

GLOBAL MERCURY HOTSPOT MAPPING



Join the Global Effort to Identify and Map Biological Mercury Hotspots

Why Map Mercury Hotspots?

Areas with high concentrations of methylmercury (MeHg) are considered *biological mercury hotspots*. Mercury emissions and deposition from contaminated sites are important, but tell only part of the spatial story of mercury pollution. Ecosystem sensitivity and food web relationships help further describe the actual risks to human and ecohealth.

Elemental mercury is converted to a more toxic organic form through the process of methylation, which occurs with the help of bacteria found primarily in wet areas. Large variations in methylmercury concentrations may occur in different parts of the food web depending on the sensitivity of the ecosystem to mercury input.

Where MeHg availability is elevated, fish and wildlife may exhibit harmful mercury concentrations and represent the places that will require the most attention by countries and global monitoring programs.

Minamata Convention Requirements

Article 12 of the Convention outlines the requirements for contaminated sites, including:

- site identification and characterization;
- public engagement;
- human health and environmental risk assessments;
- options for managing the risks posed by contaminated sites; and
- evaluation of benefits and costs; and
- validation of outcomes.

Why Should Your Country Participate?

Mapping mercury hotspots helps identify critical areas where mercury affects important human food sources or threatened and endangered fish and wildlife species. Participation in this project will help your country comply with four Minamata Convention Articles, including:

- **Article 12:** Contaminated sites (with new guidance pending from the Conference of Parties)
- **Article 16:** Health aspects, which details requirements to develop strategies to identify and protect populations at risk and to promote health care services
- **Article 18:** Public information and awareness, which outlines the need to develop outreach programs
- **Article 19:** Research, development and monitoring, which outlines the need to develop inventories and assess impacts of mercury on human health and the environment.

What Can You Do?

- Remediate the mercury contamination through clean-up protocols.
- Avoid the mercury impacted footprint as a food source until the area is safe.

Quick Notes

- Minamata Convention requirements span four Articles including: 12, 16, 18, and 19.
- Collaborative projects: Biodiversity Research Institute (BRI) is collaborating with the Basel Convention Regional Centre in the Caribbean for “hotspot mapping” for nine countries in the Caribbean region.

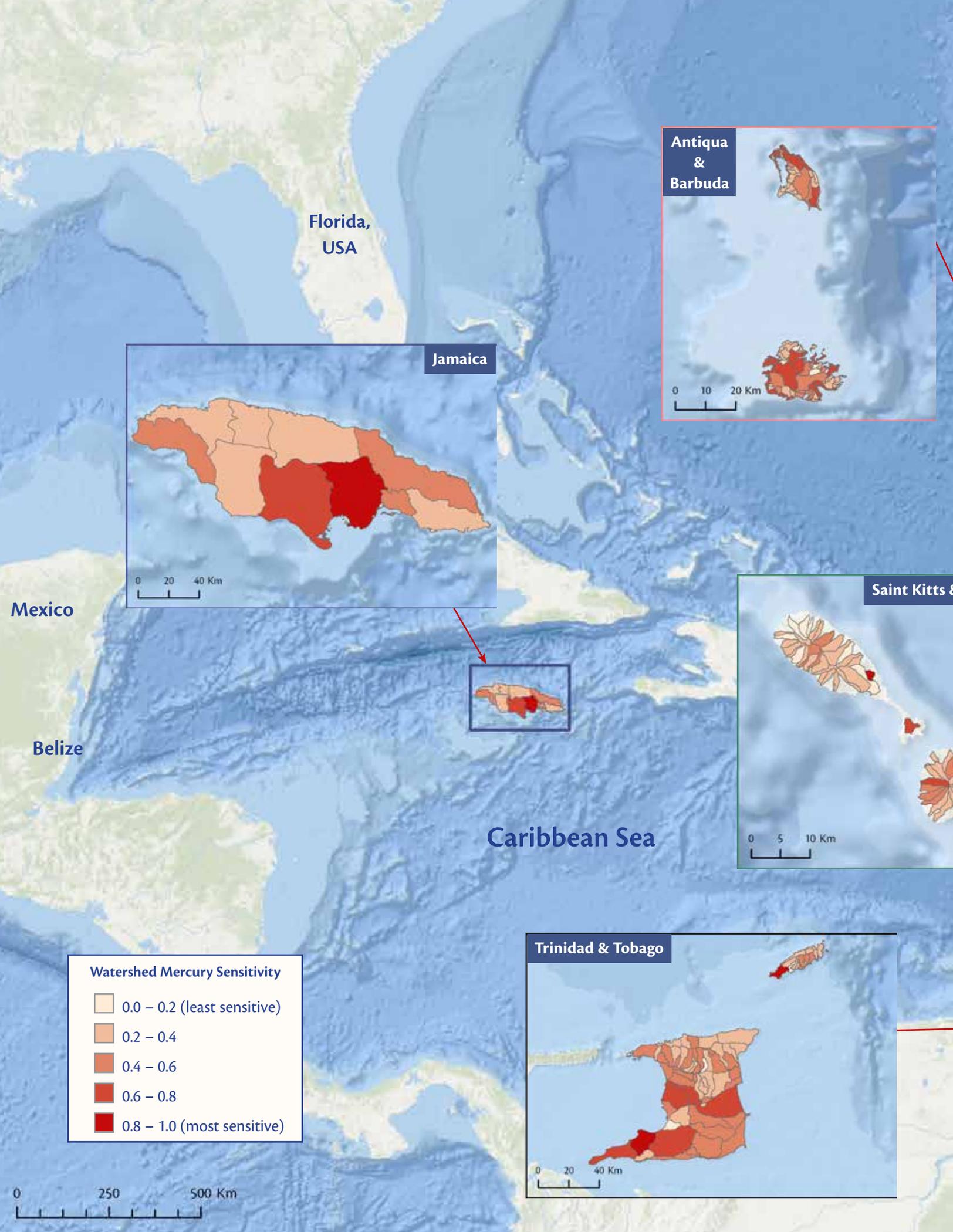
Learn How You Can Participate

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



Photo: Rainforest in Brazil
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Florida,
USA

Antigua
&
Barbuda

Jamaica

Saint Kitts &
Nevis

Trinidad & Tobago

Mexico

Belize

Caribbean Sea

Watershed Mercury Sensitivity

- 0.0 – 0.2 (least sensitive)
- 0.2 – 0.4
- 0.4 – 0.6
- 0.6 – 0.8
- 0.8 – 1.0 (most sensitive)

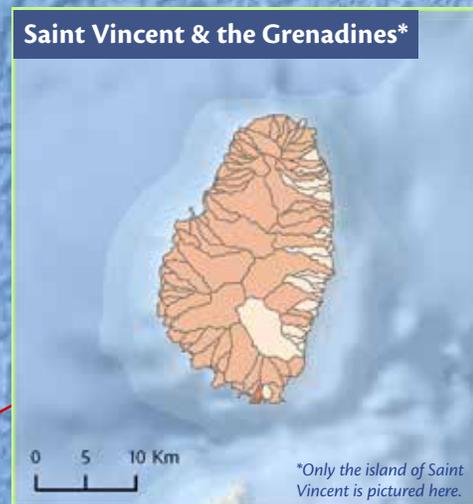
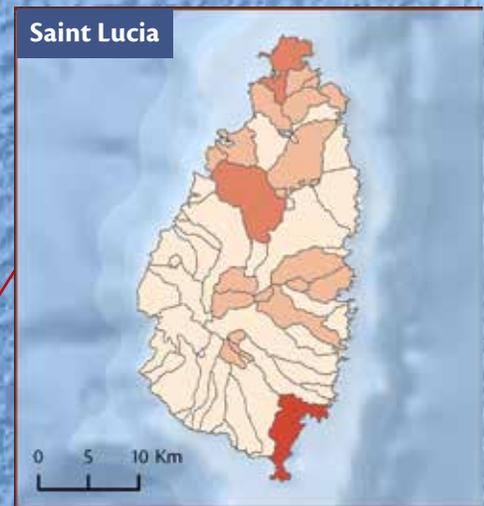
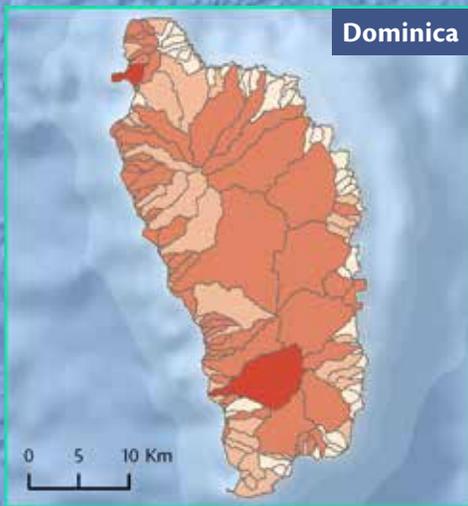
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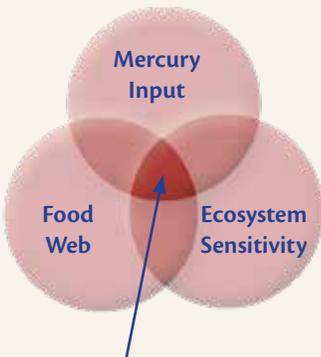
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Mercury Hotspot Mapping in the Caribbean Region



Venezuela

Bioindicators of Mercury in a Tropical Landscape

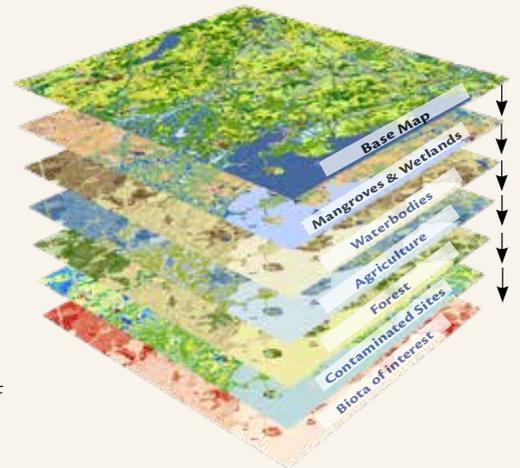


Biological Mercury Hotspot

A geographic area where environmental MeHg concentrations are of greatest biological concern.

GIS Layer Selection

Using an approach that combines spatial information on the distribution of habitats and species with the extent and severity of contaminated sites, BRI scientists can measure the ecosystem response and risk exposure to MeHg availability. These data can be mapped to specific locations to better inform natural resource managers, regulators, and other decision makers to help prioritize resources for best protection of human and ecohealth.



Next Steps: Become a Partner in Global Mercury Hotspot Mapping

Hotspot mapping helps us identify and track areas of concern. If you are interested in joining the global mercury hotspot mapping effort, please consider the following steps:

1. Contact **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., contaminated site identification, mapping efforts, reports).
5. BRI will create an interpretive map of biological mercury hotspot gradients.
6. Submit report to country Ministry.

To join this effort, contact:

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