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1. The context of chemicals management within Ghana prior to signing the Convention

Ghana signed the Rotterdam Convention¹ on the 11th of September 1998 and ratified it on the 30th of May 2003. The objective of the Convention is to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals, in order to protect human health and the environment from potential harm and contribute to the environmentally sound use of such chemicals, by facilitating information exchange about their characteristics, by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties¹¹.

Prior to signing the Convention, and in fact up to date, there is no comprehensive piece of legislation on chemicals management in Ghana. Laws on Chemicals Management are scattered in various pieces of Legislation. Together, these laws provide a framework for the management of all chemicals and pesticides in Ghana. They include Principal Acts, Subsidiary legislation, guidelines, codes of conduct and practice.

These laws are The Environmental Protection Agency Act, 1994 (Act 490), The Cocoa Industry Regulations, 1968 (NLCD 278), The Food and Drugs Law, 1992, (PNDCL 305B), The Pesticides Control and Management Act, 1996 (Act 528), The Prevention and Control of Pests and Diseases of Plants Act, 1965 (Act 307), Prevention of Damage by Pests Decree, 1968 (NLCD 245), The Standards Decree, 1973 (NRCD 173), and the Customs, Excise and Preventive Service Law (PNDCL 330).

In addition, there are the Export and Import Act, 1995 (Act 503), the Mercury Law, 1989 (PNDCL 217), The Labour Act, 2003 (Act 651) and the Draft Policy on Occupational Safety and Health, 2000.

The purpose of this study is to ascertain Ghana's experiences in developing the national regulatory framework in order to implement the Convention. This study will examine the context of chemicals management within Ghana prior to signing the convention; actions taken at the national level to revise or strengthen such framework after signing the convention; further actions that may be needed for effective implementation and lessons learnt that may be of possible interest to other countries. This study will also discuss briefly other international instruments (e.g. the Basel and Stockholm Conventions) for the management of chemicals in view of an integrated implementation of their obligations in national laws.

A. The Existing Legislative Framework prior to signing the Convention 1. The Environmental Protection Agency Act, 1994, (Act 490)

This Act establishes the Environmental Protection Agency^{III}, which has the primary function of protecting the environment to ensure its sustained use for the present and future generations. Its functions, according to the Act, include:

- Issuing Environmental Permits and Pollution Abatement Notices for controlling the volume, types, constituents and effects of waste discharges, emissions, deposits or other source of pollutants and of substances which are hazardous or potentially dangerous to the quality of the environment or any segment of the environment^v;
- Prescribing standards and guidelines relating to the pollution of air, water, land and other forms of environmental pollution including the discharge of wastes and the *control* of *toxic substances*^v;

- Conducting investigations into environmental issues and advising the Minister thereon^v;
- Promoting studies, research, surveys and analysis for the improvement and protection of the environment and the maintenance of sound ecological systems in Ghana.[™]

The terms: *waste discharges, pollutants, substances which are hazardous or potentially dangerous*, and *toxic substances* as used above are not defined under the Act.

It is arguable that even though the functions assigned to the EPA under the Act do not make specific reference to imports and exports it could be inferred from the nature of the functions of the EPA that once these imports and exports have a bearing on the environment the mandate of the EPA could be stretched to cover them.

The EPA is the key Agency responsible for the management of *all* Chemicals in Ghana. The Act establishes a Committee of the Environmental Protection Agency Board known as the *Hazardous Chemicals Committee*.^{VIII}

This Committee consists of representatives of key Government Organisations that have direct interest in the effective management of chemicals. This is to ensure that all stakeholders in such management are duly represented, heard and consulted before important decisions affecting the nation are made.

The committee consists of the Executive Director of the EPA who shall be the Chairman; three officers from the Agency; three persons with *specialised knowledge and experience in toxic chemical management*, and one representative of the following Organisations: Ghana Standards Board; Ghana Atomic Energy Commission; Ghana Cocoa Board; Crops Services Department of the Ministry of Food and Agriculture; Veterinary Services Department of the Ministry of Food and Agriculture; Neterinary Services Department of the Ministry of Scientific and Industrial Research.[™]

The functions of the Hazardous Chemicals Committee are to "*monitor* the use of *hazardous chemicals* by collecting information on the *importation, exportation,* manufacture, distribution, sale, use and disposal of such chemicals; *advise* the Board and the Executive Director on the regulation and management of hazardous chemicals; and *perform* such other functions relating to such chemicals as the Board or the Executive Director may determine."^x (Emphasis added),

To be able to perform its duties under the Act, the EPA has as one its Divisions, the *Chemicals Control and Management Centre (CCMC)*^N, which plays a vital role in the management of Chemicals in Ghana. The CCMC has as its primary objective, to protect human health and the environment from the possible effects of chemicals.

The CCMC issues *Chemical Clearance Permits* to importers of Industrial Chemicals. One permit is given per each import. It is mandatory for applicants to submit the Material Safety Data Sheets (MSDS) of every chemical they intend to import in Ghana to the CCMC. These applications are subsequently screened based on the information provided on the MSDS and other sources. Industrial and Consumer chemicals, listed on the Narcotics Board's Red list or the EPA Red list, as a result of their abuse in Ghana, are severely restricted. Samples of some of these chemicals are sent to the Ghana Standards Board (GSB) for examination before Clearance Permits are issued. On the average this takes about one week, depending on the chemical involved. The CCMC also supervises the disposal of obsolete chemicals. This takes between one and three months because the EPA does not have a disposal site of its own and has to rely on the facilities of other organisations.

Furthermore, the CCMC collects information on all chemicals (industrial and agrochemicals) imported into Ghana. In processing applications for the import of chemicals, the CCMC is guided by MSDS or technical

dossiers, which provide technical information on the chemicals. The CCMC however relies primarily on the advice of the Pesticides Technical Committee^{xil}. The documents may also suggest disposal options of such chemicals as well as information about their toxicity.^{xill}

2. The Pesticides Control and Management Act, 1996 (Act 528)

Act 528 is the only piece of legislation that addresses the manufacture, classification, labeling, importation, exportation, and use of pesticides in Ghana. Significantly, this Law has very broad application; it affects government, companies, manufacturers, users, vendors, importers, exporters, advertisers and formulators. The law focuses on the registration of pesticides;^{XV} the restriction and suspension of the use of pesticides;^{XV} the licensing of pesticide dealers^{XVI} and the penalties for non-compliance.^{XVII} Some aspects of the Act will be dealt with in section B of this study in order to compare them with the obligations of the Convention. In this section, the study will outline the contents of the Act.

a) The procedure for the registration of pesticides

Act 528 stipulates that 'no person shall import, export, manufacture, distribute, advertise, sell or use any pesticide in Ghana unless the pesticide has been registered by the EPA'.^{XVIII} For a chemical to be registered by the EPA, the applicant has to provide a technical dossier on the product. The information provided should include the purpose, composition and origin of the pesticide. In addition, physical and chemical properties and toxicity levels of both the formulation and the active ingredient(s) must also be provided. The dossier must be accompanied by reports of relevant ecotoxicological and toxicological studies conducted on the product formulation and respective active ingredients.

b) The Pesticides Technical Committee^{XIX}

Act 528 establishes the Pesticides Technical Committee (PTC).^{xx} This committee is made up of members from diverse backgrounds.^{xxi} Its duty is to perform those functions assigned to it by the EPA Board.^{xxii}

The three subcommittees of the PTC^{XXIII} (Ecotoxicology, Bioefficacy and Labeling and Advertisement subcommittees) are responsible for evaluating the dossier. The Agency will only register a pesticide if it is satisfied that the pesticide is safe to use under Ghana's local conditions and effective for the use for which it is intended. It is the function of the CCMC to register the chemical but it does so upon the recommendation of the PTC.

According to the Act, in registering the pesticide, the Agency shall classify it as being for: i) general use; ii) restricted use; iii) suspended; or iv) banned.^{xxiv}

A pesticide may be suspended or restricted if its application may have unreasonable adverse effects on people, animals or the environment. Currently, 10 pesticides have been banned in Ghana.^{xxv} The reasons for the ban may include the high level of toxicity of the substance. As we will further appreciate in section B of this study, this is in conformity with the Rotterdam Convention on Prior Informed Consent.

c) The procedures for granting licenses to pesticides dealers

Act 528 stipulates that no person shall import, export, manufacture, distribute, advertise or sell any pesticide except in accordance with a license issued under the Act. The Pesticides licensing and Enforcement Unit of the Pesticides Department^{XXVI} (of the EPA) licenses the following categories of dealers in Ghana:

- Importers, manufacturers and formulators;
- Distributors, retailers and dealers;
- Commercial operators (i.e. pest control operators); and
- Transporters of restricted pesticides.

Before being issued licenses, the dealers submit applications to the Agency requesting such. Currently, the information required for licensing of dealers in pesticides includes the address of the company, names and qualifications of responsible Officials in the company, list of pesticides to be handled under the license and a description of the technical storage and handling facilities. The Pesticides Licensing staff then visit and inspect the premises to be used for the business.^{XXVII} The Agency may subsequently issue a license authorising the applicant to import, export, manufacture distribute advertise or sell pesticides if it has reasonable grounds to believe that the applicant will comply with the conditions required under the license.^{XXVIII} Licenses could be suspended or cancelled by EPA if applicant does not fulfil the conditions.^{XXXII}

d) The enforcement of Act 528

The list of pesticides in the register is made available to industry and other stakeholders such as the Customs, Excise and Preventive Service (CEPS)^{XXX} and the Ministry of Food and Agriculture (MoFA) to assist them in their enforcement functions. According to section 38 of Act 528, every customs officer shall:

- Assist in the enforcement of the provisions of the Act; and
- Prevent the importation into Ghana of any pesticide, where the importation is contrary to the Act.xxx

The Act also authorises the appointment of Pesticides Inspectors. According to Section 31 paragraph 1, a member of the relevant sub-committee of a District Assembly so authorised or an inspector appointed under section 15 of the Environmental Protection Agency Act, 1994 (Act 490) may.

- Inspect equipment used or to be used in applying pesticides;
- Inspect any storage or disposal facilities and areas used for the storage of disposal of pesticides;
- Inspect any land actually, or reported to be exposed to pesticides;
- Investigate complaints of injury to human beings, animals or damage to land and pollution of water bodies resulting from the use of pesticides;
- Take samples of pesticides applied or to be applied; and
- Monitor the sale and use of pesticides.xxxII:

The Inspectors have the powers to stop illegal activities and arrest suspected persons or seize their equipment. Penalties for non-compliance may include the payment of a fine, a term of imprisonment or both.^{xxxiii}

Section 15 of the Act does not indicate the nature of the people or bodies to be appointed as inspectors. This is at the discretion of the EPA Board.^{xxxxv}

3) The Food and Drugs Law, 1992 (Act 305B)

This Act aims at regulating the manufacture, preparation, sale or supply, export or import and use of food, drugs, cosmetics and chemical substances so as to protect the health of consumers.^{XOV} It establishes a Body known as the Food and Drugs Board,^{XOVI} which has the responsibility of performing the administrative functions under the Law. Though this law does not make specific reference to banned or severely hazardous chemicals, the word "*chemical substance*" is defined under the Law as "*any substance or mixture of substances prepared, sold or represented for use as a germicide, an antiseptic, a disinfectant, a pesticide, an insecticide, a rodenticide, vermicide, or detergent".^{XOVII}*

The Law prohibits a person from manufacturing, preparing, selling or supplying, exporting or importing into

Ghana any chemical substance unless it has been registered with the FDB.xxxvIII

In this respect there seems to be an overlap in the regulatory functions of FDB and EPA. In practice, however, the FDB has stayed clear of the registration and regulatory control of pesticides. Despite this fact, there is still the need to rectify this obvious overlap so as to ensure that the functions of each body are clarified. Interestingly, Law 330 makes the EPA a member of the Governing Body of the FDB.^{XXXX}

With regard to *enforcement*, it is an offence for any person to sell any chemical substance (that has in or on it any substance) which when used according to the directives on the label accompanying such pesticide may cause injury to the health of the user.^{xL}

The Act empowers authorised officers of the FDB at any hour reasonable for the proper performance of their duty to open and examine any receptacle or package, which he believes, contains any pesticide. Such officers also have the power of seizure of such products.^{XLI}

Furthermore, it an offence for any person to use or dispose of any chemical substance (pesticide) in a manner likely to cause contamination of food or water for human consumption or in a manner likely to be injurious or dangerous to the health of any person.^{XLII}

It is an offence under this law for anyone to label, package, sell or advertise any chemical substance in a manner that is false, misleading or deceptive as regards its character, constitution, value, potency, quality, composition, merits or safety.^{XLIII}

The Law prescribes the penalty for offences committed as either the payment of a fine or a term of imprisonment or both.^{XLN}

4) The Mercury Law 1989, (P.N.D.C.L 217)

Mercury is an industrial chemical. This Law regulates acquisition, possession, and sale of mercury. Its purpose is to control the use of mercury and to ensure that best practices are maintained in the interest of public health and safety. Under this Act an importer of mercury must apply for a license authorising him to "import into the country, possess, buy, sell or deal in mercury, subject to such conditions as may be specified in the licence."

As for enforcement, this license may be cancelled at any time by the issuing body, which is the Ministry of Trade, if it is satisfied that the licensee is in breach of any of the terms and conditions of the licence or if it is in the national interest to do so.

In addition it is an offence to import any quantity of mercury into the country or for one to buy, sell, transfer or have in his possession any amount of mercury unless the person has a license issued under this Law. Such a person shall on conviction be liable to a fine or to a term of imprisonment or both.^{XLVI}

5) The Standards Decree, 1973 (NRCD 173)

This decree applies to all manufactured products and seeks to promote the standardization in industry of goods produced in Ghana.^{XLVIII} The Standards Decree establishes the Ghana Standards Board.^{XLVIII} The GSB is responsible, among others for the promulgation of standard specifications in industry. It is also responsible for quality infrastructure, which embraces Metrology, Standards, Testing and Quality Assurance. This ensures that goods and services are of acceptable quality for both local and international consumers.

The standards, testing and quality assurance aspects of the work of the GSB are relevant to the management of

pesticides in Ghana and the implementation Rotterdam Convention. The Decree mandates the GSB to provide services that facilitate the regulation of the use and management of chemicals.

Section 2 (d) of the Standards Decree, empowers GSB to promote standards in public and industrial welfare, health and safety.^{XLIX}

Section 3 (2) (b) also empowers GSB to provide for examination and testing of goods, commodities, processes, and practices and for those purposes the Board may establish such laboratories and other facilities as it thinks fit.^L

The word "goods" has an elastic definition under the Standards Decree.^u It refers to all products, including chemicals, that consumers use.

There is an *official standard on pesticide labelling*.^{LII} The making of labelling guidelines has under the Act 528 been delegated to the EPA which has developed a format for such and which it applies to all those who register their pesticides to sell them on the local market. This format includes the name of the product, its active ingredient and concentration, a summary of its possible uses, an EPA registration number, batch number, date of manufacture and expiry, the name and address of the local agent, directions for use, hazard symbol and pictograms, first aid measures and a safety or risk phrase , among others. This applies also to all chemicals.

The activities of GSB, in relation to the use and management of chemicals, are carried out through laboratory examinations, the testing of goods and the provision of Quality Evaluation Reports. An example is the routine Pesticide Residue Analysis of vegetables and fruits to facilitate their export and also protect public health and safety.

6) The Customs, Excise and Preventive Service (Management) Law, 1993 (PNDCL 330)

This Law regulates all imports into and exports from Ghana, including chemicals.

It is noteworthy that the CEPS currently performs certain duties on behalf of EPA. It examines documents and as well as certificates/permits granted by the EPA to ensure that they cover the particular importation or exportation that the bearer of permit claims it does. Records of chemical import returns are submitted by CEPS to the EPA on a quarterly basis.

There is a high level of co-operation between the CEPS and the EPA. Officers of CEPS serve on various technical committees of the EPA including the Hazardous Chemicals Committee and the Pesticide Technical Committee, among others.^{LIII}

Law 330 does not have any specific regulations on pesticides and chemicals but the objectives and functions of CEPS ensure the monitoring of the importation and exportation of goods, including chemicals, into the country. With regard to *enforcement*, the Law gives power to officers to search persons, premises and baggage and seize prohibited and unaccustomed goods, which include chemicals.^{LV} In fact for the administration of this law CEPS officers are given the same powers, authorities and privileges as are given by law to Police Officers.^{LV} Act 528 specifies the role of CEPS in the enforcement of the provisions of the Act. They are required to assist in the enforcement of the Law, as well as to prevent the illegal importation into Ghana of any pesticide. They are also required to keep a list of all pesticides imported into the country for onward submission to the EPA.^{LM}

7) Export and Import Act, 1995 (Act 503)

This Law seeks to regulate the efficient import and export of all goods, including chemicals, into and from Ghana.

The CEPS play an important role in the *enforcement* of this Law. It stipulates that where an importer or exporter is required under any other enactment to obtain a permit or licence or certificate, in addition to other certification for any category of goods, certified copies of same shall be given to the Commissioner of CEPS.^{LVII}

8) Others

The laws about to be discussed do not have any specific provisions on either industrial chemical or pesticides. They are however worth discussing because as a result their objectives they could be said to have a bearing on either of industrial chemicals or pesticides.

8.1 The Prevention and Control of Pests and Diseases of Plants Act, 1965 (Act 307)

This law, in generally, deals with the use of pesticides in that it seeks to protect plants from pests and diseases.

8.2 The Cocoa Industry Regulations, 1968 (NLCD 278)

This law regulates the production, preservation and sale of cocoa in and outside Ghana. It regulates the cleansing and proper maintenance of premises in which cocoa is stored. It is this aspect of the law that has a bearing on pesticides.^{LIX}

8.3 The Prevention of Damage by Pests Decree

This decree deals, generally, with disinfectants and insecticides and seeks to control the production of food to ensure that it is free from contamination and infection by pests. It is this aspect of its aim that has a bearing on pesticides.

The decree empowers inspectors to recommend to an occupier of any land, such treatment or measures as may be necessary to eradicate pest infestation. This invariably calls for the use of pesticides.^{LX}

Where an occupier of any land has failed to comply with any direction given by the inspector within the specified time, the inspector may apply such treatment or adopt such measures as he thinks necessary for the purpose of preventing, exterminating or restricting, as the case may be, any pest or disease.^{LXI}

8.4 The Draft Policy on Occupational Safety and Health, 2000

This policy seeks to ensure that measures are instituted to ensure the attainment of optimum health for workers in all occupations in Ghana, including the administration of pesticides. This does not have the status of law. The appropriate ministry is yet to submit it to parliament.^{LXII}

B. Obligations under the Convention, which were already being effectively met

Prior to signing the Convention in 2003, Ghana was committed to the FAO International Code of Conduct for the Distribution and Use of Pesticides (as amended). This influenced and in fact informed the promulgation of the Pesticides Act in 1996. With this Act in place a significant number of obligations under the Rotterdam convention were already being met. It may be fair to say that Ghana had in place a fairly effective legal regime to regulate pesticides with different degrees of compliance to the technical dictates of the Convention.

In the following paragraphs, the study will examine the obligations of the Convention and their legislative implementation in Ghana.

i) Articles 2 & 3 (definitions and scope)

The Convention applies to two types of chemicals. These are severely hazardous pesticide formulations and

banned or severely restricted chemicals (which includes pesticides). Ghana does not have a comprehensive piece of legislation on industrial chemicals or even one devoted to chemicals generally. The best definition of a chemical found in our laws is found in the *Food and Drugs Law* which defines a chemical substance as "any substance or mixture of substances prepared, sold or represented for use as a germicide; an antiseptic; a disinfectant; a pesticide; an insecticide; a rodenticide; a vermicide; or a detergent; or any other substance or mixture of substances which the Secretary may, after consultation with the Board, declare to be a chemical substance."

This definition is useful for the purposes of the above-mentioned law and is not intended to apply to banned or severely restricted chemicals. What this means is that the laws of Ghana provide no definition for chemicals for the purposes of the Convention. It also has no definition for banned or severely restricted chemicals.

In addition, Act 528 does not use the term, severely hazardous pesticide formulation as used in Article 2^{LXV} of the Convention. The expression used is restricted or suspended pesticides. The real issue is whether despite the difference in terminology they, in essence, refer to the same thing.

Section 6 of Act 528 says: "The Agency shall classify a pesticide as **restricted or suspended if it considers** that its use in accordance with widespread commonly recognized practice in the absence of additional regulatory restrictions may cause unreasonable adverse effect on people, animals, and crops or on the environment."

The drafting is inelegant; the definition could be clearer. It must, however, be read together with the definition of pesticides in the same Act in order to appreciate its meaning and scope. A pesticide is defined as **"A substance or mixture of substances intended for preventing, destroying, repelling or reducing the destructive effects of any pest; or a substance or mixture of substances intended for use as a plant regulator, defoliant, desiccant or wood preservative".^{LW}**

Despite the difference in wording these two definitions (i.e. the definition found in the Convention - see FN lxiv - as well as those found in Act 528) are in essence the same as they both touch on the issue of conditions of use as well as the effect of pesticides on humans, and the environment. What the definition in Act 528 lacks is clarity as found in the phrase "in the absence of additional regulatory restrictions" and the element of time, as in "observable after single or multiple exposure."

The Convention does not apply to: a) narcotic drugs and psychotropic substances; b) radioactive materials; c) wastes; d) chemical weapons; e) pharmaceuticals, including human and veterinary drugs; f) chemicals used as food additives; g) food; and h) chemicals in quantities not likely to affect human health or the environment provided they are imported for the purpose of research or analysis or by an individual for his or her own personal use in quantities reasonable for such use.

Act 528^{LXVII} excludes from the ambit of the law "Pesticides imported for experimental or research purposes and not for distribution; or imported in the event of national emergency; or in direct transit through Ghana and the Agency is satisfied that the pesticide is permitted to enter the country of destination; or if the Minister by legislative instrument so prescribes."

Act 528 does not exhaust the excluded items. It introduces as an exempt item pesticides imported in case of national emergency. It should be noted however that the language of the section leaves room for the Minister to add to the list. The Minister may do so by Regulations.

ii) Article 5 (final regulatory action)

Article 5 requires that each Party that has adopted a final regulatory action notify the Secretariat in writing of such action. According to the EPA^{LXVIII} as far back as 1993, and before signing the convention, the then Toxic Chemicals Committee of the EPA took final regulatory action on some chemicals.^{LXX} These were formally banned in 2003.

iii) Article 6 (listing of severely hazardous pesticide formulations)

According to the EPA^{DXX} it has not as yet found any reason to comply with article 6 and Annex IV. It has not experienced problems caused by a severely hazardous pesticide formulation under conditions of use.

iv) Article 10 (PIC procedure)

Act 528 defines the PIC procedure as 'the international operation procedure for exchanging, receiving and handling notification information by the Agency on restricted, suspended and banned pesticides for reasons of health and the environment."^{LXN} Ghana, prior to signing the Convention, was to a large extent in compliance with article 10. It transmitted responses concerning future imports of some chemicals listed in Annex III of the Convention. These include DDT, Aldrin and Dieldrin, among others, which were banned in Ghana as far back as 1993.

v) Article 10.9 (b) (domestic production)

The Convention requires Parties to treat import and domestic production equally. Ghana has never had reason to comply with those provisions since it does not produce chemicals. However to ensure absolute compliance, the law^{LXXII} has extended the definition of manufacture to include "to add substances, mix, formulate, package or **re-package**, **label.**" This is very material since most of the chemicals imported into Ghana are repackaged and labelled. Ghana as a member of the WTO is committed to its *National Treatment and Most-Favoured Nation Treatment obligations*.

vi) Article 11& 12 (obligations of Ghana as exporter & export notification)

Ghana's obligations under Articles 11 & 12 have not been met. This is because Ghana is not an exporter of chemicals and pesticides.^{LOOIII}

vii) Article 14 (information exchange)

Ghana's exchange of scientific, technical, economic and legal information concerning the chemicals has been with exporting countries. Ghana was committed to exchanging information within the country as well as to exporting countries. Information exchange is compulsory under Act 528.^{LVOV} To do this, the EPA collects and records data on the import, export, manufacture, formulation, quality, quantity, and use of pesticides. This information also helps it to assess possible effects on human health or the environment.

viii) Article 13 (labelling)

The provisions on labelling under this article refer specifically to exporters, which Ghana is not. However, Act 528 has provisions on advertising, labelling and packaging.^{LXXV} The making of labelling guidelines has under Act 528 been delegated to the EPA which has developed a format for such and which it applies to all those who register their pesticides to sell them on the local market.

This format includes the name of the product, its active ingredient and concentration, a summary of its possible uses, an EPA registration number, batch number, date of manufacture and expiry, the name and address of the local agent, directions for use, hazard symbol and pictograms, first aid measures and a safety or risk phrase, among others. This applies also to all chemicals. This is closely monitored by Program Officers at the EPA who actually inspect such labels to ensure that they comply with the guidelines.^{LOCM}

There are in progress draft labelling, transportation, packaging and disposal Regulations (on Pesticides). They are in their elementary stage. It is a USAID funded project, i.e. *The Trade and Investment Programme for a Competitive Export Economy.*

ix) Article 15 (initiatives at the national level)

This article requires countries to strengthen their national infrastructures and institutions for the effective implementation of the Convention. Ghana was to an extent in conformity with this.

Ghana has national registers and databases including safety information on chemicals. It has databases on various subjects. These include: chemical use statistics, PIC decisions, inventory of existing chemicals and occupational health. It also keeps registers on imports, toxic chemicals, and pesticides. These are available to the public at the premises of be the EPA, the CEPS and the relevant ministries and Universities. These have been in place as far back as 1997.^{LXXVII} The EPA is in the process of making such information available to the whole country by the creation of a website.

Ghana has greatly encouraged initiatives by industry to promote chemical safety. Ghana has in place a National Poisons Information Centre, which assists health professionals in the diagnosis and management of poisonings from chemicals, toxins, venoms and drugs; provides information to health professionals on the toxic effects of poisoning agents; and provides information to the general public on prevention and first aid management of acute poisoning.

In addition, the government is committed to monitoring and curtailing occupational exposure, poisoning and residues in foods.^{LXXX} For this reason it encouraged the Occupational Safety and Health Unit of the Ghana Health Services to come out with new programmes to create public awareness about the dangers involved in the misuse of chemicals.^{LXXX}

Making information on chemical handling available to the public has for a long time been complied with by the EPA. This was done by setting a standard for labelling of pesticides. This has over the years helped to create public awareness about the effects of the misuse of such chemicals.

Again, programme officers of the EPA as well as officers of the Ministry of Environment have always been mandated to organise seminars and education campaigns to educate people especially those in the rural areas about such. Accident management and alternatives (to chemicals) that are safer for human health and the environment have long been of great concern to Ghana.

The EPA was also committed to organising workshops and seminars for the general public to educate them on the safe use of chemicals. Training sessions were and still are organised mostly for farmers in rural areas to teach them how to produce the organic manure, among others.^{LXXXII}

x) Other national initiatives

Other initiatives have been the adoption of a pesticides registration and control system/pre-market pesticide registration scheme based on risk evaluation. The law requires the testing of chemicals before registration is

approved.^{LXXXIII} Under section 3 of Act 528, anyone who wants to register a pesticide has to submit an application along with other prescribed documents to the EPA. The Pesticides Technical Committee of the EPA evaluates the dossier. Furthermore there is a re-registration (of licences) procedure to ensure a periodic review of licences given. Act 528^{LXXXIV} makes provision for this periodic review.

C. The other International instruments governing pesticides or industrial chemicals to which Ghana was a party at the time and the implementation of those instruments

The following Conventions and Protocols have been ratified and steps are being taken to implement them at the country level:

- The Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention) 1989.
- The Stockholm Convention on Persistent Organic Pollutants.
- The FAO International Code of Conduct for the Distribution and Use of Pesticides (as amended in 2003).
- The ILO Convention on the Safety of Chemicals at the Workplace, 1990.
- The UN Convention on Substances that Deplete the Ozone Layer (Vienna Convention) 1985.
- The Montreal Protocol on Substances that Deplete the Ozone Layer, 1987; and
- The London Amendment of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1990.

The EPA is the body primarily in charge of the implementation of the conventions listed above apart from the ILO Convention which is being implemented by the Ministry of Labour. The EPA works with other stakeholders. It draws on expertise from the Universities, the Ministries and other relevant Agencies. This arrangement is conducive to the effective implementation of the Conventions as it prevents duplication of functions and waste of resources.

(1) The Vienna Convention

Ghana became a party to the Vienna Convention on October 22 1988 and ratified the Montreal Protocol and its London Amendment on July 24, 1989 and July 22, 1992, respectively. This Convention aims at phasing out Ozone Depleting Substances (ODS).

To implement the above, a Legislative Instrument, namely the *Management of Ozone Depleting Substances and Products Regulations (LI 1812)*,^{LXXVV} has been added to the EPA Act. The EPA is responsible for performing the administrative functions under the L.I.. The LI regulates imports and exports of controlled substances and products. This law has very important features, which are also requirements in the Rotterdam Convention. It has key provisions on how to apply for an import-export permit, customs verification and conspicuous labelling, maintenance of records by importers and exporters, reporting procedures for permit holders, register of permits, bans the use of a controlled substances in the manufacture of goods and enforcement provision.

The creation of public awareness is another laudable feature of this law. It mandates the EPA to carry out public awareness activities and programmes relating to the elimination of the ozone depleting substances. The Executive Director of the EPA is also required to publish a list of controlled substances and products in the mass media and at the offices of the agency.

In addition, Ghana, through the technical and financial assistance of the multilateral Ozone Fund secretariat has established an Ozone Office which implements various programmes to achieve the phasing out of ODS.^{LXXXVI}

(2) The Stockholm Convention

Ghana signed the Convention on 23 May 2001 and ratified it on 30 May 2003. The objective of the Stockholm Convention is to protect human health and the environment from persistent organic pollutants (POPs). In Line with Article 7 of the Stockholm Convention on POPs, Parties are required to prepare National Implementation Plans (NIPs), which defines a country's commitments, current situation, and actions, which it plans to undertake in the field of POPs management. To implement the Stockholm convention the EPA has prepared a comprehensive NIP to be submitted to the secretariat later on in the year.

The focal national priority areas include: i) public education and awareness creation; ii) development of new legislation and harmonization of existing legislation; iii) strengthening of the institutional capacity in terms of legal, technical infrastructure and human resources (e.g. training of customs officers and environmental inspectors etc) to manage POPs; and iv) research into the extent of exposure of the population to POPs and the search for safer alternatives."

(3) The Basel Convention

Ghana became a party to the Basel Convention was ratified by Ghana on the 30th day of May, 2003. Some obligations under the law are being performed.^{LXXXVIII} For example Customs Officials are being trained to curb the transboundary movement of waste and more efficient methods of waste disposal are being introduced.^{LXXXVII}

(4) The ILO Convention on the Safety of Chemicals at the Workplace

Ghana is a party to this convention. Ghana's response to the needs of this Convention however is a comprehensive piece of legislation on labour.^{xc} This law is divided into several parts. These include parts on Protection of Employment, Hours of Work, Rest Periods, Employment of Persons with Disability and last but not least Occupational Health, Safety and Environment.

Under this last part employers are enjoined to ensure that their employees work under safe and healthy conditions. They are required to in ensuring this to take into consideration the age, literacy level and other circumstances of each worker. Further more they are to protect workers from "*toxic gases, noxious substances, vapours, dust, fumes* and other *substances* likely to cause risk to safety or health.^{xci} Failure on the part of the employer to do such or to report any occupational accident is punishable. Last but not least Labour Inspectors have the right to "take remove for purposes of analysis, samples of materials and *hazardous or chemical substances* used or handled by workers in the course of their employment.^{xci} (Emphasis added)

(5) The FAO International Code of Conduct for the Distribution and Use of Pesticides

To show Ghana's commitment in complying with its international obligations, the Pesticides Control and Management Act, 1996 (Act 528), was passed in 1996. This law offers a comprehensive package on the importation, manufacture, formulation, distribution, use and transportation of pesticides in Ghana. The section Obligations under the Convention which were already being effectively Met of this study contains a discussion on how this code was implemented.

2. Actions taken at national level to strengthen the administrative framework after signing the Convention

Ghana has made significant strides in strengthening the administrative framework.

A. Appointment of the Designated National Authority

To strengthen the legal framework, the EPA has been appointed as the Designated National Authority. This was done by the Ministry of foreign affairs under powers conferred on it by the President of Ghana. Even though it is the primary body in charge of protecting the environment, more powers and responsibilities have been conferred on it by its appointment. These responsibilities are those conferred on all DNAs by the Convention which is now part of the laws of Ghana.

B. The CIEN project

In addition, since the Government recognises the importance of information exchange a project referred to as the Chemical Information Exchange Network (CIEN) has been actively embraced. The EPA in 2004 collaborated with the United Nations Environment Programme (UNEP) and the United States Environmental Protection Agency (USEPA) in undertaking a two-year project in Ghana to supply equipment and as well as train personnel on how to access information on chemicals using the Internet. The EPA was the National Coordinating Agency responsible for organising the national activities. The CIEN project aims at:

- Enhancing the capacities of countries to obtain and share information needed for their national decisionmaking especially in the field of chemicals management.
- Creating the framework for access to and exchange of information to support national, regional and international activities for sound chemicals management.
- Assisting appropriate government agencies in developing countries to access the internet, providing training to chemical managers and appropriate stakeholders on how to access chemical information on the internet; and
- Encouraging the establishment of a national/regional network for chemical information exchange between chemicals management stakeholders.

Some of the key institutions involved in the project are Customs, Excise, and Preventive Service, Ministry of Food and Agriculture and the Ghana Standards Board etc.

According to the EPA the CIEN project was expected to result in the following:

- A website where National and International partners can gain access to chemical information services;
- Trained staff to access chemical information on the internet.
- An institutional kiosk providing information on all actors/stakeholders and their respective informational base; and
- Information kiosks and libraries on chemicals management, assisting the general public to gain access to existing bibliographical references about specific subjects and to access them directly from their computers.^{xcm}

Unfortunately, implementation of the CIEN project has unofficially come to an end, but the EPA on its own is continuing the project by developing databases and WebPages on chemicals to be posted on the EPA website.^{xcw}

This project is very important to the EPA since they aim is to ensure that all stakeholders especially the CEPS as well as the general public have access to the most recent pieces of information on banned and severely hazardous chemicals among others.

C. The Hazardous Chemicals Committee

Furthermore, the Hazardous Chemicals Committee^{xcv} has been reconstituted. This was done in 2004. This committee became dormant a couple of years after being composed. After signing the Rotterdam Convention it became imperative to reconstitute it to perform its legally required functions, so as to help implement the Convention. This committee has been very effective since.

D. Training of Staff

Staff has been trained at the UK Pesticides Safety Directorate. This was done when it was realised that for an effective implementation of the law there was the need to strengthen the human capacity by sharpening skills and encouraging expertise. Presently, any decision on whether or not to register a chemical is based on a risk assessment.

3. Further actions that may be needed to achieve effective implementation of the Convention in Ghana

A. Public Participation

Article 15 of the Convention requires that "each Party take such measures as may be necessary to establish and strengthen its national infrastructures and institutions for the effective implementation of this Convention." One of such measures may be the need to amend existing law (for e.g. The Pesticides Act) to make room for more civil society participation.^{XCVI} Non-governmental organisations, especially, those concerned mostly with environmental issues and committed to enhancing the well-being of the deprived communities, should be encouraged to play active roles in ensuring the effective implementation of the Convention.

They are a significant group since they are found in very remote parts of the country and are in touch with those in rural areas. The members of the Pesticides Technical Committee and the Hazardous Chemical committee are made up of representatives of mainly Government Departments.^{XCVII} Perhaps including representatives from non-governmental organisations will help make a difference, especially, in educating those in remote areas who are illiterate about the dangers of the misuse of chemicals.

B. Laws: revision, promulgation, and amendments

There is also the need for a comprehensive law on industrial chemicals. The definitions in this law must conform to those under the Convention. There is the need to harmonise the existing laws to prevent the duplication of functions and mandates. An example is the obvious overlap in the regulatory functions of FDB and EPA discussed under the heading Food and Drugs Law.

In addition, there is the need for a Legislative Instrument to be made to the Pesticides Act, which will set out the specific mode of operation of the Act. This is very important, as it will be an opportunity to make new regulations to address some of the problems that have been realised.^{XCVIII} For instance, since there is no Legislative Instrument to the Act certain procedural issues like the procedure for the storage and disposal of pesticides which are considered likely to cause injury to humans and the environment are lacking.

On the other hand there could be a Legislative Instrument devoted solely to the implementation of the Convention as has been done for the Vienna Convention. The advantage of having a law solely for the implementation of the Convention is that it will be made to suit the needs and requirements of the Convention as opposed to building upon laws that were not drafted with the Convention in mind.

Regarding the existing laws, the definition of restricted and suspended pesticides under Act 528 must be brought in conformity with that of the Convention, for instance the element of time may be incorporated. Again, certain important terms used in the EPA Act such as chemicals, toxic substances, substances which are hazardous have to be defined.

Since the EPA is the primary body in charge of the management of all chemicals in Ghana, it is imperative that these expressions be defined to further enhance the scope of their mandate. The items excluded under the Convention must also be spelt out clearly in an amendment to the Pesticides Act for the avoidance of doubt.

C. Training

Furthermore there is the need to train personnel to implement the Convention effectively. Ghana needs more experts in the field of chemicals management. Perhaps some people could be sponsored to acquire expertise in the relevant fields. For instance, the Pesticides Department has 9 staff members, 2 of whom are secretaries. They need more chemists, biochemists, toxicologists, ecotoxicologists, environmental scientists and Information technology experts to be able to do their work more effectively. According to the EPA^{xCIX} as a result of poor conditions of service they are not able to retain those they have trained.

D. Resources

This seems to be a major problem for the EPA. More resources are needed to implement the Convention, especially, resources to help personnel ensure compliance with the convention. For instance, the Pesticides Department does not have a vehicle of its own for its outreach programmes. It has to go to the common pool where vehicles are not always available. Their laboratory also needs to be upgraded with modern facilities. A lot of its laboratory work is taken to the Ghana Standards Board and this slows them down since the GSB serves others too.

In addition, staff does not have enough computers. About 5 of the staff use their personal laptops to work.^c

E. Enforcement

Creating public awareness first and foremost about the existence of the Convention is important. Then, the dangers to human beings and the environment in the misuse of chemicals shall also be part of an awareness campaign. This would help to ensure compliance. Presently, many people are unaware of the devastating effects of the misuse of chemicals on human life. A recent publication in The Ghanaian Times captioned Farmers use toxic chemicals states that "a number of chemicals banned in most developed countries are still being used by farmers in some communities in Ghana"^{cl} It also said that "the use of agro-chemicals in the country has reached an alarming rate and this was causing reproductive dysfunction, suppression of the immune system and development abnormalities in both humans and animals"^{cl} and that "because of illiteracy, chemicals are wrongly applied."^{cll}

Ensuring compliance with relevant laws is the most prominent issue for the EPA and the other enforcement agencies like CEPS. As has been indicated, illiteracy is one of the major problems. Ignorance of the laws is another. In this regard, the completion of the EPA website on chemicals, especially those restricted or banned is also paramount to the effective implementation of the Convention.

F. Integrated implementation

It has been realised that implementing the Basel, Stockholm and Rotterdam Convention together will yield better results. This is especially because the Conventions essentially seek to solve the same or better still related problems. Again it is the same Agency, the EPA, which is primarily responsible for the performance of the administrative functions under all the conventions.^{CV}

4. Conclusions and lessons learned of possible interest to other countries

A. Region-specific difficulties and/or solutions

In Ghana, it is commonly recognized that the greatest problem is the lack of a harmonized system of pesticide registration in Sub-Sahara Africa. It would be beneficial if there could be a sustainable regional pesticide registration system.

Harmonising the data requirements and registration criteria for the region would enhance efficiency and transparency in the management of chemicals. It is noteworthy that the Sahel countries are a very good example in this regard as they have been able achieve a common system. The registration system that Ghana has was to a large extent taken from them.

B. International assistance which proved helpfu^{FV}

The following initiatives delivered satisfactory results:

- Bioefficacy Training in the evaluation of data in support of pesticide registration at the Pesticides Directorate in UK, (Nov-Dec, 2005).
- Workshop on the development of Biopesticide registration and risk assessment guidelines for Ghana organized by DFID (27-30 June 2005).
- Training in human toxicology risk assessment, UNITAR (March 14-18, 2005),
- Workshop on Biopesticides and use organized by the Natural Resources Institute, UK and the International Institute for Tropical Agriculture (2003).
- Training in ecotoxicological Risk assessment, UNITAR (May19 June 5 2003).
- Workshop on Risk Management planning for priority chemicals, UNITAR (23-26 July 2002),
- FAO training in Pesticide Registration (July 2002).
- Under a USAID funded project, the Trade and Investment Programme for a Competitive Export Economy has contracted some national staff; and
- The Chemical Information Exchange Network UNEP & USEPA (2004).

C. Successful and unsuccessful legislative strategies

Ghana cannot make reference to any unsuccessful legislative strategies. The law on pesticides has to a large extent been a success as it came in to fill an important vacuum in Ghana's laws on chemicals. The law provided Ghana with the mandate to tighten its registration procedures. This took real effect in 2003 and has greatly reduced the incidence of smuggling (an aspect of illegal trade). The smuggling of chemicals from neighbouring countries into Ghana is almost non-existent since the EPA now requires that every chemical have a local representative before it is registered.

Neighbours like Burkina Faso now have a lot of confidence in our registration system. A delegation of the agroimport dealers from Burkina Faso have visited the EPA to try to reach an agreement whereby Ghana would require that labels be made bilingual (English & French) so that they can also benefit from Ghana's efficient system. This is being considered by the Ministry of Food and Agriculture.^{CVIs}

It is envisaged that making legislative Instruments to this Act would fill in the gaps and provide the needed legislative framework for the smooth implementation of the Rotterdam Convention.

- Hereinafter referred to as ' the Convention'
- See Article 1 of the Convention
- Environmental Protection Agency, Hereinafter referred to as EPA
- [™] Environmental Protection Agency Act, 1994, (Act 490) section 2(f)
- V Ibid, section 2(h)
- VI Ibid, section 2(k)
- VII Ibid, section 2(1)
- VIII Ibid, section 10(1)
- [™] Ibid, section 10 (2)
- × Ibid, section 2(3)
- ^{XI} This is a division within the EPA responsible for the management of chemicals. For more information on this division, see Dr. Peter Acquah, Environmental Protection Agency (EPA at a Glance) (January 2000)
- ^{XII} Pesticides Technical Committee, hereinafter referred to as PTC. This is a committee of the EPA Board
- Environmental protection Agency-Ghana, National draft Implementation Plan of the Stockholm Convention, January 2006. (Unpublished manuscript, on file with the EPA office-Ghana) Some of the details were also obtained in an interview with Mr. Pwamang, the Director of Chemicals at the EPA-Ghana
- The Pesticides Control and Management Act, 1996 (Act 528) See sections 1–16
- ^{XV} Ibid, See section 14
- ^{XVI} *Ibid, sections* 7 30
- XVII Ibid, sections 31–37
- XVIII Ibid, section1
- XIX Ibid, section 38
- ^{XX} Ibid, section 30(1)
- ^{XXI} This includes the Head of the Chemistry Department of the National Nuclear Research Institute of the Ghana Atomic Energy Commission, Representatives from the Cocoa Services Division, Ministry of Lands and forestry, Environment, The Ghana National association of Farmers. For the rest, refer to section 30 of The Pesticides Control and Management Act, 1996 (Act 528).
- Supra note iv at section 4.According to Section 4 of the Act, the Board is the governing body of the Agency. It is responsible for the discharge of its functions. Its members are appointed by the President of Ghana in consultation with the Council of State. The membership consists of , "a chairman who shall be a person knowledgeable in environmental matters; the Executive Director of the Agency; a reprehensive of the Council for Scientific and Industrial Research, not below the rank of Principal Research Officer; a representative of the Ghana Standards Board, not below the rank of Principal Scientific Officer; a representative, not below the rank of Director from the Ministries responsible for Environment, Local Government, Finance, Health, and Education; a representative of the Association of Ghana Industries; and three other persons at least one of whom shall be a woman."
- XXIII Supra note xii
- XXIV Supra, note xiv, Section 4 (1)
- These include 2,4,5-I, Aldrin, Chlordane, DDT, Dieldrin, Heptachlor, Hexachlorobenzene, methyl-parathion, Mirex
- This is one of the departments of EPA in charge of regulating the use of pesticides.
- Environmental protection Agency-Ghana, National Draft Implementation Plan of the Stockholm , Supra, note xiii
- XXVIII Supra, note xiv, section 20
- XXIX Ibid, Section 22
- ^{XXX} Customs, Excise and Preventive Service, herein after referred to as CEPS
- XXXI Supra, note xiv, section 38
- XXXII Ibid, section 31(1)
- xxxIII ibid, section 31(2)
- Supra note IV, According to Section 15 (1) "There shall be appointed by the Board officers designated as Environment Protection Inspectors referred to in this Act as "Inspectors". The term; 'inspectors' is not defined under the Act
- XXXV The Food and Drugs Law, 1992, (Act 305B) see section 11
- *XXXVI* Food and Drugs Board, herein after referred to as FDB

XXXVII Supra, note xxxv at section 51 on Interpretation

- XXXVIII ibid at See Section 18
- XXXIV Ibid, Section 29(1)(j)
- XL Ibid, See Section 11
- XLI Ibid. See Section 36
- XLII Ibid, See Section 33
- XLIII Ibid. See Section 14
- XLIV Ibid, See Section 26
- XLV The Mercury Law 1989, (P.N.D.C.L 217) section 2 (1)
- XLVI Ibid, section 1-5
- XLVII The Standards Decree, 1973 (NRCD 173), sections 2&3
- XLVIII Ghana Standards Board, herein after referred to as GSB. This body is responsible for performing the administrative functions under the Act
- XLIX Supra note xlvii See sections 2(d)
- L Ibid, see section 3(2)(b)
- LI lbid, see section 25 on interpretation. Goods means any article, commodity or any other matter that may be described
- LII There are in progress draft labelling, transportation, packaging and disposal Regulations. These are yet to be formalized. It is not clear how soon this will be done. This was revealed in an interview with Mr. Pwamang, Director of chemicals at the EPA as well as with Mr. Michael Kwakye, a Programme Officer at the EPA
- LIII Environmental protection Agency-Ghana, National draft Implementation Plan of the Stockholm Convention, Supra, note xiii
- LIV The Customs, Excise and Preventive Service (Management) Law, 1993 (PNDCL 330) See sections 235, 243 & 287
- LV Ibid, sections 234
- LVI Ibid sections 38
- LVII Export and Import Act, 1995 (Act 503), See sections 6 & 11
- LVIII The Prevention and Control of Pests and Diseases of Plants Act, 1965 (Act 307), see sections 7& 8
- LIX Cocoa Industry Regulations, 1968 (NLCD 278), see Regulation 1 (4) (e)
- LX Supra note Iviii at section 7
- LXI Ibid at section 8
- LXII This was revealed in an interview with Dr. Edith Clarke, the Head of the Occupational Health Unit of the Ghana Health Services.
- LXIII Supra note xxxv at section 51
- LXIV According to article 2 (d) of the Rotterdam Convention a 'Severely hazardous pesticide formulation' means a chemical formulated for pesticidal use that produces severe health or environmental effects observable within a short period of time after single or multiple exposure, under conditions of use;
- LXV Supra, note xiv at section 51
- LXVI Supra. note 2 lxiv
- LXVII Supra, note xiv at section 2 (1)
- LXVIII Interview with Mr. Pwamang
- LXIX These are Aldrin, Dieldrin, DDT, Ethylenedibromide and Parathion
- LXX interview with Mr.Pwamang
- LXXI Supra note xiv at section 41
- LXXII lbid
- LXXIII This was revealed in two separate interviews with Mr.Pwamang and Mr. Michael Kwakye, programme Officer at the EPA
- LXXIV Supra, note xiv, See section 28
- LXXV Ibid at section 26& 27
- LXXVI This was revealed in an interview with Mr. Michael Kwakye, Program Officer at the EPA who actually showed me a copy of a label that had been presented to them by a company for verification
- LXXVII National Profile National Profile for Chemicals Management-Ghana (1999). Copies of this address can be obtained at: http://www.unitar.org/cwn/nationalprifiles
- This has been set up under the Ghana Health Service

- ^{LVOIX} It is note worthy that the Centre is also responsible for educating the general public on the damaging effects of chemicals on the environment; providing toxicological surveillance through data collection on chemical incidents, exposures and poisonings; organising training on poisoning prevention and management for health workers and all relevant stakeholders
- LXXX Supra note xiv at section 21
- Interview with Dr. Edith Clarke, Head of the Occupational Safety and Health
- LXXXII Interview with Mr. Michael kwakye , programme Officer, EOA
- LXXXIII Interview with Mr. Charles Koomson , Programme Officer of the EPA
- LXXXIV See section 8 of pesticides Act
- LXXXV Supra note xiv, Section 12 & 21(1) (4-6)
- LXXXXI Management of Ozone Depleting Substances and Products Regulations 2005 (LI 1812) (hereinafter referred to as 'the L.I')
- LXXXVII Interview with Mr.Pwamang, the Director of Chemicals at the EPA-Ghana
- LXXXVIII Environmental protection Agency-Ghana, National draft Implementation Plan of the Stockholm Convention, Supra note xiii at Pg 18
- ^{LVOXIX} An Interview with Mr John A. Pwamang revealed however that the EPA proposed that an Act be drafted to implement the Convention. As steps were being taken to do this the Attorney Generals office requested they it be suspended for a while since the World Bank was in the process of conducting investigations on how best the Convention could be implemented. The Attorney General felt there was the need to wait for this to be done so that it could inform the Act. Unfortunately, the idea of having an Act has never come up again. However, being a dualist state, once an international instrument is ratified by either an Act or Resolution of Parliament, it becomes part of the laws of Ghana. It is not very material then that no law has been passed to implement it.
- LXXXIX Interview with Mr. Pwamang, Director of Chemicals at the EPA-Ghana
- xc Labour Act, 2003 (Act 651)
- ^{XCI} *ibid, section 118 (2) (c) (d)*
- XCII Ibid, section 124 (1) (g)
- Environmental protection Agency-Ghana, National draft Implementation Plan of the Stockholm Convention, Supra, note xiii
- XCIV This was revealed in an interview with Mr.Pwamang, Director of Chemicals at the EPA-Ghana. The EPA (Ghana) website address is: www.epaghana.gov.
- XCV Supra, note xiv, See section 10 (1)
- XCM The law does not seem to make much room for civil society participation. However, it is worth mentioning that before a Convention is ratified either by a Resolution or Act of Parliament, some public participation is ensured. Before a Parliamentary Resolution is made, the appropriate Parliamentary Committee submits a report on the Convention to Parliament . The report takes account of the views of a cross-section of the Ghanaian Society. If Parliament decides to ratify the Convention by an Act of Parliament there is a stage in the legislative process referred to a s the committee stage where interested members of the public are invited to make an input
- XCVII See Supra note iv, section 10(1) of act 490 and Supra note xvi, section 30 (1)
- XCVIII An Interview with Ms. Fredericka Illiasu of the Attorney Generals Office (Legislative Drafting Unit) revealed that her unit is in the process of doing this.
- XCIX Interview with Michael Kwakye, Progarmme Officer EPA
- ^c Interview with Michael Kwakye, Progarmme Officer EPA
- ^{CI} Stephen Kwabena Effah, "Farmers use Toxic Chemicals", The Ghanaian Times, Wednesday, July 12, 2006 at Pg. 1, col.2. This was at a news conference organised in Accra by a Non-Governmental Organisation called Ecological Restoration. For the full article refer to www.ghanweb.com
- ^{CII} Ibid at Pg 1
- CIII Ibid at Pg 2, Col. 1
- ™ This was suggested by Mrs Ahiadeke, the Legal Officer of the EPA and Mr. Pwamang, the Director of Chemicals also at the EPA-Ghana
- ^{CV} Interview with Michael Kwakye, Progarmme Officer EPA
- ^{CVI} Interview with Michael kwakye , Programme Officer EPA

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