

# UNEP / CNR-IIA / WHO Workshop

## Elements towards a Global Monitoring Plan for Mercury

13–14 February 2018

CNR – Montelibretti Research Area (Monterotondo, Italy)

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Workshop of the Global Environment Facility (GEF) funded project “Developing a Global Monitoring Plan for Exposure to and Environmental Concentration of Mercury” was held in Institute of Atmospheric Pollution Research (CNR-IIA), Italy. Three participants were dispatched to the Workshop from Japan.



Participants

February 13, 2018

### 1. Reports from “Human Biomonitoring as a tool to assess the exposure to Mercury” were as follows;

- ① Overview of the project
- ② Ethical and cultural consideration, ethical committee’ approval
- ③ Designing and planning of the survey: target population groups and sampling size
- ④ Selection of biological matrices and feasibility: applicability of different matrices
- ⑤ HBM survey implementation: contacting and recruiting women and organization of the field work
- ⑥ Analytical methods and capacity needs, QC/QA programmes
- ⑦ Fish contamination monitoring and interpretation of the results
- ⑧ Positive experience of implementing mercury HBM survey

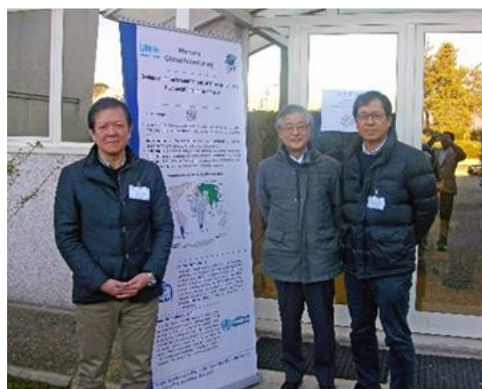
⑨ Outcomes of the HBM project (main achievement at regional and global level)

**2. Presentations in “Worldwide initiatives of mercury and mercury compound monitorin” were as follows;**

- a. Experiences in biota and human monitoring by David Evers /BRI
- b. Presentation by Milena Horvat / Jožef Stefan Institute
- c. Health effects and HBM of populations exposed to elemental mercury vapor and methylmercury by Mineshi Sakamoto / National Institute for Minamata Disease
- d. Levels and trends of mercury in humans in the Arctic Monitoring and Assessment Programme(AMAP) 2015Human Health Assessment Report by Pál Weihe / The Faroese Hospital System



Presentation



Participants from Japan

February 14, 2018

**Main Outcomes of the Working group discussion for human biomonitoring (HBM) were as follows;**

Policy questions addressed:

- Identification of the vulnerable populations to mercury exposure.

What are vulnerable populations? Hysiological vulnerability (pregnant women and fetuses) and highly exposed groups (fish consumption, contaminated sites, occupational; exposure, poor population/economically disadvantaged).

Several examples were reported from Faroe Islands, AMAP (Arctic Monitoring and Assessment Programme), Mediterranean, Russian Siberia, and Ghana.

There is a difference in approaches to evaluate the exposure in general populations and the exposure in vulnerable groups.

In relation to fish consumption:

- The mercury in cord blood and hair samples will be sufficient for HBM of fish-consuming populations. Cord blood mercury mainly provides information about maternal exposure to methylmercury and also that of newborns.
- The mercury in urine is applicable to populations who were exposed to elemental mercury in hotspots, especially in artisanal scale gold mining (ASGM) and occupational exposure.

Compounds:

- Analyzing total mercury is required because analysis of methylmercury is much more difficult and expensive.

Frequency:

- HBM should be carried out more than once per five years in general populations.
- Seasonality: within the same country, the HBM survey should be carried out in the same season.

What type of results can be expected?

- Levels of internal exposure in general populations world-wide.
- The geographical and temporal trends.
- Identification of countries and populations which require urgent measures to reduce mercury exposure.
- New information on global exposure to mercury.

Comparability and needs for correlations.

- Quality control and quality assurance are necessary for comparability of the analytical data.
- Eligibility of HBM data should be appropriately designed; ethical considerations are also important!