Update on the Ad-hoc Technical Expert Group on Effectiveness Evaluation

Minamata Convention on Mercury

Expert Consultation Meeting on Mercury Monitoring on Soil and Biota

Monaco, 13-14 May 2019

Convention Article 22

1. COP shall evaluate the effectiveness of this Convention, beginning no later than six years after the date of entry into force of the Convention and periodically thereafter at intervals to be decided by it.

2. To facilitate the evaluation, COP 1 shall initiate the establishment of arrangements for providing itself with **comparable monitoring data** on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations.

Convention Article 22

3. The evaluation shall be conducted on the basis of available scientific, environmental, technical, financial and economic information, including:

   a) Reports and other monitoring information provided to COP pursuant to paragraph 2;

   b) Reports submitted pursuant to Article 21;

   c) Information and recommendations provided pursuant to Article 15; and

   d) Reports and other relevant information on the operation of the financial assistance, technology transfer and capacity-building arrangements put in place under this Convention.

INC 7 and COP 1 decisions

INC 7 in March 2016, requested the Secretariat

- to compile information on existing monitoring programmes and how they can contribute to an overall monitoring approach, and
- to develop a draft road on effectiveness evaluation.

COP 1, in September 2017, reviewed the report from the Secretariat, and adopted decision MC-1/9, including:

- Road map for establishing arrangements for obtaining comparable monitoring data and elements of an effectiveness evaluation framework, and
- Terms of reference for an ad-hoc group of experts.

Mandates from COP1 to Ad-hoc Expert Group

Develop monitoring arrangements, including

- Reviewing information on existing monitoring programs
- Assessing to what extent the information meets the needs of the Convention, and outline options to enhance its comparability and completeness;
- Taking into consideration cost-effectiveness, practicality, feasibility and sustainability, global coverage, and regional capabilities
- Identifying available modelling capabilities to assess changes in global mercury levels within and across different media
- Identifying sources of data that can be used for establishing a baseline;
- Identifying how monitoring activities may contribute to the development of the effectiveness evaluation framework

Mandates from COP1 to Ad-hoc Expert Group

Also develop elements of effectiveness evaluation framework, including:

- Identifying the steps required to undertake an effectiveness evaluation;
- Suggesting a process flow (schedule) for the effectiveness evaluation planning;
- Identifying arrangements for conducting the effectiveness evaluation;
- Drafting terms of reference for the committee developing the first effectiveness evaluation;
- Assessing potential approaches to the development of performance indicators

Ad-hoc Expert Group

- Members – Five from each region, nominated by COP Bureau members
- Ten Observers – Civil society, indigenous communities, intergovernmental organizations, industry and the UNEP Global Mercury Partnership
- Co-chairs: Ms. Kateřina Šebková (Czechia) and Mr. Mohammed Khashashneh (Jordan)
- Met in Ottawa, Canada, on 5-9 March 2018

COP-2 – 19-23 November 2018

- Documents
  - UNEP/MC/COP.2/13 Report on the outline, plan and elements of the effectiveness evaluation framework
  - UNEP/MC/COP.2/INF/8 Report of the ad hoc group of experts on effectiveness evaluation
  - UNEP/MC/COP.2/INF/15 Compilation of comments submitted on the draft report of the ad hoc group of experts on effectiveness evaluation
- Adopted Decision MC-2/10

Ad-hoc Expert Group Report (UNEP/MC/COP.2/INF/8) - Consideration of monitoring arrangements -

(a) Types of data that could be comparable on a global basis, as well as their availability, as well as a draft plan integrating comparable results for future monitoring

- On levels of mercury in **air, biota and human**, data are either available, or able to be obtained, and would be comparable on a global basis.
- For **water** and **soil**, data are available and useful locally, but may not provide trends on a global basis. **Sediment** monitoring is not widespread, and not easily comparable.
- **Ocean water** would be globally comparable, but concern exists on the feasibility of sampling.

Ad-hoc Expert Group Report (UNEP/MC/COP.2/INF/8) - Consideration of monitoring arrangements -

(d) Consideration of cost-effectiveness, practicality, feasibility and sustainability, global coverage, and regional capabilities in identifying opportunities for future enhancements to monitoring

- To meet the requirements of article 22 regarding monitoring data, information should be gathered on levels of mercury in **air, biota and humans**.
- Cost-effective, practical, feasible and sustainable methods are available for all of these three types of monitoring.
    - Air - a combination of air sampling (both active and passive) and wet deposition
    - Human biomonitoring - hair and cord blood
    - Biota - the sampling methods might vary bust be possible.
- The technologies, analytical capacity and expertise needed to establish global monitoring are available.

Ad-hoc Expert Group Report (UNEP/MC/COP.2/INF/8) -Consideration effectiveness evaluation framework-

(b) Potential approaches to the development of performance indicators

- The Group recommends to develop:
  - Indicators for evaluating the effectiveness of measures stipulated in individual articles.
  - An overall indicator that takes into account monitoring information and the analysis of article-by-article indicators.
- Two types of indicators should be distinguished.
  - Process indicators: to what extent measures are taken in relation to the articles
  - Outcome indicators: may relate to pressure (e.g. mercury emission), state (e.g. environmental concentration), and impact (e.g. human exposure / health outcomes)
- Based on these considerations, the ad-hoc group of experts developed an initial article-by-article table of potential indicators

Ad-hoc Expert Group Report (UNEP/MC/COP.2/INF/8) -Consideration effectiveness evaluation framework-

(d) Schedule for effectiveness evaluation

The Group recommends the following schedule.

- 2018: COP2 considers result of intersessional work, how to address gaps and organize future monitoring, and how to establish EE framework
- 2019: COP3 approve monitoring arrangements (including timeline for submission of data), and EE framework. EE committee members are nominated.
- 2021: COP4 initiates the first monitoring report, which will feed into effectiveness evaluation
- 2022: Monitoring report is prepared. Information collection is completed, and Secretariat develops preliminary analysis. Committee meets to review the information.
- 2023: COP5 welcomes monitoring report and EE report.

COP Decision MC-2/10 – Nov 2018

With regard to the **effectiveness evaluation framework**, requested the Ad-hoc Group to:

a) **Review and assess the detailed article-by-article process and outcome indicators**. The group will elaborate on the sources of information and baselines for those indicators, considering cost-effectiveness, practicality, feasibility and sustainability, and, on that basis, provide detailed rationales for the recommended indicators;

b) Identify **which recommended indicators require monitoring data**, in particular in relation to the control measures and objectives set out in the articles of the Convention;

c) Develop a methodology for **integrating the recommended indicators** with a view to providing an integrative picture of the general effectiveness of the Convention, (e.g., by use of aggregated or cross-cutting indicators); and

d) Amend the recommended draft terms of reference of the effectiveness evaluation committee and the schedule for the first effectiveness evaluation, if needed, on the basis of the outcome of the above.

COP Decision MC-2/10 – Nov 2018

With regard to **monitoring**, requested the Ad-hoc Group to:

a) Identify:

- (i) Which categories of the available comparable monitoring data would be most effective in providing information on **global trends** (distinguishing these data from data that may be of use for informing local, national and/or regional policies);
- (ii) **What monitoring data in air, water, biota, and humans could be used to assess the impact on levels and trends of mercury**; and
- (iii) The potential and limitations of the data identified, taking into account the impacts other than anthropogenic emissions and releases on these spatial and temporal trends;

b) Assess the extent to which the information reviewed meets the needs for monitoring as set out in Article 22 and identify major gaps that could affect the usability of available data. Outline **options or recommendations to enhance the comparability and completeness** of the information;

c) …

COP Decision MC-2/10 – Nov 2018

…

c) With the aim of filling gaps in globally relevant monitoring data, for the options and recommendation outlined above, compare their cost-effectiveness, practicality, feasibility, and sustainability, global coverage, and regional capabilities to identify opportunities for future enhancements to monitoring;

d) Identify available **modelling capabilities** to assess changes in global mercury levels within and across different media;

e) Examine options and identify sources of data based on those options that can be used for **establishing a baseline** for monitoring data;

f) Provide other technical inputs and necessary information to address any additional monitoring questions that may be identified in the course of elaborating the evaluation framework; and

g) Draft terms of reference for global monitoring arrangements, including developing monitoring guidance.

COP Decision MC-2/10 – Nov 2018

Outline of the report of the ad-hoc technical expert group

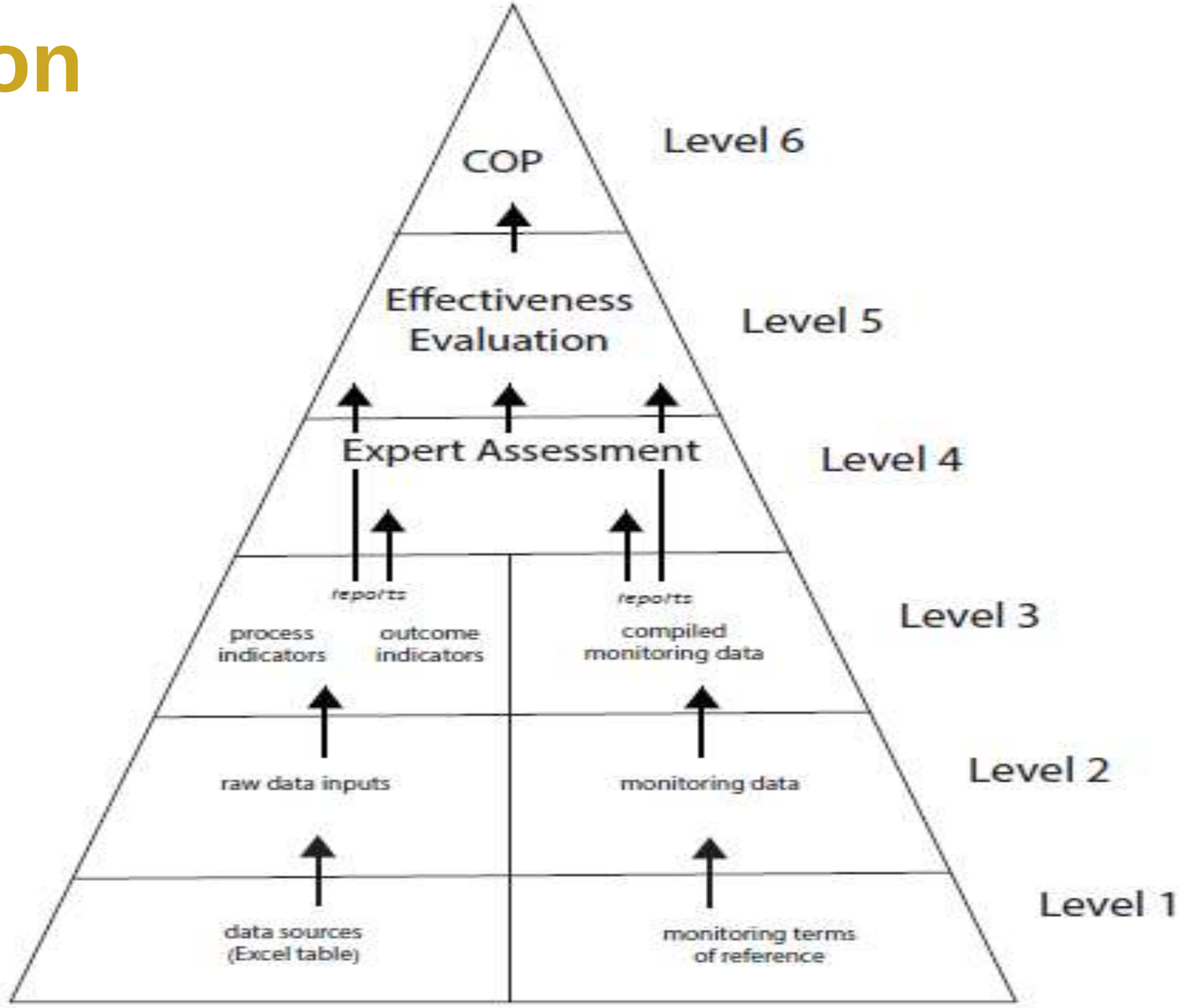
- Executive summary
- Introduction
- Description of the effectiveness evaluation framework
- Proposed methodology and schedule for the evaluation
- Issues for further considerations, if any
- Annex 1: Technical information on monitoring, if any
- Annex 2: Draft terms of reference of the effectiveness evaluation committee
- Annex 3: Draft terms of reference of the global monitoring arrangements

Ad-hoc Expert Group

- Met in Geneva on 8-12 April 2019
- Draft report will be posted on the Convention website for comments from 15 July to 5 September 2019
- Report for COP 3 will be finalized by 1 October 2019

Effectiveness evaluation framework

Different stages of the EE process and the different levels of information are to be explained based on the pyramid and its narrative text.



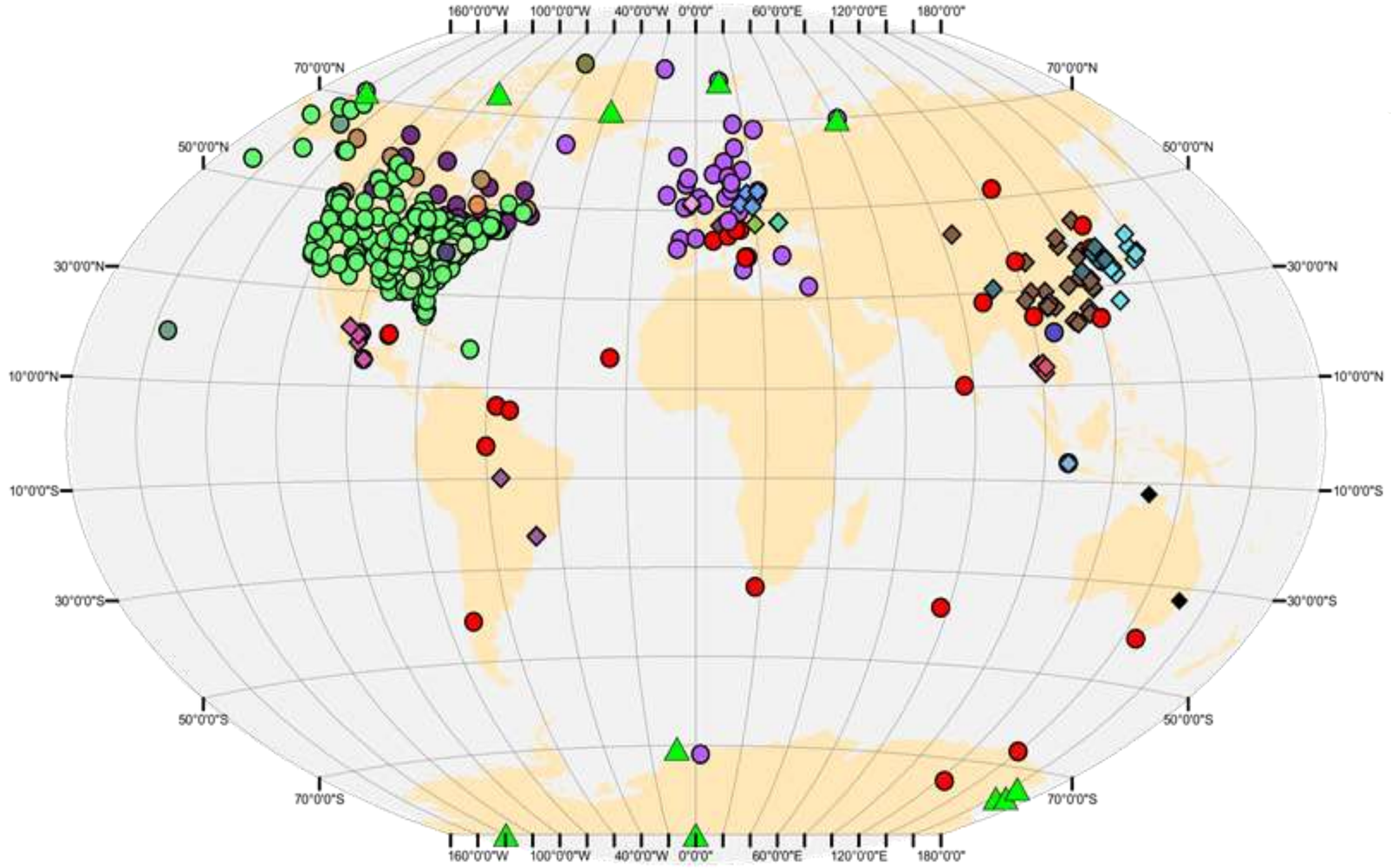
Data and information used for synthesis reports

1. Synthesis of Article 21 reports
2. Implementation and Compliance Committee report
3. Article 13 COP review report on finance mechanism
4. Report on Capacity Building and Technical Assistance
5. ASGM National Action Plans and their reviews
6. COP may request synthesis reports modelled on processes used in the past :
    - **Global monitoring report**
    - Emissions and releases report
    - Supply, trade and demand report
    - Waste assessment
    - Other reports as needed

Contribution of monitoring data to indicators

Overall indicator/ Article 1	• Level of mercury in air, human and biota (core indicator) • Population at risk (potential indicator) • Attribution of levels of mercury in environment and human from anthropogenic emissions and releases estimated by modelling information
Article 7 (ASGM)	• Mercury levels in biota – trophic level 4 • Mercury levels in ambient air
Article 8 (emissions)	• Total mercury concentration in ambient air • Discrepancy between measured and modelled atmospheric concentration
Article 9 (releases)	• Projected mercury release levels
Article 16 (health aspects)	• Mercury levels in humans (tracks success in protecting vulnerable populations)

Available monitoring information on air



Legend

- AIRMoN
- AMNET
- APMMN
- AUS
- BRA
- CAPMoN
- CAPMoN, CAMNet
- CAPMoN, CAMNet, AmNet, EMEP
- CHE
- CHI
- EMEP
- GMOS
- HUN
- IDN
- JAP
- KOR
- MDN
- MDN, AmNet
- MDN, AmNet, AirMon
- MDN, CAPMoN, CAMNet
- MEX
- POL
- POLES
- ROM
- THA
- UK

circle - global/regional network
diamond - national network
triangle - polar sites

Last update: 2019-02-10

Available monitoring information on biota

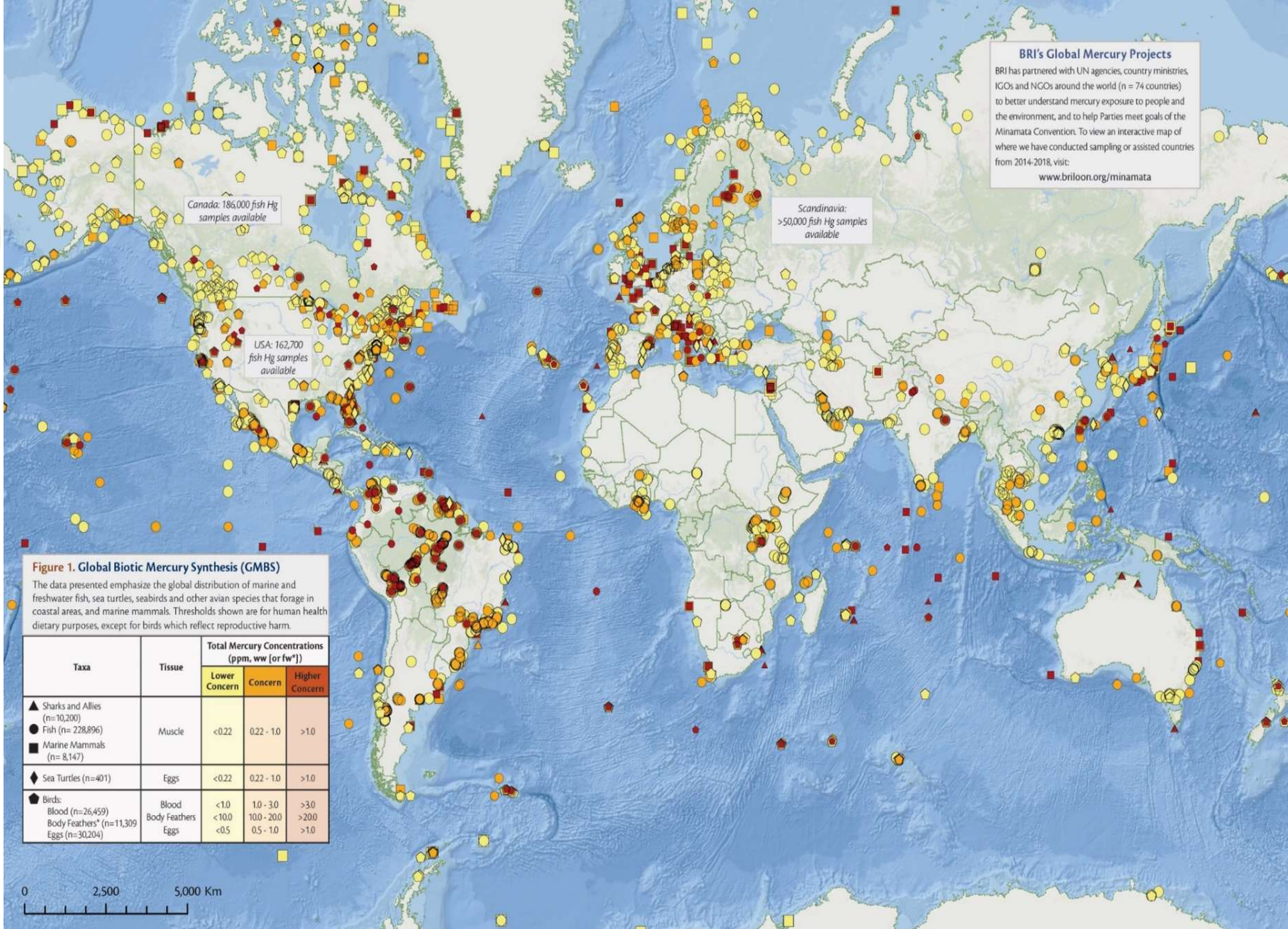


Figure 1. Global Biotic Mercury Synthesis (GMBS)

The data presented emphasize the global distribution of marine and freshwater fish, sea turtles, seabirds and other avian species that forage in coastal areas, and marine mammals. Thresholds shown are for human health dietary purposes, except for birds which reflect reproductive harm.

Taxa	Tissue	Total Mercury Concentrations (ppm, ww [or fw*])		
		Lower Concern	Concern	Higher Concern
▲ Sharks and Allies (n=10,200) ● Fish (n= 228,896) ■ Marine Mammals (n= 8,147)	Muscle	<0.22	0.22 - 1.0	>1.0
♦ Sea Turtles (n=401)	Eggs	<0.22	0.22 - 1.0	>1.0
⬟ Birds: Blood (n=26,459) Body Feathers* (n=11,309 Eggs (n=30,204)	Blood Body Feathers Eggs	<1.0 <10.0 <0.5	1.0 - 3.0 10.0 - 20.0 0.5 - 1.0	>3.0 >20.0 >1.0

Other intersessional work

- Source categories of **mercury releases** to land and water
- **Mercury waste thresholds**
- Guidance on the management of **contaminated sites**
- **Customs codes** and mercury-added products
- Mercury emission from **open burning of waste**

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Intersessional work and Submissions for COP3

At its second meeting, the Conference of the Parties agreed on a number of action items to effectively implement the Minamata Convention and prepare for the third meeting of the Conference of the Parties, to be held in Geneva, Switzerland on 25-29 November 2019. In some areas, submissions are invited by parties and other stakeholders, while in other areas submissions are expected through the members of the Bureau of the Conference of the Parties.

Information should be submitted to the Secretariat of the Minamata Convention, MEA-MinamataSecretariat@un.org

Mercury Releases to land and water

Pursuant to Decision MC-2/3 a group of technical experts on guidance in relation to mercury releases was

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