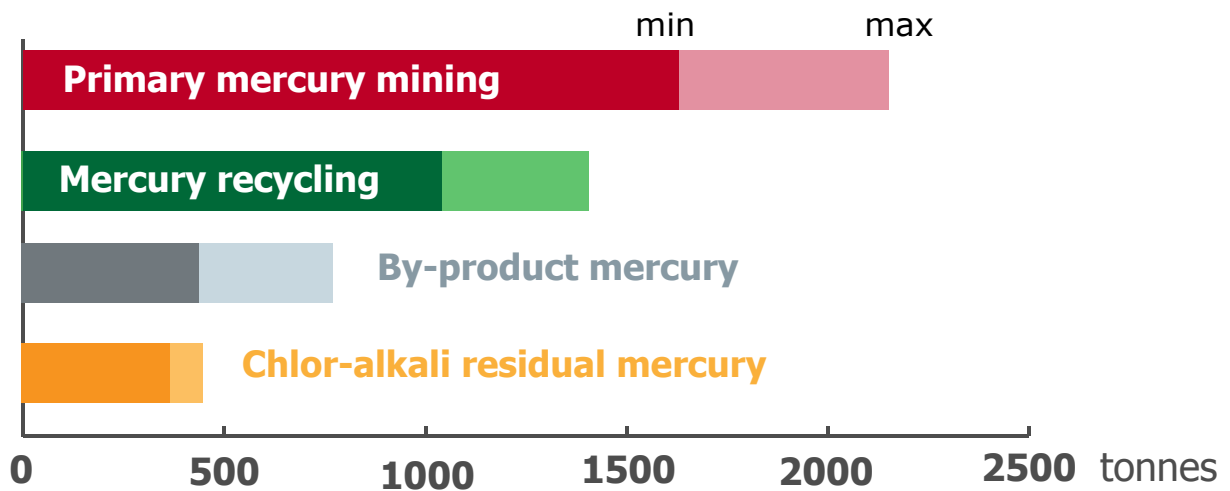
Sources and supply of mercury

Global mercury supply in 2015

Estimated

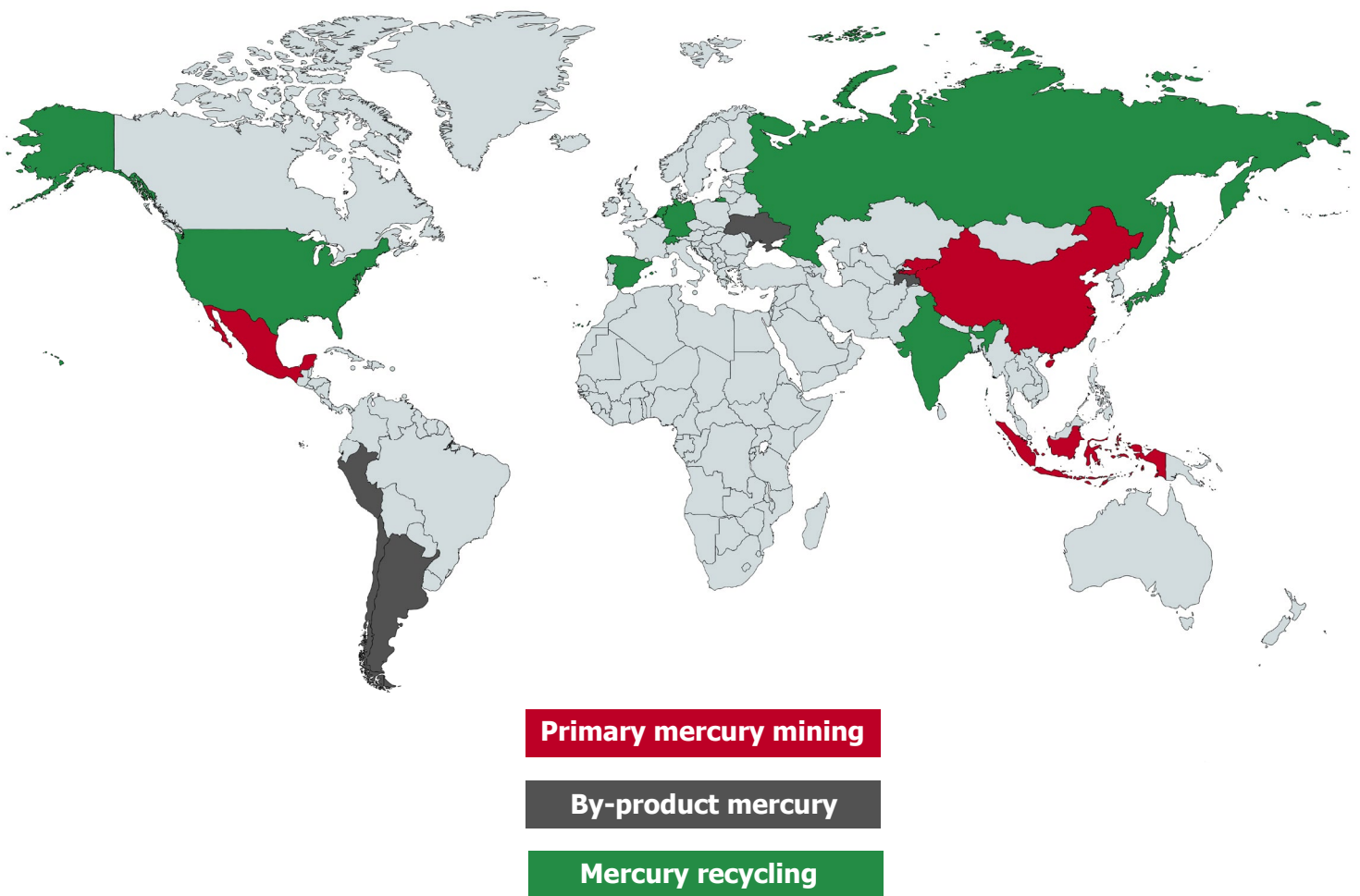
max 4785 tonnes **min 3480** tonnes

By source



Countries producing mercury* by main mercury source

*more than average 25 tonnes/year, based on data from 2013-2015





ASGM is the largest sector in terms of total mercury use and total releases of mercury into the environment. ASGM occurs in over 70 countries in Africa, Asia and South America. Mercury use in ASGM, together with use in the production of vinyl chlorine monomer (occurring primarily in China), constitute over 60% of global mercury demand. The demand in both sectors has increased significantly since 2005.

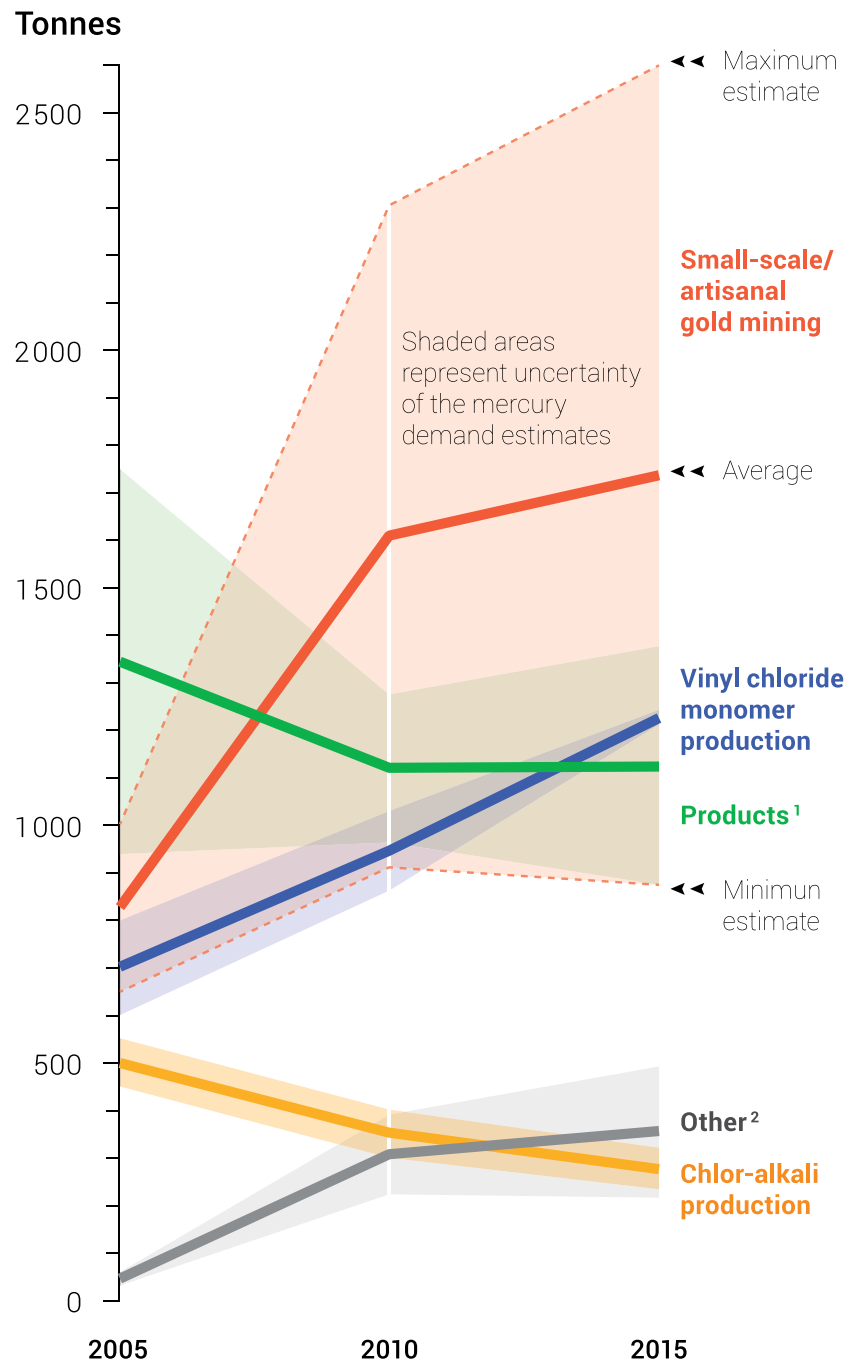
The reported increase in mercury use from 2005 to 2015 in the ASGM sector does not necessarily mean that actual mercury use by miners increased by the same amount. Rather the reported increase reflects in part the availability of better information and data. The high uncertainty of the estimate of mercury use in ASGM further highlights the complexity of the sector and challenges associated with obtaining reliable information on gold production and mercury use. The remoteness, informal status of operations and relative lack of financial and technical resources to conduct the needed field assessments were identified as barriers to obtaining more accurate estimates.

In developing their ASGM National Action Plans, countries strive to increase their understanding of the sector and may fill in some data gaps by conducting field investigations. This should lead to better estimates of mercury use.

Mercury demand

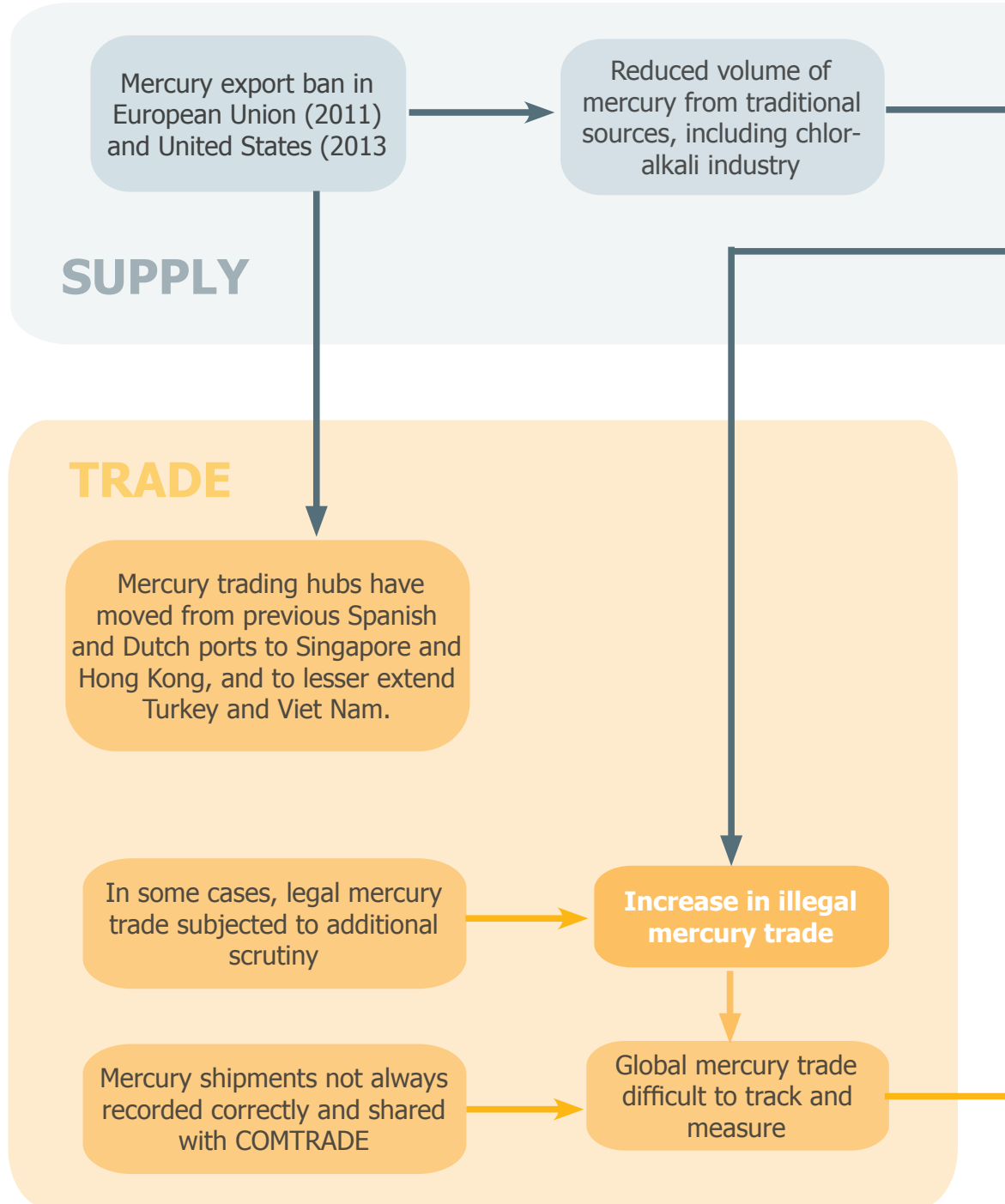
Evolution of mercury demand by sector, including uncertainties

source: UN Environment report "Global mercury supply, trade and demand"

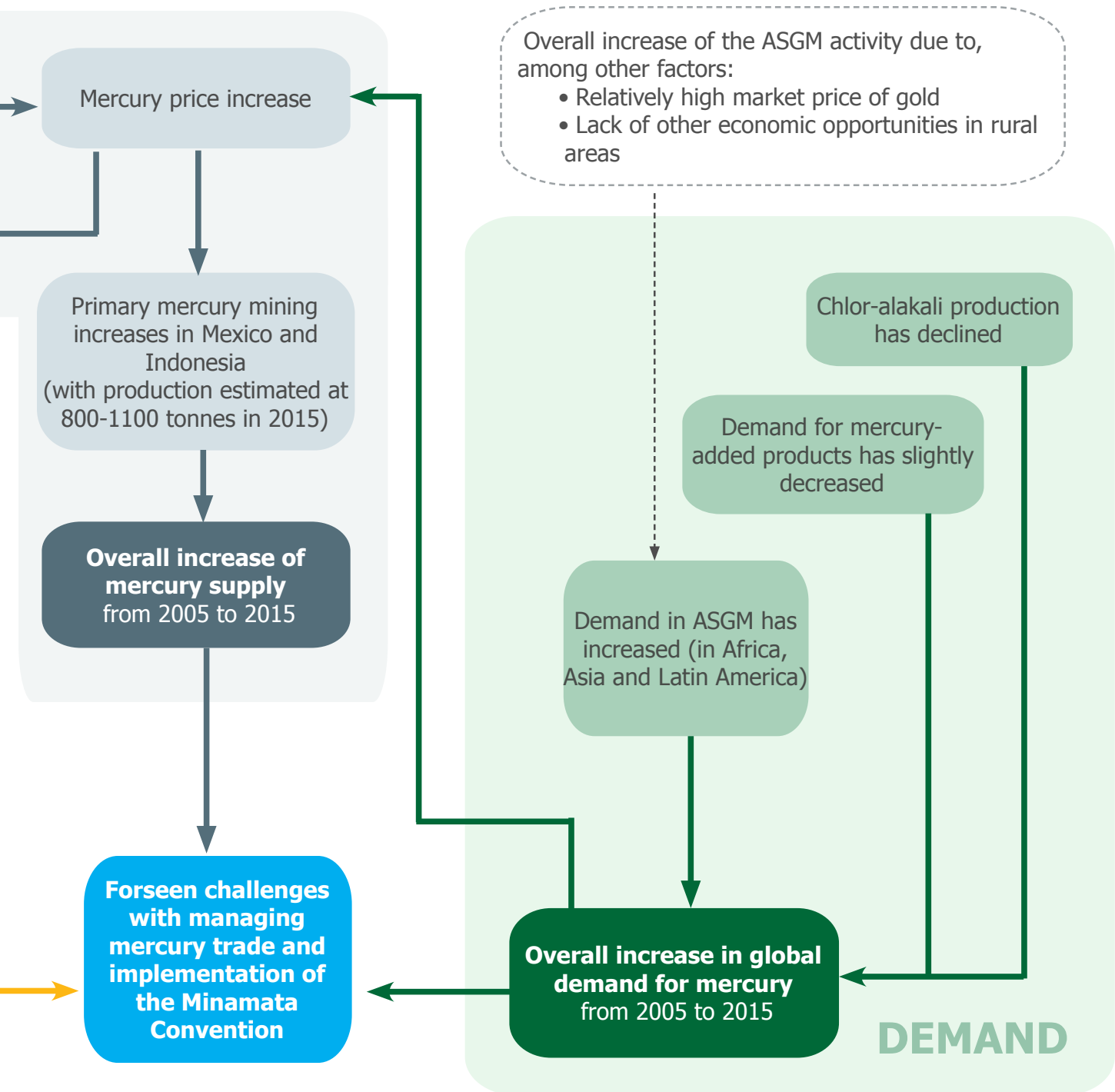


1. Batteries, dental applications, measuring and control devices, lamps, electrical and electronic devices
2. Paints, laboratory, pharmaceutical, cultural/traditional uses, etc.

The graphic below shows the global trends and causality between mercury supply, trade and demand. It is based on the findings of the UN Environment report “[Global mercury supply, trade and demand](#)” (2017).



Global trends and causality in mercury supply, trade and demand



CHAPTER 4



Minamata Convention provisions on mercury trade

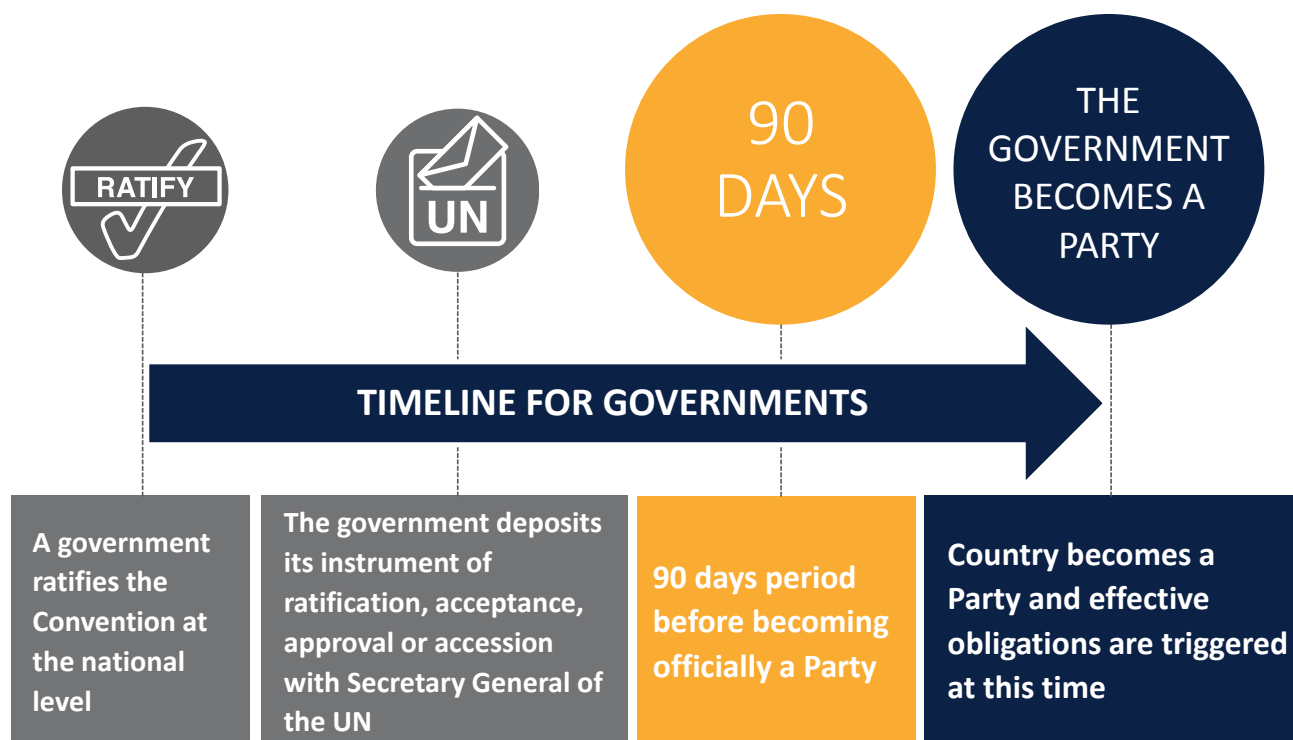


Minamata Convention on Mercury

Article 3

Mercury Supply sources and trade

The Minamata Convention obligations on mercury supply and trade go into effect as soon as a country becomes a Party, so the timing of the obligations are anchored to this date.



CHAPTER 4

Minamata Convention provisions on mercury trade



Primary mercury mining

Article 3
Paragraph 3

No new primary mercury mining.

Article 3
Paragraph 4

Phasing out existing primary mercury mining within 15 years.

Mercury from primary mercury mining is not to be used in artisanal and small-scale gold mining.*

* Use of mercury from primary mercury mining is allowed only for manufacturing mercury-added products in accordance with Article 4, manufacturing processes in accordance with Article 5, or disposal in accordance with Article 11. This means mercury from primary mining cannot be available for use in ASGM.

Mercury from decommissioned chlor-alkali plants



Article 5
Annex B

Use of mercury in chlor-alkali production must be phased out by 2025.

As these plants shut down, they leave behind legacy mercury and in some cases contaminated sites.

Article 3
Paragraph 5(b)

Excess mercury from decommissioned chlor-alkali plants must be disposed of in an environmentally sound manner, as per Article 11.

CHAPTER 4

Minamata Convention provisions on mercury trade



Mercury stocks



Article 3 Paragraph 5(a)

Countries must endeavor to identify large mercury sources that may contribute to the global mercury supply.

Countries need information on stocks exceeding 50 metric tons (MT), and mercury supply-generating stocks exceeding 10 MT/yr.

Information may help plan for associated interim storage requirements under Article 10.

Guidance adopted by the First Conference of the Parties (COP1), explains how Parties can obtain such information.

CHAPTER 4

Minamata Convention provisions on mercury trade

GUIDANCE ON OBTAINING STOCKS INFORMATION



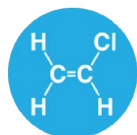
(a) Is primary mining occurring within the country's territory?



(b) Are there identified sites where mercury is stored prior to use within the territory?



(c) Are recycling or recovery activities that may produce mercury undertaken within the territory? If so, what quantity of mercury is produced by those activities?



(d) Is there any proposed decommissioning of chlor-alkali plants, vinyl chloride monomer plants, or other facilities with manufacturing processes in which mercury or mercury compounds are used?



(e) Are there facilities that may result in the production of by-product mercury within the territory? If so, what quantity of mercury is generated by those facilities?

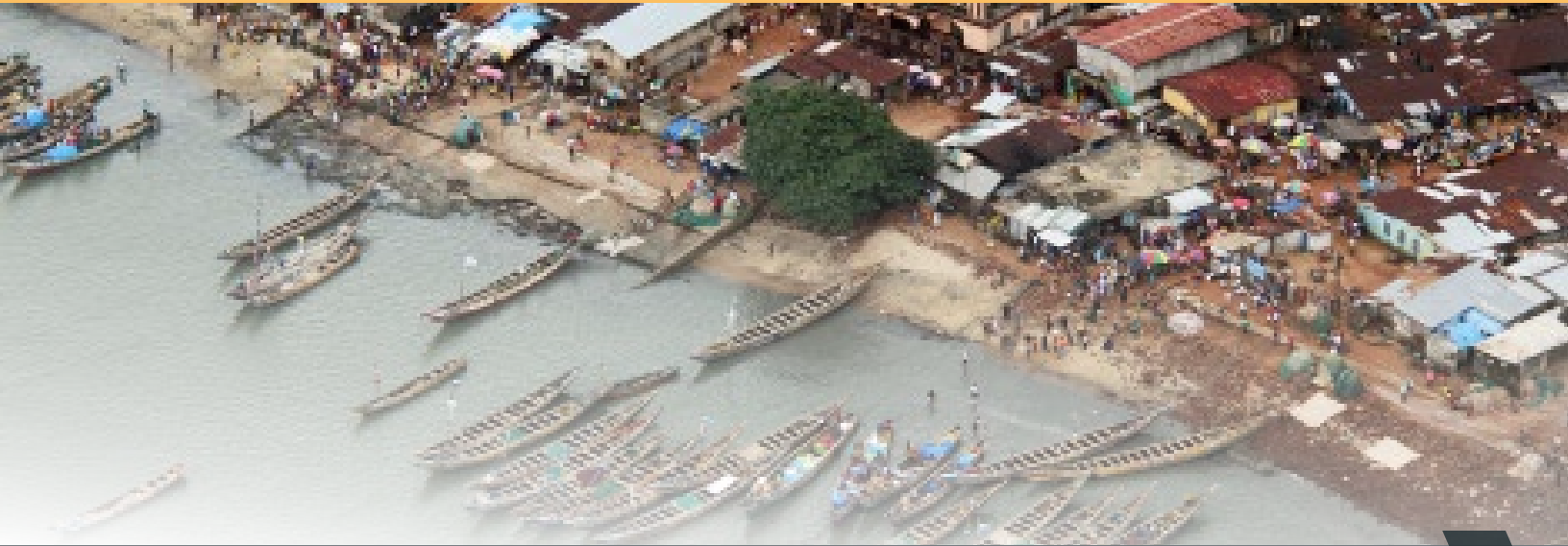
Sources:

Link to the guidance on obtaining stocks information: http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/guidance_identification_stocks_sources.pdf

Decision of the Minamata COP1 regarding the Guidance on obtaining stocks information: http://www.mercuryconvention.org/Portals/11/documents/meetings/COP1/English/1_29_e_report.pdf

CHAPTER 4

Minamata Convention provisions on mercury trade



Trade procedures - prior informed consent

Article 3 Paragraph 6

Not allow the export of mercury unless the importing country provides written consent to a Party, the mercury is for an allowed use or environmentally sound interim storage, and all other conditions of Article 3 paragraph 6 are met.

Not allow the import of mercury without consent of the relevant government official, ensuring both the mercury source and proposed use are allowed under the Convention (and applicable domestic law).

Article 17 Paragraph 4

Designate a national focal point for the exchange of information, including the consent of importing Parties.

List of National focal points: <http://www.mercuryconvention.org/Countries/Parties/Focalpoints/tabid/6322/language/en-US/Default.aspx>

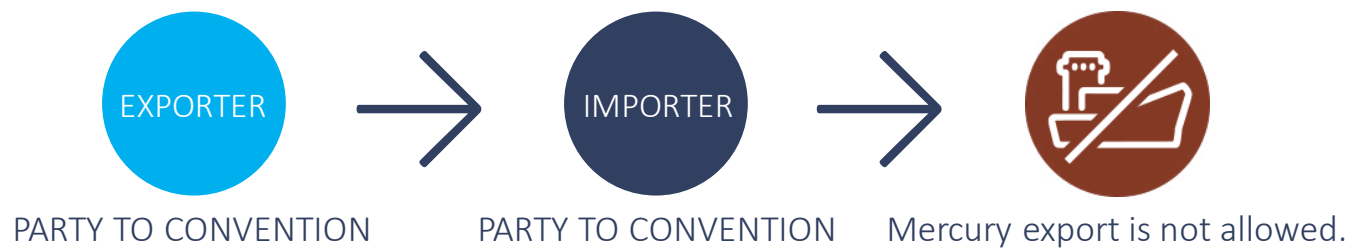
Guidance and example of forms for the prior-informed consent were adopted by the COP1 and are available here: http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/guidance_forms_article3.pdf

CHAPTER 4

Minamata Convention provisions on mercury trade

SCENARIO ONE

EXPORTER IS A PARTY → IMPORTER IS A PARTY



EXCEPTION

Mercury export is allowed if:



Importing Party has provided written consent



Mercury is for use allowed under the Convention, OR for environmentally sound interim storage

The general rule is that mercury export is not allowed. Mercury export is allowed if the importing Party has provided the exporting Party with its written consent; and the mercury is for only for a use allowed to the importing Party under the Convention or environmentally sound interim storage, per Article 10.

SCENARIO TWO

EXPORTER IS A PARTY → IMPORTER IS A NON-PARTY



EXCEPTION

Mercury export is allowed if:



Importing non-Party has provided written consent



Importing non-Party certifies it has measures in place to protect human health and the environment

Importing non-Party ensures its compliance interim storage and final disposal

Mercury is for use allowed under the Convention, OR for environmentally sound interim storage

The general rule is that mercury export is not allowed. Mercury export is allowed when the non-Party importer has provided the exporting Party with its written consent; including certification that it has measures in place to ensure the protection of human health and the environment and to ensure its compliance with the provisions on interim storage (per Article 10) and mercury waste (per Article 11); and such mercury will be used only for a use allowed to a Party under the Convention or for environmentally sound interim storage (Article 10).

CHAPTER 4

Minamata Convention provisions on mercury trade

SCENARIO THREE

EXPORTER IS A NON-PARTY → IMPORTER IS A PARTY



NON-PARTY



PARTY TO CONVENTION



Mercury export is not allowed.

EXCEPTION

Mercury export is allowed if:



Importing Party has provided written consent



Exporting non-Party has provided certification that the mercury is not from primary mercury mining or from decommissioning chlor-alkali facilities

The general rule is that mercury export is not allowed. Mercury export is allowed when the exporter non-Party has provided certification that the mercury is not from primary mercury mining or excess mercury from decommissioning chlor-alkali facilities, and the importing Party has provided its written consent.

CHAPTER 4

Minamata Convention provisions on mercury trade



General consent

The Convention allows Parties to issue consent either on an import by import basis or through a general notification of consent provided to the Secretariat.

A general notification of consent may include terms and conditions, and may be revoked at any time by that Party or non-Party.

As the general notification of consent would mean that there is no information about shipments of mercury being provided to the importer, countries should consider carefully whether they have suitable controls for monitoring and handling mercury to use this option effectively.

STEP 1

Supply

Identify the sources of mercury in your country (supply), according to the guidelines adopted by Minamata Convention COP1: http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/guidance_identification_stocks_sources.pdf

STEP 2

Demand

Identify the uses of mercury in your country (demand), based on the Minamata Initial Assessment report if available.

STEP 3

Trade

Consult national trade statistics (information on merchandise imports and exports), especially the data on tariff item 2805.48 corresponding to mercury, as well as UN Comtrade database to identify and compare the official mercury trade statistics for your country and region. Keep in mind that Comtrade data can sometimes be incomplete or erroneous due to reporting issues.

Consult other tariff codes related to mercury imports, for example:

2852.10 Inorganic or organic mercury compounds, although they are not of defined chemical constitution, except amalgams

3006.40 corresponding to cements and other dental products (for dental amalgams)

STEP 4

Field investigation

Estimate the use of mercury in ASGM, based on the field investigation under the Minamata National Action Plan (NAP) for ASGM, if applicable, or other reliable sources.

If the estimated mercury use in ASGM is higher than official mercury import data, it is a signal that mercury might enter the country illegally.

Practical steps to assess mercury trade in a country

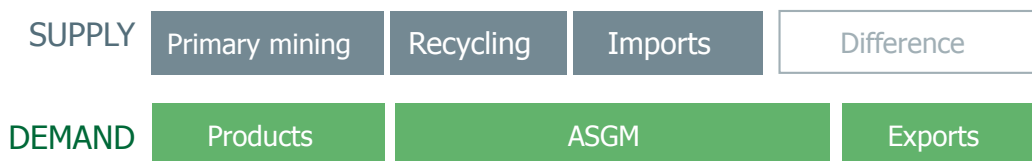
With a focus on the ASGM sector

STEP 5

Compare and assess

Compare the information obtained in previous steps to assess the occurrence of illegal trade of mercury:

For example



The difference suggests that mercury might be entering the country illegally (or there may be a UN Comtrade reporting issue or an issue with the mercury use in ASGM estimate)

STEP 6

Regional approach

Know the main countries that produce mercury or export it in your region, as well as the countries to which they export mercury or compounds and products that contain it. Mercury might be re-exported legally or illegally from the identified countries to countries with ASGM.

STEP 7

Further research and initiatives

Establish a center or a group that collects information related to the illegal traffic of mercury both from mercury producing and / or exporting countries and from countries with ASGM, in order to monitor mercury flows at a regional and international level and thus prevent illegal traffic in a country.

Consider establishing a **mercury storage licensing requirement** for significant quantities, and a system for tracking domestic mercury flows, either through reporting, or the tracking of shipments.



Consider a possible role for a **mercury trade licensing system** to meet the prior informed consent requirements, the source/use restrictions, and the reporting obligations of Article 3.

Evaluate your surveillance capacity (customs, police, and administrative systems) and identify steps necessary to control the illegal entry of mercury and, if necessary, confiscate the stocks and ensure environmentally safe final or interim disposal. The monitoring should occur at the national, municipal and community levels.

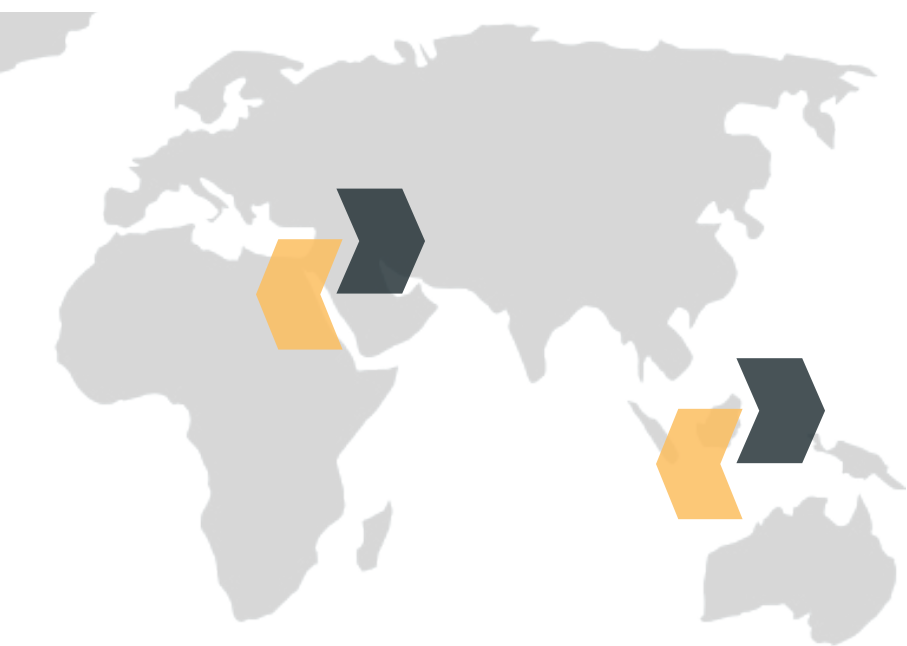
Use Prior Informed Consent to control mercury trade. Follow the guidelines and forms adopted by the Minamata Convention Conference of the Parties for obtaining consent to import mercury: http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/guidance_forms_article3.pdf

In collaboration with the customs authorities, **establish a strategy to stop illegal shipments of mercury.** Consider developing a border surveillance capacity

Control the role of **criminals** and determine



Recommendations for the NAP strategy to manage mercury trade in ASGM



Consider **regional collaborative** efforts for tracking and enforcing trade provisions. Establish contact with the customs authorities of the neighboring countries, in order to develop strategies or regional agreements for mercury control.

Develop a **registry of gold buyers who distribute mercury**. Since the gold buyers established in the communities might distribute mercury, they can play a key role in the investment to acquire mercury-free technology.

Since the efforts to manage the mercury trade might take several years, consider complementing them by carrying out **capacity building, trainings and providing access to technical and financial resources for miners** to adopt practices that are more efficient and use less or no mercury.

Consider the use of **civil and criminal penalties enforcement** to deter illegal mercury trade.

Other options to control imports and exports mercury

Harmonized Tariff System

The Harmonized Commodity Description and Coding System generally referred to as "Harmonized System" or simply "HS" is an international nomenclature of goods for the purpose of import or export. The HS was conceived by the World Customs Organization (WCO), an independent intergovernmental body, based in Brussels, Belgium.

HS comprises about 5,000 commodity groups; each identified by a six-digit code, arranged in a legal and logical structure and is supported by well-defined rules to achieve uniform classification.

The system is used by more than 200 countries as a basis for their customs tariffs and for the collection of international trade statistics. Over 98% of the merchandise in international trade is classified in terms of the HS.

Each tariff fraction is equivalent to an "HS number" which are cataloged in the universal list of goods classified by themes. In the case of mercury, its HS number is 2805.40. It has three pairs of digits, and each country can use two more pairs of digits to specify further the classification, according to their national needs.

Through HS codes, customs authorities, statistical offices and other government regulatory bodies can monitor and control the import and export of goods as well as produce economic reports, such as trade balances; determine customs tariffs; observe international trade statistics, determine the origin of merchandise and further monitor the goods.

Although in several cases the system presents reliable and specific data on its imports and exports, in other cases, it does not provide enough details to be able to differentiate with reliability between products or substances with added mercury and those that do not contain mercury. For example, thermometers or switches with mercury do not have a specific fraction since they all belong to the general fraction of instruments, without specifying if it contains mercury.

More information about the Harmonized Tariff System can be found here: <http://www.wcoomd.org/en/topics/nomenclature/overview/what-is-the-harmonized-system.aspx>.

An online course on the Harmonized Tariff System is available here: <https://academy.wcoomd.org/pages/hs>

Additional resources



UN Comtrade

The UN COMTRADE database compiles statistical data on merchandise trade provided by the member countries of the United Nations, based on the tariff item or HS number. One can find the importing and exporting countries of any merchandise; as well as the volume of legal traffic that in the case of mercury is expressed in kilograms and the value of operations expressed in dollars. The information is generated and administered in the countries, generally by ministries of economy or the customs systems, who annually report to COMTRADE.

For example, by reviewing the data on mercury imports in Honduras in the COMTRADE database, which for 2015 was 33 kg and for 2016, 589 kg, in both cases from Mexico, it can be inferred that the mercury used by the ASGM, estimated at multiple tons, may not have been imported by legal mechanisms, or was not reported properly by the Government to COMTRADE

More information about UN Comtrade can be found here:

<https://comtrade.un.org/>

CHAPTER 7

Additional resources

Experiences on illegal mercury trafficking in countries with ASGM

Mercury trade and use for ASGM in Sub Saharan Africa

2016 Study performed as part of a project led by the World Bank and COWI.

Findings

Official mercury trade was found to be lower than the estimated mercury use in the region. Field investigations confirmed that the ASGM sector in the region uses mostly informal channels to acquire mercury. The study identified the main importers and the routes through which mercury enters the region. Main trading hubs include: Sudan, Togo, South Africa and Kenya. Sudan was estimated to be the largest consumer of mercury of the countries studied, which largely explains the quantity of the mercury it imported. However, the estimated imports of mercury in Togo, South Africa and Kenya exceeded the estimated mercury use in the countries, suggesting that these three are main mercury hubs in the region, from where mercury is further traded, often informally, to neighboring countries.

Conclusions

In addition to field investigations on a country level, a regional approach and cooperation with neighboring countries is required to understand and manage flows of mercury for ASGM.

Methodology

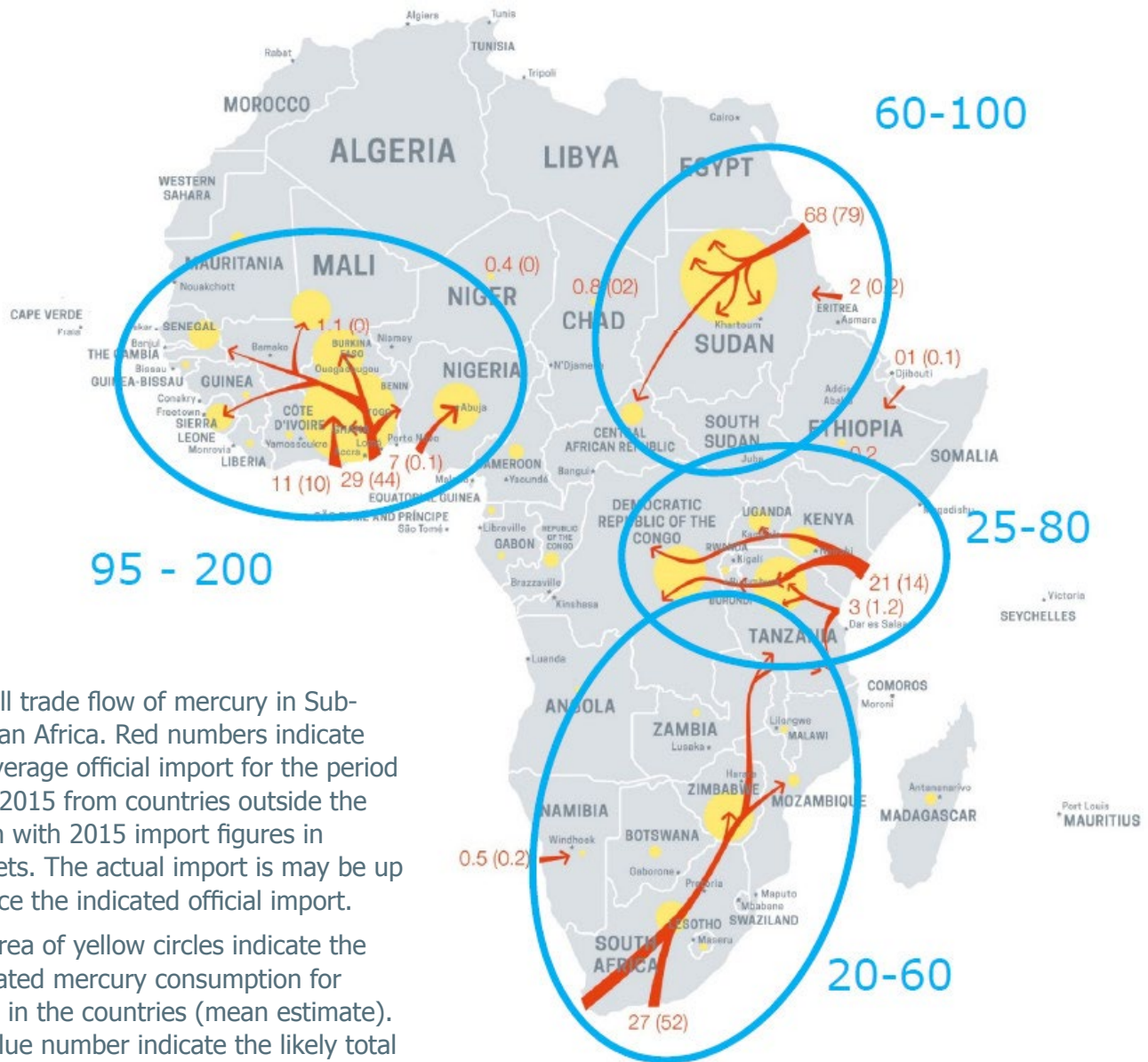
Data was collected from the UN Comtrade database, US Geological Survey Minerals Yearbook, Global Mercury Assessment and other data sources on the official trade statistics. The data was complemented by information on trade and value chain of mercury in 8 participating countries: Burkina Faso, Côte d'Ivoire, DR Congo, Ghana, Senegal, Tanzania, Uganda, and Zimbabwe. Finally, data was compared with existing information on mercury use in ASGM in studied countries.

Full report is available here: <https://web.unep.org/globalmercurypartnership/mercury-trade-and-use-artisanal-and-small-scale-gold-mining-sub-saharan-africa>

CHAPTER 7

Additional resources

Figure extracted from the “Mercury trade and use for ASGM in Sub Saharan Africa” final report, COWI, 2016.



Overall trade flow of mercury in Sub-Saharan Africa. Red numbers indicate the average official import for the period 2010-2015 from countries outside the region with 2015 import figures in brackets. The actual import is may be up to twice the indicated official import.

The area of yellow circles indicate the estimated mercury consumption for ASGM in the countries (mean estimate). The blue number indicate the likely total mercury consumption within the sub-regions indicated by the blue circles.

CHAPTER 7

Additional resources

Mercury trade in Philippines


Investigative research on mercury flows in Philippines

This investigation carried out by BanToxics aimed to better understand the mercury flow in the Philippines. The investigation revealed that mercury trade is underestimated in official statistics in comparison to the estimated use of mercury in country, especially for the ASGM sector, which implies that some mercury is traded informally. The study also exposed the challenges associated with reliable data collection on informal trading operations, including secrecy and unwillingness of the market participants to provide consistent information.

Full report is available here: <http://bantoxics.org/wp-content/uploads/2017/10/Mercury-Trade-in-the-Philippines.pdf>







**Artisanal and
Small Scale
Gold Mining**

NAP

**National
Action
Plan**

Credits

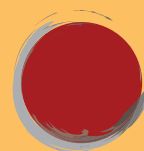
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