



Mercury Country Situation Report for Jordan

Land and Human to Advocate Progress (LHAP)
Amman, Jordan

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Introduction: This project started after the convening of the Minamata Convention COP1 in 2017. This report will be considered a base for the status of mercury from an NGO point of view after Jordan signed and ratified the Convention following COP1, a signal for the Convention implementation. This report, moreover, comes and coincides at a time when the Ministry of Environment, with the support of GEF and UNDP, are executing an MIA report. Therefore, cooperation was established between the Ministry of Environment and Mr. Ziyad Al-Alawneh, head of LHAP, who was recruited as a national consultant to review the national Jordanian team outcome of MIA report and run a national awareness campaign across the country, an activity suggested by LHAP in the IPEN-funded project. It is worth mentioning also that the two campaigns joined forces as they were running more or less at the same time.

LHAP's work on mercury could be summarized in the following:

1. In 2010, in an effort to demonstrate SAICM implementation via IPEN Participating Organizations, IPEN launched an International SAICM Implementation Project, also known as ISIP. ISIP aimed to mobilize resources for initial enabling activities pertaining to national priorities, in keeping with the work areas set out in the strategic objectives of section IV of the SAICM Overarching Policy Strategy. In particular, the ISIP supports the Governance objective of SAICM's Overarching Policy Strategy paragraph 26, which calls for enhanced "cooperation on the sound management of chemicals between Governments, the private sector and civil society at the national, regional and global levels." In addition, ISIP builds on the 2008-2009 Global SAICM Outreach Campaign to raise awareness about SAICM and strengthen collaboration among the public interest, health and labour sectors. ISIP's four objectives include:
 - Promoting the need for sound chemicals management
 - Advancing National SAICM Implementation
 - Promoting global SAICM implementation by global civil society
 - Building capacity among NGOs developing countries and countries with economies in transition.

The project has assisted a national organization to prepare mercury status report in 2012 (Baituna) with the help and support of LHAP. The report of 2010 revealed that mercury in Jordan only exists in the electrical and electronic equipment the country imports from abroad, dental clinics, hospitals, cement factories and the oil industry. Mercury is banned from being a constituent of pesticides, paints and in chlor-alkali plants (Jordan used to have 5 plants operated on mercury- the plants continue to exist but in a mercury-free form).



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2. LHAP was part of the negotiations and discussion that lead to the launch of the mercury Convention.
3. LHAP took part in the diplomatic event in Japan during which UNEP launched the Mercury Treaty agreement and opened it for signatures and ratification. LHAP was also part of the team honouring Minamata victims.
4. LHAP participated in the country Arabic-speaking workshop that took place at the Dead Sea 5-7 August 2014 for the early ratification and implementation of the agreement.
5. Within IMEAP, LHAP implemented a project in 2014 and carried out a campaign. The project aimed at: conclude Jordan Mercury Country Situation Report, carry out national public awareness activities and measure mercury in products (intentional sources) to contribute to an initial report during which samples are collected and analysed. The project activities were: Conduct a national study on the status of mercury in the country through the use of a desktop study and interviews; review implemented studies and national legislations; take samples from canned and fresh fish, hair, cosmetics, vaccines; document the status of mercury and the sampling results in a brochure for circulation; organize 3 public hearings to inform the public at large about the results in the North, Middle and South regions; and send the outcomes and findings to the Ministry of Health, Ministry of Environment, and media, and publish them over LHAP's Facebook page.
6. LHAP was part of the national team to discuss the early ratification of the agreement, which happened in November 2016.
7. LHAP attended and welcomed the IPEN participation in INC7 that took part in Jordan / Dead Sea.
8. LHAP attended the Mercury Treaty COP1 in Geneva September 2017.

In terms of initial activities, Jordan has obtained funding from GEF for an enabling activity mercury project. The project's objective is to undertake a Mercury Initial Assessment to enable the government to determine the national requirements and needs for the implementation of the Minamata Convention and establish a sound foundation to undertake future work towards implementing Convention provisions. The project has two main components (enabling environment for the implementation of the Minamata Convention and the development of the national mercury profile and mercury initial assessment report) and a number of outcomes, out of which is raising awareness on the environmental and health impacts of mercury. Therefore, this report focuses on the outcome of raising awareness of the Jordanian community about mercury.

Sources of mercury pollution: The Ministry of Environment of Jordan is implementing a Mercury Initial Assessment project, which has the main objectives to determine the national requirements for future implementation and the ratification of the Minamata Convention and to establish a national foundation to undertake future works to comply with the implementation of the Convention provisions.



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As a signatory for ratification of the Minamata Convention on Mercury, Jordan is benefiting from financial and technical assistance from the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) to carry out a project (2016-2017) that has done the following:

- Undertook an assessment of national legislation and policies with regards to the implementation of the Convention;
- Undertook a detailed Mercury Initial Assessment (MIA);
- Identified emission sources of mercury and release sources of mercury to air, land, and water;
- Assessed institutional and capacity needs to implement the Convention.

The results of this Level 1 mercury inventory through the MIA process estimated a total mercury release/use to Jordan of 10,640 kg Hg/year. The largest categories of mercury release are from:

1. Materials production (i.e., cement): 1,519 kg Hg/year
2. Dental amalgams: 3,074 kg Hg/year
3. Use and disposal of other products: 4,535 kg Hg/year

The waste deposition is estimated at 8,925 kg Hg/year, of which an estimated 90% is already accounted for in other Hg source categories. So, approximately 893 kg Hg/year is released through waste deposition. Similar adjustments are made with the “Informal Dumping of General Waste” source category. The estimated releases of Hg are primarily in the air (2,440 kg Hg/year), to water (2,520 kg Hg/year) and into general waste (3,810 kg Hg/year).

Levels of mercury pollution: What has been reported by the Ministry of Environment draft MIA report indicate the following six source categories made the largest contributions to mercury inputs to society in Jordan:

1. Waste water system/treatment (772 kg Hg/year)
2. Other materials production - cement (1,519 kg Hg/year)
3. Dental amalgam fillings ("silver" fillings) (3,074 kg Hg/year)
4. Informal dumping of general waste (3,825 kg Hg/year)
5. Use and disposal of other products (4,535 kg Hg/year)
6. Waste deposition (8,925 kg Hg/year)

Note that the following source sub-categories made the largest contributions to mercury releases to the atmosphere, water and land.

The following source sub-categories made the largest contributions to mercury releases to the **atmosphere**:

1. Other materials production - cement (1,139 kg Hg/y)
2. Informal dumping of general waste (383 kg Hg/y)



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3. Open fire waste burning (255 kg Hg/y)
4. Thermometers (154 kg Hg/y)
5. Electrical switches and relays with mercury (138 kg Hg/y)

The following source sub-categories made the largest contributions to mercury releases to the **water**:

1. Informal dumping of general waste (383 kg Hg/y)
2. Waste water system/treatment (695 kg Hg/y)
3. Dental amalgam fillings (1,353 kg Hg/y)
4. Thermometers (463 kg Hg/y)
5. Medical blood pressure gauges (144 kg Hg/y)

The following source sub-categories made the largest contributions to mercury releases to the **land**:

1. Informal dumping of general waste (3,060 kg Hg/y)
2. Dental amalgam fillings (246 kg Hg/y)
3. Electrical switches and relays with mercury (136 kg Hg/y)

Imports and exports: The draft MIA report has not indicated the quantities imported to Jordan, though mercury that comes to the country is through trade and import. Jordan is not producing mercury nor is it used for industry except for minimal quantities in the labs (exempted by the Convention). Therefore, mercury ends in Jordan as a waste that needs to be handled.

Mercury added products in the market: Mercury comes to Jordan through trade. It comes through cosmetics, meters, food, batteries, dental amalgam capsules, vaccine, lamps, pesticides, fertilizers, etc. The draft Jordan MIA did not calculate the imported quantities. This is going to be done soon through a thorough inventory with the new project. No recycling of mercury containing products is allowed; however, with the absence of close control, much mercury waste ends in the garbage.

Human exposure to mercury: The most common forms of mercury exposure are through emissions coming from cement factories in Jordan, incineration of medical and solid waste, broken thermometers, dental amalgam for both patient and dentists and through skin absorption when using mercury containing cosmetics. Jordan has no ASGM nor has mercury chlor-alkali factories; however, the people residing the vicinity of cement factories and incinerators could be the most exposed to emissions by inhaling or when it settles on land or gets access to water.

Possible damage caused by mercury in Jordan: There are no reports in Jordan that indicate intoxication by mercury. There is no history of contamination. There is, moreover, difficulty in diagnosing people intoxicated by mercury. Jordan needs to carry out a study to find out



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and track people highly exposed to have a sense of the situation. The samples collected from the different sources indicate that the concentrations are negligible (included in the brochure associated with this summary).

Storage of mercury wastes: Jordan has a national storage area for all types of hazardous chemicals, among which is mercury and products containing mercury. The storage is not yet compulsory, which requires upgrading the current legislation to make it compulsory.

Recommendations on reducing and eliminating human sources of mercury in Jordan:

1. Upgrade and update the national legislations.
2. Technology transfer to enable lab testing and examine products containing mercury and equip the custom department personnel to examine imported items.
3. Establish a national center for toxic materials testing and examination.
4. Build the capacity of medical doctors in diagnosis ability to be able to identify early intoxication.
5. Carry out national status to identify the actual status of health and measure levels of mercury in people's bodies.
6. Educate and inform public about mercury and its impact on health and environment.

Project Outcome:

With the aim to raise and educate Jordanians about Minamata Convention, its contents and the reasons for adopting such Convention, LHAP:

- made the target groups aware of the health, environment, and social impacts of mercury after introducing mercury's nature and where it comes from;
- monitored the government of Jordan's Convention implementation;
- tracked the government adherence to the agreement (reporting and complying with the agreement requirements in addition to the adoption of the policy and legislations following the ratification);
- updated the country situation report by conducting a study to realize the Jordan mercury situation, the national policies and legislation, and progress in compliance with the agreement; and
- documented the country situation report by printing a brochure that was circulated during the community consultation activities.

Outreach to Stakeholders:

The Ministry of Environment is among the stakeholders who were addressed in the outreach activities. Other stakeholders like the mayors, students, municipalities, CSOs, CBOs, academic institutions, women, school parliaments', women, religious educators, leaders, and the Jordan Olympic Committee; specifically, supporters of the commission on Environment and Sport.

The work witnessed very significant interaction to obtain mercury data. This was more than one level: providing LHAP with a copy of the MIA draft report, furnishing LHAP with the MIA



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project publications and printed materials and carrying out joint community awareness outreach activities across the country.

Moreover, the Ministry of Environment was furnished with the brochure, LHAP production report that summarizes the updates of the work at the country level. In some of the activities Dr. Mohammad Khashashneh, head of Harmful Substance and Hazardous Chemicals Department in the Ministry of Environment, took part in the outreach activities, as well as his staff team. In addition, the MIA UNDP project manager also participated in the implementation of LHAP activities.

Outreach to government authorities and industry: As mentioned previously, LHAP carried out some activities jointly with the Ministry of Environment and UNDP as part of the national campaign to educate different stakeholders about the mercury Convention. It is worth mentioning that the issue of mercury has dominated during the same time, the social meetings and community interaction even at the family gathering as a topical issue and the other reason that much of what people consume are of direct impact on the people life in general. The topics covered during both campaign focuses on articles 3-11. The issues covered are:

1. Circulating a brochure that summarizes the study findings and include the draft MIA outcomes and results
2. Showing a 5 minutes movie about mercury and its environment and health impacts produced by the Ministry of Environment and UNDP. Both parties (Ministry of Environment and UNDP in one side and LHAP on the other side agreed to exchange printed and promotional and use during the campaign.
3. Distributing materials for attendees to use as a reference and to educate their families about the issues that include:
 - a. Ruler with animations that show sources of mercury.
 - b. A small booklet that covers:
 - i. How to handle a release of mercury into the ground.
 - ii. Cautions to consider when cleaning release of mercury.
 - iii. A timetable for students in specific to use for the year in order to prolong the educational and awareness impact on students.
 - iv. Note pads for mainly teachers and mature participants.
 - v. An English summary on mercury tackling the national status, too.
4. Running interactive sessions. The session tackles issue of concern to Jordanians such as:
 - a. Cosmetics
 - b. Food and mercury
 - c. Mercury meters used for blood pressure and temperature
 - d. Lamps containing mercury
 - e. Mercury released from cement factories, incinerators and open burning
 - f. Mercury and pesticides, fertilizers and vaccines
 - g. Dental amalgam and mercury in addition to alternatives

- h. How to protect oneself from the exposure to mercury and the role of people on phasing out mercury and reducing the exposure

The photos below are documenting the campaign carried only by LHAP:





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The following photos are extracted from the joint campaign:



The national campaign and actual actions will continue after the Ministry of Environment won a 5 years project on U-POPs and medical wastes. The agreement is signed, staff recruitment is finalized and the work will be carried out. LHAP is one of NGOs that will participate in the implementation of this project.

In conclusion, the targeted community has shown high interest due to the fact that this issue is new, invisible and impacts their health and the environment. Many people have blamed the authorities for not informing them about this toxic and dangerous element and its compounds. I conclude by saying that the campaign should be continuous to reach all the community strata to make them aware of mercury and its impacts and how people would take measures to protect themselves.