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International SAICM Implementation Project (ISIP)

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 aims 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 labor sectors.

ISIP Objectives

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

Title of activity: Country Level Assessment for Mercury, in Uganda
NGO: Pro-biodiversity Conservationists in Uganda (PROBICOU)
Country: Uganda
Date: January 2011

Elements of SAICM Covered:

Promote reduction of the risks posed to human health and the environment (57); Help develop comprehensive national profiles or country situation reports about mercury (1, 166); Programs to monitor mercury to assess exposure (66, 82); Promote the development and use of products and processes that pose lesser risks (44); Take immediate action to reduce the risk to human health and the environment posed on a global scale by mercury in products and production processes (59); Participation in activities related to the negotiation of a legally binding instrument on mercury

Description of mercury that is available in the market:

The study found out that Uganda, being a developing country, is experiencing difficulty in the area of chemicals management and safety. For instance, it was established that some industrial products that contain mercury are being imported into the country, but little is known about them. These include; paints, fungicides, household appliances, batteries, electronic switches and relays (e.g. automobile switches), certain vaccinations (such as ethyl mercury), dental amalgam, lamps, measuring and control devices (e.g. thermometers, barometers, thermostats, sphygmomanometers) and skin lightening products, among others.

The study further found out that Uganda does not only import but also produces and uses products that contain mercury. For instance, it was observed that mercury is a common chemical in school and college laboratories. Mercury in Uganda is also found in science laboratories, maintenance areas, medical rooms and classrooms. Elemental mercury in Uganda is used to demonstrate the concept of density and various mercuric salts are used in chemical experiments.

In classrooms and other facilities, there are mercury containing thermostats, silent wall switches and fluorescent light bulbs. In medical rooms, mercury is found in thermometers and blood pressure measuring devices, which normally contain several grams of mercury.

The study further observed that in Uganda, there are nosal sprays and contact lens solutions that contain thimerosal, phynel mercuric acetate or phynel mercuric nitrate. There are also topical disinfectants that contain mercurochrome or tincture of mertiorate.

Description of the most common forms of mercury exposure:

The study noted that mercury can travel long distances on air and water currents and in the bodies of migratory species. For instance, in Uganda, the study noted that most of the fish species contain mercury. It was therefore observed that people get exposed to mercury through eating mercury contaminated fish.

The study also found out that the most common form of mercury exposure in Uganda is through human contact, especially in salons. The most vulnerable category of people to this form of exposure are women who use skin lightening products.

People in Uganda also get exposed to mercury getting in touch with mercury containing waste without protective gears. The most affected are the municipal waste handlers. Human contact exposure of mercury in Uganda is also common in school laboratories, dental clinics, and in artisan gold mining.

The study further found out that mercury exposure in Uganda is also through pollution arising from waste incineration. Most of the mercury containing waste as well as other hazardous waste in Uganda is incinerated by sub standard incinerators and this leads to human exposure by inhalation.

Exposure to mercury in Uganda is also through heating electronic and electrical appliances such as fluorescent light bulbs. Under the disguise of minimizing power, the government of Uganda encouraged the distribution of these bulbs at a cheaper price to most of the households and yet they contain mercury.

Further, the study noted that most of the electronics in Uganda especially used computers contain mercury. It was therefore observed that most of the people who use these computers for a long time get exposed to mercury.

Description of human sources of mercury:

The study observed that mercury is one of the most toxic natural elements that is present in the environment from sources such as rock formations and volcanoes. Despite mercury being a natural element, the study observed that there were a number of human activities in Uganda

releasing it to the environment. One such activity is through artisan gold mining where small scale gold miners use mercury to purify gold.

Another human activity that releases mercury into the environment in Uganda is through dumping of wastes that contain mercury. In Uganda, waste management is a big problem. There is open dumping and most of the waste handlers lack protective gears.

The study further noted that waste incineration, especially in health care centres and municipal waste dumping sites, is one of the greatest human activities that release mercury into the environment. Most of the incinerators in Uganda are of poor quality and therefore do not have air pollution control devices.

Description of the levels of mercury release and exposure:

In Uganda, there is limited data on levels of mercury release and exposure at the national level. Very few institutions have recorded data on mercury. According to the 2005 State of the Environment Report by the National Environment Management Authority (NEMA), the mercury emissions identified in outdoor air was between 10.5 to 20 nanograms of mercury per cubic meter (ng/m^3). These levels are many times lower than what is considered to be safe to breathe. In non-urban settings, the average mercury exposure was about 6 ng/m^3. In surface water, mercury levels identified were 5ppt, or 5ng per litre of water about a thousand times lower than "safe" drinking water standards by World Health Organization (WHO). Normal soil levels ranged from 20 to 625 parts of mercury per billion parts of soil (20-625 ppb; or 20,000-625,000 ng per kilogram of soil). Accordingly, the information available indicates that mercury in air and water emissions is significantly less than what is considered harmful.

Description of the damage caused by mercury:

The study observed that once mercury enters into the ecosystem, micro-organisms transform it into a highly toxic form of mercury called methyl mercury which accumulates and magnifies in fish, sea food and those who consume them. Low dose exposures of mercury and especially of methyl mercury can seriously harm human health and the environment. Methyl mercury bio-accumulates, passes through the placenta and appears in breast milk. It disrupts a developing child's brain functions and creates deficits in language skills, memory, attention, motor skills and visual abilities. When mercury exposure is combined with malnutrition, the risk greatly increases.

Despite the above observations however, the study noted that there are a few cases that have been reported to be as a result of mercury exposure in Uganda. Although there are reported cases of death as a result of shock, cardiovascular collapse, acute renal failure, and severe gastrointestinal damage, which are attributed to oral exposure to inorganic mercury; these cases have not been confirmed by scientific investigation. There is still contention that although such cases are attributed to mercury, there may be other causes. Most of the Ugandan forensic laboratories are not equipped enough to handle such investigations and in most cases the conclusions are not reached.

However, some common cases of mercury exposure identified in Uganda were skin irritations in women- arising from mercury containing cosmetics. Another case of skin irritation was identified among some HIV patients who use skin bleaching creams to remove HIV related symptoms such as black spots, to avoid identification. The study noted that 1 in every 10 women is at least a victim of mercury exposure from breaching cosmetics, and has scars and skin disorders. Most of the victims in this case are women and girls.

The study also noted that in addition to the direct health problems, mercury exposure also decreases a country's total productivity and adds to increased burden to national healthcare costs.

Description of the laws currently regulating mercury:

The study noted that there are no laws specifically banning the use of mercury in Uganda. The Ugandan legal framework is generalized with no law specifically addressing mercury. However there are laws that regulate chemical use including mercury. Some of the laws include; - The National Health Policy, The Constitution of the Republic of Uganda (1995), The National Environment Policy for Uganda (1994), The National Environment Management Act Cap 153 LOU, The Food and Drugs Act Cap 278 LOU, National Drug Policy and Authority Act, Cap. 206 LOU, Agricultural Chemicals (Control) Act No 1, 2007, The Occupational Safety and Health Act No 9 2006, Uganda National Bureau of Standards Act Cap 237 LOU, External Trade Act, Cap 88 LOU, the Public Health Act Cap 281 LOU, The Public Health Act: Building Rules, The Specified Goods (Conveyance) Act Cap 349 LOU, Inland Water Transport (Control) Act Cap 356 LOU, Roads Act Cap 345 LOU, The Investment Code Act Cap 92 LOU, The Mining Act, 2003, The Land Act Cap 227 LOU, and The Ratification of Treaties Act Cap 204 LOU.

The following key observations on Uganda's Legal framework and Mercury were observed:

Inadequate linkages
Other than the National Environment Management Authority (NEMA), the institutions set up in the legislations are by large compartmentalized without legal requirement for them to consult or work together on any subject. The cooperation that exists is informal. As a result, they have inadequate linkages, and poor communication and coordination between them, and this leads to un-harmonized and incompatible data and contributes to ineffective enforcement. Consumer protection on products containing mercury, as the subject of concern, on the other hand, demands multi-sectoral and multidisciplinary and synergic action. This situation calls for legal and administrative improvement of linkages and therefore calls for a major exercise to identify, revise, amplify, consolidate, harmonize and make specific the necessary linkages in the laws.

Patchy coverage
Despite the good effort and intentions resulting in existence of reasonable provisions, the old laws carry the thinking of the 1950s; a time when the technology, environment and health effects had not become so prominent. Correspondingly, the legislation is, in many areas, outdated and patchy in dealing with present problems in the management of mercury and other chemicals. The legislation in Uganda is generalized and there are no specific laws related to the importation, use, storage and management of mercury.

Inadequate coordination
Management of chemicals such as mercury and consumer protection management operations involves many independent participants usually operating in a situation of urgency. They therefore need a high level of co-ordination, which is currently inadequate. Consequently, it is necessary to develop a system with a high ability to co-ordinate these operations.

Lack of specificity and explicitness
The core national laws that are in place are "framework" or "umbrella" laws that were designed to deal with the general subject of chemical safety from hazardous chemicals and so are general in nature. While some legislation needs to be enabling and bringing out principles of chemical safety as the current laws are, there is also need for explicit, detailed and specific legislation targeted on exceptionally toxic chemicals such as mercury and other heavy metals, pesticides, asbestos, carcinogens, allergens, PCBs and benzene on the one hand, and also targeting various subject areas such as food, drugs and cosmetics on the other.

There are no substances or subject-specific provisions, regulations, standards, guidelines or manuals dedicated to various subjects regarding the management of mercury. While the current effort goes a long way to meet the general requirements of the international arrangements, this leaves matters to be subjectively interpreted or extrapolated and so leaves consumer concerns unfulfilled.

Description of the efforts to deal with mercury:

One of the efforts is to reduce the use of thermometers that contain mercury and currently the country is not importing mercury thermometers.

The government of Uganda, through the National Environment Management Authority (NEMA), has been taking initiatives to address the issues of chemical management in Uganda. Some research has been carried out on the overall chemicals management in Uganda; for instance, the Inventory Report for the National Implementation Plans (NIPs) for the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Situation Analysis Report for the Sound Management of Chemicals (SMC) under the Strategic Approach to International Chemicals Management (SAICM) framework.

The government of Uganda has also tried to be a Party to the international chemical agreements and has been part of the global effort negotiating the mercury treaty. Uganda supports a legally binding global treaty on mercury that requires all countries to work together.

However, apart from generalized attempts to handle chemicals, the government of Uganda has not come up with particular efforts to address mercury domestically. Some civil society organizations such as Pro-biodiversity Conservationists in Uganda (PROBICOU) and the National Association of Professional Environmentalists (NAPE) have been carrying out awareness-raising activities on the health and environmental effects of mercury exposure.

The Civil Society Organizations continue to conduct research to inform government and other stakeholders and have organized themselves into a network/Coalition called Network on Sound Management of Chemicals in Uganda (NESMAC- Uganda) This network intends to coordinate civil society chemicals management programs and activities in Uganda and this will cover mercury as well.

Description of what forces support and oppose the Mercury Treaty, the public participation consultation process, and the level of public awareness of the treaty process:

The study observed that although the government of Uganda supports a legally global binding treaty on the use mercury; it has not involved the public. Most of the stakeholders apart from some few civil society organizations- are not aware of the whole treaty negotiation process. There is no single meeting which has ever been organized to create awareness on the whole process. The treaty negotiation process is known by some few government officials and civil society members who have attended international dialogues on this subject.

An observation by this study revealed that traders who deal in mercury containing products especially cosmetics are opposed to this global treaty. There is therefore a need to create public awareness on the treaty process.

Project Outcome:

Description of the activity conducted:

The study involved many activities, among which was the review of the relevant documents. This was purely desk review. Checking in the records of the customs departments, Uganda Revenue Authority (URA) was also done in order to obtain estimates of mercury importation to Uganda.

Another activity was site visits to the gold mining communities in Uganda, health care institutions, relevant government departments and waste dumping sites. During these visits, group discussions were conducted.

Another activity carried out was a sensitization workshop organized for traders in Kampala which intended at obtaining their views on the effects of mercury exposure and the overall process of the global treaty on mercury.

Impact on target groups:
This study targeted government officials from the relevant institutions, civil society members, healthcare workers, traders, academicians and workers in gold mining sites. The project team engaged all these groups by working with them during document reviews and group discussions. Most of the people who were engaged during this study are now aware of the impacts of mercury exposure and the process and benefits the global treaty on mercury.

Impact on target policies:
The study aims at helping the country to develop a specific law on the management of mercury in Uganda. This will in turn feed in the global treaty on mercury.

Outreach to stakeholders:
The study involved, among others, officials from the National Environment Management Authority (NEMA), Ministry of Tourism, Trade and Industry (MTTI), Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Health (MOH), Uganda Revenue Authority (URA), Kampala City Traders Association, Kampala City Council and gold miners of Tira (Busia), Rupa (Moroto), Amorukakiri (Moroto), Bwindi and Mubende.

There is potential for follow up to advance our relationship on mercury work but this calls for the need to organize a dialogue for all these stakeholders. Contacts of the stakeholders were obtained and the study report was shared with them. Some of them have provided feedback and are calling for a more comprehensive study that involves the testing of mercury levels

Deliverables, outputs and/or products:
The study report is being used by policy makers as source of information and it is available in both soft and hard copies. There is need to disseminate this report to the general public in summarized copies such as brochures and leaflets.

Communication efforts:
We intend to organize a press conference to disseminate the results of the study. Apart from this, we intend to use radio and TV talk shows to disseminate the results in addition to issuing press releases.

We also plan to organize a national sensitization workshop for all the stakeholders as well as community meetings for the specific sectors.

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Recommendations, from a public interest, NGO perspective, on reducing and eliminating human sources of mercury:
Civil society organizations have recommended that awareness-raising, lobbying and advocacy be intensified. There is a need to advocate for a global legally binding agreement on mercury.

There is a need to advocate for mercury-free products or alternatives by increasing awareness and information exchange on non mercury products.

There is a need to advocate for the reduction of mercury in the waste stream by improving technologies and technical capacity of waste handling companies and institutions.

NGOs have also recommended that government institutions should increase coordination and not work in isolation on issues regarding not only mercury but also chemicals management in general.

The public interest groups recommended the need for the establishment of a fund to finance the activities on mercury in Uganda.