



Quick Notes

- **Focal communities:** Arctic, Small Island Developing States, and mining communities where ASGM is practiced
- **Human tissue sampling:** Hair and blood are most commonly used. For information on the process, see *Resources* on back page.
- **Collaborative projects:** In collaboration with UN Environment and IPEN, BRI is helping countries meet the goals of the Minamata Convention by coordinating global sampling (44 countries to date), analyzing hair samples, and compiling a new and standardized database on mercury concentrations in people around the world.

Join the Global Effort to Monitor Human Exposure to Mercury

Why Monitor Mercury in People?

People are exposed to mercury through fish in their diets. At the top of the global food web, humans are at risk due to the presence of methylmercury in aquatic ecosystems. Methylmercury is a potent neurotoxin that has been associated with harmful effects to humans.

This mercury originates through emissions from coal-fired power plants, through artisanal and small-scale gold mining (ASGM) activities, and other source types.

Where to Monitor People?

- Communities such as the Inuit of North America and the Faroese, whose diet includes marine mammal species that tend to have elevated methylmercury concentrations.
- Small Island Developing States that rely on top trophic-level fish species that tend to have elevated methylmercury concentrations.
- Regions where ASGM, the largest anthropogenic source of mercury in the environment, is practiced. Risks to people are related to direct exposure to ASGM activities (e.g., burning of mercury amalgam), as well as to mercury releases into aquatic systems from ASGM waste products.

Why Should Your Country Participate?

- Build capacity to comply with monitoring efforts as outlined in Articles 16 and 19 of the Minamata Convention on Mercury, including monitoring “levels of mercury and mercury compounds in vulnerable populations, and “assessments of the impact of mercury and mercury compounds on human health and the environment.”
- Include country-specific data in a global database. By participating in this effort, your country’s data will help toward understanding the global scope of mercury contamination.
- Position your country for *Next Steps* in the global effort to reduce exposure to mercury (see back page).

Who Should Be Concerned?

- General public and regular consumers of seafood (marine and freshwater.)
- Ministries where there are vulnerable populations, such as ASGM sites and other mercury hotspots.

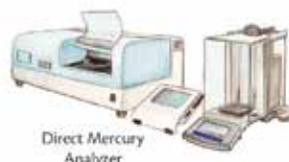
Learn How You Can Participate

Details about how you can participate are on the reverse side of this flyer.



2) What Does BRI Do?

Once samples are shipped to BRI, we prepare and analyze the samples, and provide interpretation.



3) What Do You Receive?

Mercury data that will provide a clearer understanding of exposure to people who live in your country and region.



Human Hair Sampling Process

1) What Do You Provide to Us?

Country Ministries and NGOs collect human hair samples, and participant questionnaires regarding potential routes of mercury exposure.



Across the landscape, mercury pollution originates from many sources, such as artisanal small-scale gold mining and coal-fired power plants, and ultimately contaminates our seafood.

Monitoring human exposure helps meet the objectives of **Articles 16 & 19** of the Minamata Convention.

Next Steps: Become a Partner in Global Mercury Biomonitoring

Monitoring human exposure to mercury is essential to evaluating the effectiveness of the Minamata Convention. If you are interested in joining the global mercury monitoring effort, please consider the following steps:

1. Contact **Biodiversity Research Institute (BRI)**. We will provide guidance and protocols on all aspects of the process.
2. Develop partnerships among and within your country's Ministries and local nongovernmental organizations.
3. Determine your goals and objectives, which BRI can then help to connect to the Minamata Convention.
4. Identify funding sources to cover expenses (e.g., field sampling, shipping, lab analysis, reports).
5. Identify where, when, and how to conduct field sampling.
6. Conduct field sampling.
7. Send samples and questionnaires to BRI.
8. BRI will analyze samples and interpret data.
9. Submit report to country Ministry.

To join this effort, please contact:

Molly Taylor

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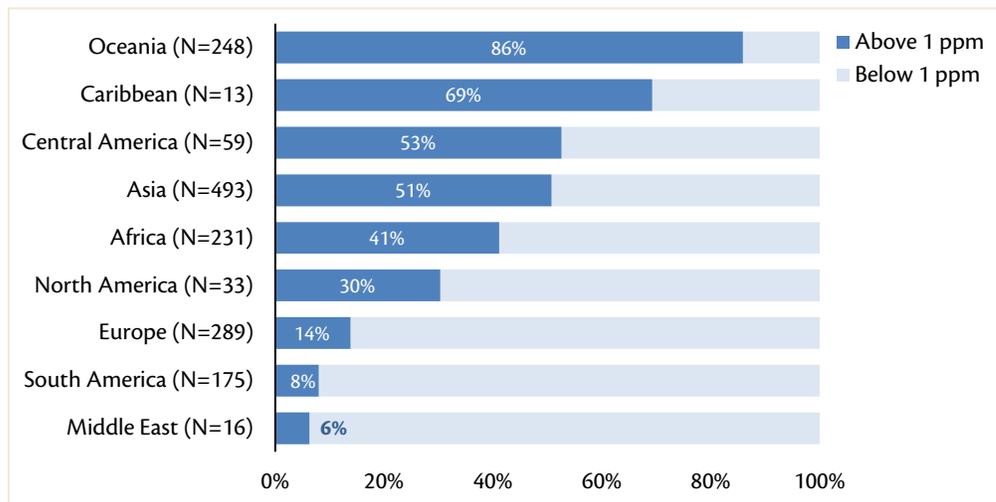


Figure 1. This graph depicts the percentage of human hair samples from each region that contained mercury in concentrations greater than 1 ppm (dark blue) and less than 1 ppm (light blue).

Credits: Cover photo: Hair sampling in Nepal by Ram Charitra Sah, CEPHEd, Nepal. Illustrations by Shearon Murphy, December 2017

BRI Science Communications



BRI's publications help advance environmental awareness and inform decision makers about the research we conduct. For example:

Local, Regional, and Global Biomonitoring: Understanding Mercury Exposure through Monitoring At-risk Species. 2017



Available online: www.briloon.org/hgpubs

Additional Resources



IPEN is a global network of people and organizations committed to a toxic-free environment:
www.ipen.org



List of Alternatives to Mercury-added Products (to be available in 2018): www.unep.org



Basel Convention Regional Centers: www.basel.int

Related Web Links

Minamata Convention on Mercury:
www.mercuryconvention.org

United Nations Development Programme:
www.undp.org

United Nations Environment:
www.unep.org/chemicalsandwaste

United Nations Industrial Development Organization: www.unido.org

World Health Organization: www.who.int



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