

REPORT ON

**GAP ANALYSIS BETWEEN THE EXISTING LAWS ON MERCURY IN
NIGERIA AND THE MINAMATA CONVENTION ON MERCURY**

(THE LEGAL REGIME FOR THE HANDLING OF MERCURY PRODUCTS IN NIGERIA)

BY

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TO

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EXECUTIVE SUMMARY

The landmark Minamata Convention on Mercury is named after the Japanese city where industrial emissions of the toxic substance caused a poisoning disease affecting thousands of people. **Mercury** is a chemical element. It is commonly known as **quicksilver** and was formerly named **hydrargyrum**.

Mercury is used in thermometers, barometers, manometers, sphygmomanometers, float valves, mercury switches, mercury relays, fluorescent lamps and other devices though concerns about the element's toxicity have led to mercury thermometers and sphygmomanometers being largely phased out in clinical environments in favour of alternatives such as alcohol or galinstan-filled glass thermometers, thermistor or infrared-based electronic instruments. Likewise mechanical pressure gauges and electronic strain gauge sensors have replaced mercury sphygmomanometers. It remains in use in scientific research applications and in amalgam material for dental restoration in Nigeria. It is used in lighting: electricity passed through mercury vapor in a fluorescent lamp produces short-wave ultraviolet light which then causes the phosphor in the tube to fluoresce, making visible light.

In the health sector, Thiomersal (called *Thimerosal* in the United States) is an organic compound used as a preservative in vaccines, though this use is in decline. Thiomersal is metabolized to ethyl mercury. Although it was widely speculated that this mercury-based preservative could cause or trigger autism in children, scientific studies showed no evidence supporting any such link. Nevertheless thiomersal has been removed from or reduced to trace amounts in all U.S. vaccines recommended for children 6 years of age and under, with the exception of inactivated influenza vaccine. In Nigeria, thiomersal is still used in the health sector.

Another mercury compound merbromin (marketed as **Mercurochrome**, **Merbromine**, **Sodium mercurcescin**, **Asceptichrome**, **Supercrome**, **Brocasept** and **Cinfacromin**) is a topical antiseptic used for minor cuts and scrapes. Merbromin is an organomercuric disodium salt compound and a fluorescein. It is readily available in most countries but, because of its mercury content, it is no longer

sold in the United States, Germany, or France but is still in use in Nigeria. In fact, it is deemed as a safe and economical drug for the topical treatment of otomycosis in developing countries like Nigeria.

Previous studies have shown that only very few chemicals are produced in Nigeria. These include sulphuric acid and alum. This implies that the bulk of the chemicals including mercury are imported in one form or the other. Key mercury sources in Nigeria are from the oil and gas sector, artisanal and small-scale gold mining (ASGM), industrial manufacturing, health measuring devices and dental amalgam sectors.

Of particular interest in the gaps that need to be addressed, are the issues of responsible mercury and chemical waste treatment, storage and disposal including waste minimization through extensive reuse and recycling as key components of Sound Chemical Management. Nigeria will need to keep step with best practices by strengthening its laws to provide customers instructions for proper disposal on Safety Data Sheets (SDSs) and other materials. A typical example is how to dispose of electronic junk through methods of disposal that do not distribute mercury into the atmosphere. All the chemical legislations in Nigeria deal with the trade and use mercury only generally. Thus most of the information based on scientific discoveries made by the international scientific community in the last decade about the dangerous and harmful effects of exposure to mercury has not been brought with the purview of any national chemicals legislation.

The following study will among others, reveal the following: gaps, overlaps, duplications and inconsistencies; inefficiencies and waste of resources; increasing risks for human health and the environment thus impairing development. It is hoped that critical areas of challenge must become the focal point of any legislative reform regarding the safe use and management of mercury.

INTRODUCTION

In the last ten years, Nigeria has taken significant steps towards the development of an integrated national chemicals management system. Deliberate initiatives were made to among others; analyse the national situation with regard to chemicals management, establishment the inter-ministerial coordination mechanisms, kick-start activities towards the implementation of GHS, development of a national policy on chemicals management and training and awareness raising activities on chemicals management.

These activities have contributed in improving the legal and institutional infrastructures for the sound management of chemicals in general by raising awareness among policy makers on the need for integrated chemicals management linked to national development policy, developing the information management system, improving inter-sectoral coordination at the ministerial level and building capacity of national officers in several aspects of chemicals management.

However, several gaps remain to be filled. These especially include incomplete regulatory framework for all the lifecycles of chemicals management; difficulties in inter-sectoral collaboration and lack of technical and financial capacity for implementation and enforcement of the legal requirements including the implementation of several Multilateral Environmental Agreements (MEAs).

As at 13th October, 2013, Nigeria became a signatory to the Minamata Convention on mercury thus increasing by one, the Multilateral Environmental Agreements requiring implementation.

Being a signatory to the Minamata Convention on Mercury (the mercury treaty) gives Nigeria a great opportunity to leap frog the status of national mercury management regime thereby minimising the already existing and potentially devastating health consequences from the use of mercury. Though there are no mercury management specific laws in Nigeria, this paper intends

to show how Nigeria can manage mercury vis-à-vis the provisions of the Minamata Convention. Mercury is one of the top 10 chemicals of major public health concern and is a substance which disperses into and remains in ecosystems for generations, causing severe ill health and intellectual impairment to exposed populations.

SECTION I.

NATIONAL SITUATION REGARDING LEGAL AND INSTITUTIONAL INFRASTRUCTURES GOVERNING THE MANAGEMENT OF MERCURY

PRESENT LEGAL FRAMEWORK FOR MANAGING MERCURY IN NIGERIA

Beyond just identifying the legal framework we can have a deeper analysis of the key roles or mandate of the legal framework as well as the institutional infrastructures with regards to management of mercury in Nigeria. This will help to clearly identify the overlaps and gaps.

- 1. The Federal Ministry of Environment (FME)** which was created to take over the functions of the defunct Federal Environmental Protection Agency (FEPA) is the policy formulation ministry as well the Designated National Authority (DNA) in most of the Multilateral Environmental Agreements (MEAs) including the Mercury Treaty. Though the Ministry is not created by an Act of Parliament, it is created Pursuant to section 20 of the 1999 Constitution of Nigeria (as amended) wherein the State is empowered to protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria. The Minister of Environment is also specifically named as a supervisory authority in a number of legislations. For instance, in the **Harmful Waste (Special Criminal Provisions) Act Cap H1 LFN 2004**, the Minister of Environment is the supervisory authority of the said Act.
- 2. The National Environmental Standards and Regulations Enforcement Agency (NESREA) Act 2007** which created the general enforcement agency for the environment sector except for Oil and Gas.
- 3. Harmful Waste (Special Criminal Provisions) Act Cap H1 LFN 2004** is an Act which criminalizes the illegal disposal of harmful wastes. Though there is no specific mention of mercury as a harmful waste it falls within the category of wastes regarded as harmful wastes as interpreted in this Act. In this Act, "harmful waste" means any injurious, poisonous, toxic or noxious substance and in particular, includes nuclear waste emitting any radioactive substance if the waste is in such quantity, whether with any other consignment of the same or of different substance, as to subject any person to the risk of death, fatal injury or incurable Impairment of physical and mental health; and the fact that the harmful waste is placed in a container shall

not by itself be taken to exclude any risk which might be expected to arise from the harmful waste.

4. **The National Agency for Food and Drug Administration and Control (NAFDAC)**, Decree 15 of 1993 (amended by Decree 19 of 1999 and now Act Cap N1 Laws of the Federation of Nigeria (LFN) 2004.
5. **The Factories Act 1990 Cap 126 Vol. III, Laws of the Federation of Nigeria** being implemented by Inspectorate Division of the Federal Ministry of Labour.
6. **The Consumer Protection Council (CPC) Act 1992 Cap C25 of 2004.**
7. **The Standards Organization of Nigeria (SON) Act No. 56 of 1971.** This is an Act to establish the Standards Organisation of Nigeria to standardise methods and products in Nigerian industries and to provide for other matters connected thereto. The Standards Organisation of Nigeria have the duty to ensure that products in Part 4 of the convention are not imported into Nigeria.

PRESENT INSTITUTIONAL ARRANGEMENTS FOR POLICY COORDINATION AND COOPERATION FOR IMPLEMENTATION AND ENFORCEMENT OF THE PROVISIONS OF THE MINAMATA CONVENTION IN NIGERIA

Currently in Nigeria, the responsibility of ensuring that mercury does not present adverse effects to human health and the environment rests with various ministries and governmental agencies through laws, regulations, guidelines and other measures that provide necessary protection. The following are the key institutional actors:

- **The Federal Ministry of Environment** is the Designated National Authority in most Multilateral Environmental Agreements (MEAs). It became the focal point on chemicals safety and waste management in Nigeria following the scrapping of the Federal Environmental Authority (FEPA) in 1999 at the advent of the 4th Republic. Pursuant to its mandate, it has coordinated inter-agency collaboration efforts at strengthening Sound Chemicals Management in Nigeria. The Minister of Environment is the responsible Minister saddled with the responsibility of enforcing the provisions of the Harmful Waste (Special Criminal Provisions, etc.) Act.

- **The National Environmental Standards and Regulations Enforcement Agency (NESREA)** a parastatal under the Federal Ministry of Environment is the general enforcement agency for the environment sector except for Oil and Gas.
- **The National Agency for Food and Drug Administration and Control (NAFDAC)**, a parastatal regulates and controls the manufacture, importation, exportation, distribution, advertisement, sale and use of food, drugs, cosmetics, medical devices and packaged water (known as regulated products) and chemicals.
- **The Factory Inspectorate Division (FID)** of the Federal Ministry of Labour and Productivity (FML&P) identifies and controls the hazards to workers in the workplace from exposure to chemicals and other risks.

The organizations above work in cooperation and with other relevant ministries, and stakeholders to manage chemicals, for example in import decisions on the Prior Informed Consent (PIC) Procedure.

Other agencies and Ministries that are involved with National Chemical Management are:

- **The Federal Ministry of Agriculture and Natural Resources**, (Livestock and Pest Control Department) which is responsible for collecting and disseminating information on pesticides management to farmers i.e. proper use and alternatives to unsafe pesticides. They are also the major importers of pesticides.
- **The Produce Inspection Service Division of the Federal Ministry of Commerce** imports chemicals and oversees the quality of produce leaving the country. It also provides industry analysis and statistical information, as well as business counseling and export assistance.
- **The Nigerian Ports Authority (NPA)** which is responsible for ensuring the safe transportation, loading, unloading, and handling of goods, including chemicals, carriage, embarking/disembarking of passengers in or from sea going vessels. Efforts are made to ensure that all hazardous materials imported and exported are transported in accordance with international regulations, and the manufacturer's recommendations.

- **The Federal Ministry of Industry** which though not an institutional manager of chemicals and pesticides, supervises industries and companies that handle chemicals in the course of production.
- **The Department of Petroleum Resources (DPR)** which in cooperation with FMENV regulates the petroleum sector (both upstream and downstream). This includes regulation of hazardous materials, consignors, consignees of drilling chemicals, exploration, formulation, refineries, distribution, import and export of petroleum products.
- **The Nigerian Custom Service** which is responsible for the control of imports and exports of all goods including chemicals. It also ensures that the imports and exports are in accordance with national and international regulations.
- **The National Authority on Chemical Weapons Convention**, located in the office of the Secretary to the Government of the Federation, which ensures the implementation of Nigeria's obligations under the chemical weapons convention.
- **Ministry of Mines and steel** which is responsible for mining activities in Nigeria. It is responsible for regulating activities of miners in Nigeria and fighting illegal mining. The role of this ministry is important as illegal miners use mercury to extract gold from gold ore.

	MINISTRY OF ENVIRONMENT	HARMFUL WASTE (Special Criminal Provisions, etc.) ACT The Blueprint on Handbook on Waste Management, (2001) Guidelines on Hazardous Chemical Management, (2001) Blueprint on Environmental Enforcement (A Citizen's Guide), (2001) Blueprint on Compliance Monitoring Inspection (Inspector's Guide), (2001)	"prohibit the carrying, depositing and dumping of harmful waste on any land, territorial waters" This include waste that contain mercury. The definition of hazardous chemicals includes mercury Both blueprints serve as a blue print for citizens and Inspectors respectively on managing the environment.	This mandate appears to cover all types of chemicals. All these regulations make no specific reference to mercury.
PROTECTION OF CONSUMERS	CPC	CPC ACT	"issue guidelines to manufacturers, importers, dealers and wholesalers in relation to their obligation under this Decree;[section 2(g)]	This mandate appears to cover all types of chemicals No specific reference to mercury.
MINING (artisanal gold mining and coal mining)	MINISTRY OF MINES AND STEEL	nil	nil	There is no law prohibiting the use of mercury in this sector

QUALITY CONTROL	SON	SON Act	to designate, establish and approve standards in respect of metrology?, materials, commodities, structures and processes for the certification of products in commerce and industry THROUGHOUT Nigeria[Sec.4(b)]	This mandate appears to cover the APPROVAL OF STANDARDS for all types of chemicals. No specific reference to mercury.
AGRICULTURE	MINISTRY OF AGRICULTURE	Pesticides Registration Regulation 2005	The entire regulations	It covers all pesticides and those that contain mercury.
OIL& GAS	MINISTRY OF PETROLEUM	Mineral Oils (Safety) Regulations 1963: Petroleum Refining Regulations 1974:	The entire regulations	It covers all minerals and oils including those that contain mercury.

OTHER EFFORTS MADE BY NIGERIA TO STRENGTHEN THE OVERALL NATIONAL HAZARDOUS CHEMICALS MANAGEMENT PROGRAMME

These include:

- Chemical registration, which regulates chemical imports by requiring a notification/registration before formulation/importation.
- Establishment of the Standing Committee on PIC import decisions/Enforcement of national decisions,
- Donor Agency sponsored workshop on hazardous chemical tracking in Nigeria to raise awareness and hold consultations with all stakeholders involved in hazardous chemicals management;

- Preparation of a National Profile on chemicals management infrastructure.

LEGAL GAPS

From the above table and the analysis the following gaps are identifiable:

- i.** Flowing from the need for proper definition of what chemicals are in one or the numerous chemical legislations, it will be necessary to specifically mention mercury (heavy metals) in all of its life cycle and forms.
- ii.** There is need to properly clarify and or harmonise mandates. This will streamline the budgetary process and save costs associated with duplication of functions all the government agencies.
- iii.** Even though mining (artisanal and small-scale gold mining (ASGM) and coal mining are carried out in most parts of Nigeria, there is no law prohibiting the process in which mercury amalgamation is used to extract gold from ore or mine coal.
 - a.** Between NESREA and NAFDAC as to which agency should regulate which source or which phase in the mercury life cycle. While NAFDAC regulates ALL CHEMICALS (presumably all stages), NESREA also is entitled to enforce compliance with regulations on the **importation, exportation, production, distribution, storage, sale, use, handling and disposal** of hazardous chemicals and waste. This also apparently covers all the life cycles.
 - b.** Between NAFDAC NESREA, CPC and SON as to which agency should set standards, control quality, regulate advertisement e.t.c. as it will appear all the above listed Agencies of government can legitimately lay claim to such mandates.
 - c.** There is need to clarify or harmonise mandates between the Federal Ministry of Environment, the Ministry of Health and NAFDAC on the one hand as to how to phase out products that contain mercury as contained in Article 4 of the Minamata Convention on Mercury.

- d. There is need to clarify or harmonise mandates between the Federal Ministry of Environment and the Ministry of Health on the one hand as to which agency is in charge of the disposal of hazardous chemicals or wastes containing mercury.
- e. Inconsistent legal drafting e.g. while the general provisions of the NESREA exclude 'oil & gas' from its mandate, sect. 7(c) includes 'oil and gas' treaties among those to be enforced by the agency.

A. INSTITUTIONAL GAPS

Flowing from the table and legal gaps identified above, the Institutions named therein should be re-structured to address institutional gaps observed:

SECTION III

PROPOSED ACTIONS FOR ADDRESSING THE GAPS

A. PROPOSED LEGAL DEVELOPMENTS

- i.** There is a strong need to enact new over-arching chemicals legislation. This would ensure that:
 - * All gaps in mercury management in particular and chemicals management generally in our laws are covered.
 - * Provisions relevant to implementing the Minamata Convention on mercury are made.
- ii.** Harmonise or align current plethora of scattered legislations. This is akin to point (i) above. Harmonising current plethora of scattered legislations would avoid duplicity of laws on mercury management in particular and chemicals management generally.
- iii.** Re-define and clarify mandates of all government agencies involved in mercury and chemical management.
- iv.** Strengthen cross sectoral links between all government bodies involved in the handling of mercury and chemicals generally.
- v.** There is a need to enact a mercury-specific law that is futuristic and will cover all future challenges that will arise from mercury handling in Nigeria.

B. PROPOSED INSTITUTIONAL DEVELOPMENTS

- i.** Re-design and re-define mandates in line with global best practices.
- ii.** Strengthen capacities for actualizing re-defined mandates.
- iii.** Broaden understanding of mandates as well as equip institutions with efficient modern tools for cost recovery so as to reduce dependence on national budget.
- iv.** Ensure mandatory inter-dependence and information sharing modalities by government institutions and NGOs involved in handling heavy metals issues including mercury.

C. CAPACITY BUILDING NEEDS

- i.** Information and knowledge of risks posed by chemicals.
- ii.** Equipment and laboratories for testing.
- iii.** Training of personnel e.g. Customs, SON personnel, Prosecuting Lawyers, Judges e.t.c.
- iv.** Establishment of Poison and chemical accident centers.
- v.** Improvement in hazard communication.
- vi.** Improvement in Occupational Health and Safety practice.
- vii.** Data gathering, management and information sharing.
- viii.** Capacity for remediation of polluted or damaged sites.
- ix.** Reduction in illegal trans-boundary trade in chemicals.

CONCLUSION

There is no doubt that most of the legislations and institutions governing the management of chemicals and hazardous wastes generally in Nigeria were promulgated during the military era [1966-1999] or early in the 4th Republic [1999 to date] when the art of law making was still in its infancy. There is also no doubt that the first international treaty on mercury became a reality in the year 2013. A mercury specific legislation could not have been contemplated. Thus many of the laws duplicate rather than clarify functions and the laws are not mercury-specific. Some provisions are rather too general or non-definitive. It is also true that the knowledge of environmental issues was still in its infancy at the time many of the laws were enacted e.g. hazard communication. There is therefore an apparent and urgent need to develop a basic and overarching framework Chemicals Management law that will cure some of these maladies.