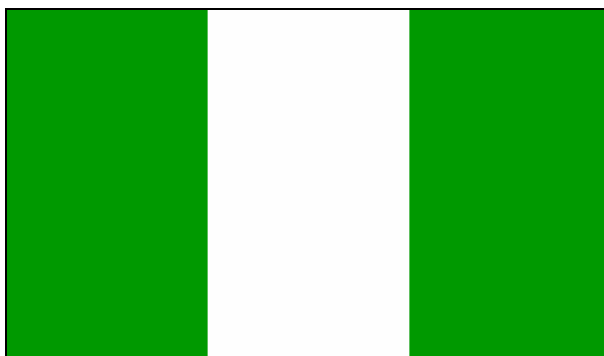


**BASELINE STUDY
TOWARDS
NON TOXIC ENVIRONMENT IN AFRICA
COUNTRY REPORT**

NIGERIA



19 September 2007



The study was conducted by

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ACRONYMS & ABBREVIATIONS

ADA	State Agricultural Development Authorities
AFAN	APER Farmers Association of Nigeria
ANCLA	Association of Nigerian Clearing and Licensing Agents
BCCC	Basel Convention Coordinating Centre
BR	Baseline Report
CAU	Chemical and Allied Union
CDA	Chemical Dealers Association of Nigeria
CPC	Consumer Protection Council
FMA	Federal Ministry of Agriculture & Rural Development
FMEH&UD	Federal Ministry of Environment, Housing & Urban Development
FMH	Federal Ministry of Health
FMI	Federal Ministry of Industry and Trade
FMJ	Federal Ministry of Justice
FML	Federal Ministry of Labour & Productivity
FMT	Federal Ministry of Transport
FOTE	Friends of the Environment
GHS	Globally Harmonized System of Classification & Labelling of Chemicals
ICCM	International Conference on Chemicals Management
KemI	Swedish Chemicals Inspectorate
LGAs	Local Government Areas
MFA	Ministry of Foreign Affairs
NAFDAC	National Agency for Food, Drug Administration & Control
NES	Nigerian Environmental Society
NEST	Nigerian Environmental Study Action Team
NESREA	National Environmental Standards & Regulations Enforcement Agency
NIMASA	Nigerian Maritime Administration and Safety Authority
NPC	National Planning Commission
RTAN	Road Transport Association of Nigeria
SAICM	Strategic Approach To International Chemicals Management
SBC	Secretariat of the Basel Convention
SON	Standards Organisation of Nigeria
SWACI	Safe Water for Africa Community Initiative
UAE	United Arab Emirates

EXECUTIVE SUMMARY

Chemicals are essential requirements of modern society that need to be managed properly in order to achieve a sustainable level of agricultural and industrial development, and a high level of environmental and human health protection.

The major types of chemicals used in Nigeria are imported. Some formulations are however undertaken, often without adequate consideration for human health and the environment during their handling, storage, use and disposal.

Although national legislative instruments and policies are in place; implementation and enforcement are inadequate due to limited national infrastructure and capacity to manage chemicals.

At the international level, considerable attention has been given to the sound management of chemicals. Since the late 1980s, several international policy instruments have been adopted; the most recent being the adoption of the strategic approach to international chemicals management (SAICM) by the International Conference on Chemicals Management (ICCM) in Dubai United Arab Emirates, February 2006.

Subsequently, the Basel Convention Regional Centre in Pretoria (BCRC), the Secretariat of the Basel Convention and the Swedish Chemicals Agency (KemI) planned a regional cooperation in Anglophone Africa to enhance chemicals management through the implementation of the Strategic Approach towards International Chemicals Management (SAICM), the Stockholm, Rotterdam the Basel Conventions.

The project, in which Nigeria was identified as one of the pilot countries, is funded under a project of the Secretariat of the Basel Convention (SBC) and the Swedish Chemicals Agency (KemI), with the aim of establishing key baseline data on national chemicals and waste.

Preparation of the Baseline Report (BR)

The preparation of the BR was carried out in three stages as enumerated in the methodology prepared by the BCRC in collaboration with KemI. The three stages comprise:

- i. Familiarisation with the concept of the SAICM and all relevant background information on the subject
- ii. Review of relevant technical documentation available in the country with the help of country experts.
- iii. Responding to the questionnaires developed by the BCRC in cooperation with KemI targeting the key stakeholders.

In undertaking this exercise, advantage of information already available in the country through various national programmes and other expertise from various regional and international institutions was made use of with the final output of the current report presented in the format developed by the BCRC/KemI team

Chemical Production, Import Export and Use

Only very few chemicals are produced in the country with about 90% of chemicals in use in the country imported. Nigeria's trading partners/principal sources for these chemicals are European and Asian Countries. The only chemicals formulated or produced in the country are those for use in agriculture e.g. fertilizers and other agrochemicals; and industrial chemicals such as sulphuric acid, alum, linear alkyl, benzene, industrial solvents, carbon black and propylene. Crude oil dominates exports, accounting for 95.7% of all exports, while agricultural products account for 2.6%. The country generates a significant quantity of hazardous wastes from the various industrial sectors such as tanneries, textiles, refineries, etc.

Recommendations

The available statistics from the situation analysis of various components of chemicals management as identified within SAICM and within the African regional plan for SAICM implementation among relevant stakeholders reveals the need for more efforts towards:

- (i) a more effective governance structure to help make the strategic approach a lasting success.
- (ii) the establishment of a platform for cooperation and coordination of activities amongst the key ministries and agencies regulating chemicals at the highest level of authority, in order to reduce duplication of efforts and inconsistencies perceived by the regulated communities.
- (iii) synergies and partnerships among the relevant regulatory institutions and civil societies to implement effectively the strategic approach for the benefit of the country and citizens.
- (iv) the establishment and constitution of a multi-stakeholder “National Committee on Management of Hazardous Substances” as an Inter-ministerial Body that will be responsible for integrating the issues of chemicals safety/management into national development plan in line with the “Johannesburg Plan of Implementation”.

- (v) an integrated regulatory framework to address the entire lifecycle of chemicals, in order to avoid the current piecemeal, overlapping and conflicting regulations.
- (vi) creation of awareness programme for; (i) chemical users and consumers to educate them on the hazards inherent in misuse/handling of chemicals and (ii) policy makers and legislators, in order for them to realize the importance of making chemicals management programmes/issues a priority in budgetary allocations. (iii) Customs (iv) rural communities, as well as (v) all importers and users of chemicals.
- (vii) training and staff development by organizations in health and safety of chemicals.
- (viii) development of comprehensive risk management strategies for the various components through addressing these components aimed at pollution prevention risk elimination.
- (ix) establishment of environment and health surveillance programme.
- (x) establishment of a comprehensive chemicals registration and control system which controls risks from the initial point of importation, use/handling to the disposal.
- (xi) establishment of procedures that any chemical put into circulation is accompanied, at a minimum, by appropriate and reliable safety data sheets, which provide information that is easy to access read and understand.
- (xii) knowledge and information sharing among key sectors and actors within the society on chemicals management to enable chemicals to be adequately assessed and managed safely throughout their life cycle.
- (xiii) awareness creation among the civil society on the role of the chemicals and waste conventions on capacity building and technical cooperation and the prevention of illegal international traffic
- (xiv) the very urgent need for the review and enforcement of national legislation in line with the global SAICM, FAO code of chemical management and alignment with GHS requirements with increased strategic public awareness programme.
- (xv) strengthening of the BCCC to undertake national capacity building for chemicals and hazardous wastes within the context of SAICM and related MEAs.
- (xvi) the urgent need for a national survey to ascertain the quantity of hazardous waste generated by various sectors of the economy.

Summary of preferred projects

Identified priority areas for development of projects as revealed from the assessment of stakeholders needs are highlighted below:

		NGOs (6)	Government stakeholders (10)
PRIORITY AREA	Possible Projects		
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	Yes	Yes
	Occupational Health and Safety	Yes	NO
	Risk assessment, management and communication	Yes	Yes
	Chemicals of global concern	Yes	Yes
	Highly toxic pesticides-risk management and reduction	Yes	Yes
	Waste management (minimization)	Yes	Yes
	Formulation of prevention and response measures to mitigate environmental and health impacts	Yes	Yes
	The Role of GHS in risk Reduction	Yes	Yes
KNOWLEDGE AND INFORMATION			
	Research, monitoring and data management	Yes	Yes
	Hazardous data generation and availability	Yes	No
	Globally Harmonized System (GHS) of Classification and Labelling	Yes	NO
	Information management and dissemination	Yes	Yes
	Highly toxic pesticides risk management and reduction	Yes	NO
	Life Cycle management	Yes	Yes
	Creation of National and International Registers	Yes	Yes
	Use of Indicators to monitor children's environmental health	Yes	Yes
GOVERNANCE			
	International Chemicals and waste conventions-promotion of ratification and synergies	Yes	No
	Stakeholder participation in decision making processes	Yes	NO
	Assessment of national chemical management to identify gaps and prioritize action	Yes	NO
	Implementation of integrated national programmes for sound management of chemicals	Yes	Yes
	GHS (review of national legislation and align with GHS requirements)	Yes	NO
	Social and economic considerations	Yes	Yes
	Legal, Policy and institutional aspects	Yes	Yes
	EIAs to include chemicals and hazardous waste	Yes	Yes
CAPACITY BUILDING AND TECHNICAL COOPERATION			
	Capacity-building to support national actions	Yes	Yes
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	Yes	NO
	Remediation of contaminated sites and poisoned individuals	Yes	Yes
	Capacity to implement GHS	Yes	Yes
	Waste management	Yes	Yes
ILLEGAL AND INTERNATIONAL TRAFFIC			
	Prevention of illegal traffic in toxic and dangerous goods	Yes	Yes

1. INTRODUCTION TO THE DOCUMENT

Africa participated effectively during the Strategic Approach towards International Chemicals Management (SAICM) process which led to its adoption by the world environmental ministers in February 2006 in Dubai. The following five SAICM focal areas were adopted:

- a. **Risk Reduction**
- b. **Knowledge and Information**
- c. **Governance**
- d. **Capacity Building and International cooperation**
- e. **Illegal International traffic**

The Dubai meeting, proposed quick start up actions towards the International Chemicals Management. This approach was also endorsed at the recent 11th African Ministerial Conference on Environment (AMCEN) meeting held in Congo Brazzaville from 22-26 May 2006 as a policy framework key to the realization of the 2020 Chemicals goal of the Johannesburg Plan of Implementation and called upon an all inclusive multi-sectoral and multi-stakeholder approach. ¹The African response towards SAICM implementation is articulated in the African plan for the implementation of SAICM. This plan sees challenges on how SAICM implementation can be raised as a priority issue at the national level, given the range of competing problems and issues facing most African countries. It also emphasizes the importance of defining how SAICM implementation activities can effectively support other programmes and objectives, recognising that managing chemicals is one component of **broader national** efforts to achieve environmental protection and sustainable industrial and agricultural development. Some of the key areas that have to be addressed are to demonstrate on how:

- SAICM can contribute to **national efforts** to promote pollution prevention and cleaner production, particularly within small and medium-sized enterprises.
- decisions made in the context of SAICM implementation can have an impact on regional and international trade
- stronger management of chemicals positively might influence the country's international image and the market for its products
- Improvements in chemical safety enhance the health and quality of life of its citizens.

This project seeks to contribute to the **first steps** for the implementation of the SAICM. A regional approach in the capacity building to address chemicals and waste issues has been re-emphasized and articulated through the recent AMCEN XI meeting held in Congo Brazzaville in June 2006 which emphasizes through Decision 5(j), “To request international and regional partners to support efforts to strengthen the ability of the Basel Convention regional centres to undertake capacity-building for chemicals and hazardous waste management in related multilateral environmental agreements in Africa, in line with the objectives of the Strategic Approach to International Chemicals Management and the environment initiative of the New Partnership for Africa’s Development (NEPAD)”. At the Cairo African Regional SAICM meeting held from 11-14th September

¹ African Action Plan on Implementation of SAICM

2006, the Regional action plan was endorsed for implementation. Thus the BCRC-KemI project has adopted a regional approach in its activities.

While a substantial use of chemicals is essential for social and economic development, chemical exposures may also threaten sustainable development through negative effects on health and the environment. Some risks affect more the urban and others more the rural poor, but most risks are considered high or greater in comparison to more prosperous groups. The potential socioeconomic impacts and costs of toxics are large and are borne disproportionately by poor communities. Chemicals management policies thus need to strike a balance between promotion of social and economic development through the production and use of chemicals and harmful effects through their use and misuse in light of other economic, social and environmental factors.

The current work is a product of the regional cooperation in Anglophone Africa fostered through the Basel Convention Regional Centre in Pretoria (BCRC) and the Swedish Chemicals Agency (KemI), in order to enhance chemicals and waste management through the implementation of the Strategic Approach to International Chemicals Management (SAICM) and related chemicals Conventions (i.e the Stockholm, Rotterdam and Basel Conventions).

This initial baseline study/needs assessment is expected to lay a foundation for the larger project for strengthening Africa's chemicals management infrastructure towards a non-toxic environment in Africa, through sound and coordinated management of chemicals and wastes.

It is hoped that it will serve as a useful reference document to identify important gaps and weaknesses, as a first step to defining where further efforts may be required and establishing priorities for future activities.

2. OVERVIEW OF THE OBJECTIVES

The major objectives of this baseline study are:

- To establish key baseline data on national chemicals and wastes infrastructure
- To assess the capacity of national institutions to manage chemicals and wastes
- To assess national needs in respect of
 - Institutional capacity
 - Legal framework
 - Enforcement
 - Disposal facilities
 - Training institutions/facilities and curricular
 - Projects –on going/completed
 - Technical/ human resources
 - Civil societies capacity and capability

3 METHODOLOGY

Key information for this exercise addressed existing activities and capacity in government, industry and civil society, as appropriate. The National Profile on chemicals management infrastructure was therefore very important in undertaking the study. Although the National Profile (NP) had not been formally updated, some sections of the document were revised during phase I of the process of the national capacity building project for the implementation of the globally harmonized system of classification and labelling of chemicals (GHS), whereby a situation/gap analysis was conducted with the review of the NP. The complete revision is still ongoing.

Notwithstanding the fact that the National Profile review exercise was undertaken with the aim of completing the relevant sections of the GHS Situation Analysis Document, the use of current information from relevant national publications proved very critical to the success of the current study.

The study was undertaken through completion of the questionnaires and interviews of key stakeholders within and outside of government involved in chemicals and hazardous wastes management.

4 BACKGROUND COUNTRY INFORMATION

4.1 Basic National data

Fig 1: Map of Nigeria



Source: Nigeria Chemicals Profile Revised draft 2007

The Federal Republic of Nigeria is situated on the West Coast of Africa between longitude 2.40" and 14.32" East and Latitude 4.16" and 13.52" North of the equator. It occupies an area of 923,773 square kilometers. It is bordered by the Republic of Benin to the West, Niger to the North, Cameroon to the East and the Atlantic Ocean to the South.

Nigeria has a population of 140,003,542 million based on 2006 census and a population growth rate of 2.38% with 62.3% of the population living in rural areas.

Nigeria is divided into thirty-six states and one Federal Capital Territory which are further sub-divided into 774 Local Government Areas (LGAs). Nigeria is presently under civil democratic rule and the seat of the new democratic government is in Abuja. The official language is English.

The major economic sectors are agriculture, industry, wholesale and retail trades. Insurance, Banking and Finance form the major part of the invisible trade.

Nigeria's natural resources comprise; natural gas, petroleum, tin, iron ore, coal, limestone, niobium, lead, zinc, arable land.

Crude oil dominates exports, accounting for 95.7% of all exports, while agricultural products account for 2.6%. Petroleum plays a large role in the Nigerian economy, accounting for 40% of the GDP. It is the 12th largest producer of petroleum in the world and the 8th largest exporter, and has the 10th largest proven reserves and the country was also a founding member of OPEC. Agricultural products comprise of beans, benne seed (sesame), cashew nuts, cassava, cocoa, groundnuts, gum arabic, kolanut, maize (corn), melon, millet, palm kernels, palm oil, plantains, rice, rubber, sorghum, soybeans, yams, carrots. About 60% of Nigerians are employed in the agricultural sector. Nigeria also has a booming leather and textile industry, with industries located in Kano, Abeokuta, Onitsha, and Lagos.

4.2 Production of Chemicals

Only very few chemicals are produced in the country, they include sulphuric acid and alum. Three petrochemical plants (refineries) at Kaduna and Port Harcourt, and Warri also produce linear Alkyl benzene solvents, carbon black and propylene. The country also has two fertilizer companies, National Fertilizer Company of Nigeria (NAFCON) in Onne, Port Harcourt and the Federal Superphosphate Fertilizer Company (FSFC) in Kaduna with an annual production of 517,000 and 100,000 tons of fertilizer per year respectively. There are only few companies in the country that formulate and package agrochemicals such as gammalin 20, (Lindane) and Butachlor, insecticides, rodenticides, etc. The active ingredients of these formulations are however imported.

Table 4.1 Production of Chemicals

Chemical Type	Production/Manufacturing(tons/year & value)
Pesticides (agricultural, public health & consumer use)	None
Fertilizers	1,072,561.3MT
Petroleum Products	6,392,922MT
Industrial (used in manufacturing/processing facilities)	2,873,017MT
Consumer Chemicals	N/A
Other chemicals (unknown/mixed use)	10535.46 MT
TOTAL	20,002,087.5MT

Source Nigeria Chemicals Profile Revised draft 2007

4.3 Chemical Imports

About 90% of chemicals in use in the country are imported. These include pesticides, petroleum products, industrial chemicals, fertilizers and consumer chemical products.

Other import commodities comprise machinery, transport equipment, manufactured goods, food and live animals with major import partners as China 10.4%, US 7.3%, UK 6.7%, Netherlands 6%, France 5.9%, Brazil 4.3%, Germany 4.2% in line with the 2005 estimates.

Table 4.2 Chemical imports

Chemical Type	Imports, (tons/year & value)
Pesticides (agricultural, public health & consumer use)	14440.67 MT, \$46,793,865.25
Fertilizers	1,639,160.236MT, \$111,387,499.23
Petroleum Products	572,639.027MT \$749,877,706.63
Industrial (used in manufacturing/processing facilities)	497.378MT, \$2,047,183.33
Consumer Chemicals	N/A
Other chemicals (unknown/mixed use)	N/A
TOTAL	2,226,737.31MT

Source Nigeria Chemicals Profile Revised draft 2007

4.4 Chemical exports

Crude oil dominates exports, accounting for 95.7% of all exports, while agricultural products account for 2.6%. The main agricultural crops (cash crops) are cocoa, oil palm, soyabean, groundnut, cotton and coconut. Major export commodities comprise of petroleum and petroleum products 95%, cocoa, rubber with major exporting partners being US 52.5%, Spain 8.2%, Brazil 6.1% according to 2005 estimates on chemical consumption.

Table 4.3 Chemical Exports

Chemical Type	Exports (tons/year & value)
Pesticides (agricultural, public health & consumer use)	None
Fertilizers	159MT, \$57356.65
Petroleum Products	5,820,020.704MT \$49403271147.75
Industrial , (used in manufacturing/processing, facilities)	N/A
Consumer Chemicals	N/A
Other chemicals , (unknown/mixed use)	N/A
TOTAL	5,820,179.7MT

Source: Nigeria Chemical Profile Revised draft 2007

4.5 Chemical Consumption

The major uses of chemicals in the country are in manufacturing of soaps and detergents, plastics, oil refining, textiles, foams, pharmaceuticals and consumer chemical products such as cleaning agents.

Table 4.4 Annual Consumption of chemicals

Type of Chemical	Number of Tons used per Year in the Country
Pesticides – Agricultural	1440.67 MT
Pesticides - Public Health	N/A
Pesticides - Consumer Use	N/A
Fertilizers	1,639,160.236 MT
Petroleum Products	N/A
Industrial Chemicals (used in manufacturing/processing facilities)	39971.895MT
Consumer Chemicals	N/A
Other Chemicals (unknown/mixed use)	N/A
TOTAL	

Source: Chemicals Profile Revised draft 2007

4.6 Production of wastes (General and Hazardous)

The major hazardous waste generators include industrial sectors involved in; steel works, metal fabrication, textiles, silicates & inorganic salt, pharmaceuticals, tanneries, refineries, paint, industrial chemicals, food processing, petroleum exploration, pulp & paper and agrochemicals. There is currently no procedure for gathering actual data on industrial wastes generation in the country. Although the inspectorate and enforcement division of the Ministry of Environment administers an Industrial Assessment Form during inspection visits to industries, the data provided in these form are largely unreliable in view of the fact that no official modelling standard for such calculations has been adopted for use by industries. The wastes data used during the process of preparing the NP in 1999 were generated using the Winvent Industrial Modelling which are shown in Table 4.5 below; while current estimates of wastes data prepared during the revision of the National Profile are as indicated in Table 4.6. There is however an urgent need to undertake a national survey of the various categories of hazardous wastes in the establishment of an effective management framework.

Table 4.5 Estimated Production of Chemical waste (1999)

Type of Chemical Waste ¹	Source	Generation Approximate quantity (tons/yr)	Export (tons/year)	Import (tons/year)
Iron oxide, particulates, SO ₂	Steel works	50,088	N/A	N/A
Cyanide, toxic metals, oils, caustic soda, sludges	Metal fabrication	33,326	N/A	N/A
Dyes surfacants, oxidizing & bleaching agents	Textiles, silicates & inorganic salt	10,011	N/A	N/A
Liquid wastes, expired chemicals and drugs	Pharmaceuticals	6,260	N/A	N/A
Heavy metal, chromium, sulfide, acids, nitrogen compounds, sludge	Tanneries	2,213	N/A	N/A
SO ₂ , Nox, CO, pariculates, hydrocarbons	Refineries	1322	N/A	N/A
Pigments, metals, resins, solvents & sludge	Paint	985	N/A	N/A
Sovents, SO ₂ , acid mist	Industrial chemicals	556	N/A	N/A
Liquid waste,SO ₂ etc	Food processing	326	N/A	N/A
Drilling muds	Petroleum exploration		N/A	N/A
SO ₂ , NOX, dyes, caustic soda etc	Pulp & paper	24	N/A	N/A

Obsolete /expired pesticides	Agrochemicals		N/A	N/A
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Source: Nigeria Chemicals Profile Revised draft 2007

Although the country bans the importation of all categories of hazardous wastes under the Decree 42 of 1988, however now it allows the importation of various recycled grades of PVC, Polypropylene etc for use only as secondary raw materials. This importation is allowed under a permitting system and the uses are monitored strictly. There is, however, a need to review the Decree to reflect these exceptions.

Table 4.6: Estimated Hazardous Waste Generation and Trade

Type	Source	Quantity/annum	Export/tons	Import/yr
E-waste	Obsolete computers, tv, radio, fridges, phones.	60 million units	N/A	40,000,000 units
Medical waste	Hospitals, research institute, medical laboratories	5.3 MT/bed	N/A	N/A
Used oil	Automobiles, generator sets	420 million Liters	N/A	N/A
Used tyres	Automobiles	39,332,490 tyres	N/A	N/A
Lead acid, dry cell, batteries	Automobiles, generators	35 MT	27 MT	N/A
POPs	Agrochemicals	30 MT	N/A	N/A

Source: Nigeria Chemicals Profile Revised draft 2007

The Basel Convention Coordinating Centre (BCCC) for Africa located in Ibadan is however actively involved in providing training and capacity building in the management of the major hazardous waste streams in Nigeria, which consist; used oil, battery wastes, biomedical wastes, e-wastes etc. The Centre has been involved over the years in capacity building activities in collaboration with the Ministry of Environment and other relevant stakeholders in the handling of hazardous wastes. The Centre has also been involved in formulation of action plans, policies and guidelines on hazardous chemicals and wastes, while providing capacity building and training in relevant aspects of environmentally sound chemicals management of hazardous wastes.

There is currently an urgent need for a quantitative survey of wastes as a national priority concern.

5 BASIC NATIONAL SET UP OF MANAGEMENT OF THE ENVIRONMENT

Currently in Nigeria, the responsibility of ensuring that chemicals do 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 five main organizations identified as major players in the management of chemicals in the country are, the Federal Ministry of Environment, Housing & Urban Development (FMEH&UD), Federal Ministry of Labour, Federal Ministry of Agriculture & Water Resources Development, Federal Ministry of Industry and the National Agency for Food and Drug Administration and Control (NAFDAC) under the Federal Ministry of Health. There are other key stakeholders within government, civil society, business/trade who are actively involved in national efforts for sound chemicals management.

The FEPA embarked on capacity building and research through the establishment of the FEPA (now Federal Ministry of Environment) Linkage Centre now known as the Basel Convention Coordinating Centre

The center was established on 20th September 1994 by the Federal Government of Nigeria with the following mandate :

- Serve as the African Regional Center for the implementation of the 1989 Basel Convention on the Transboundary Movement of Hazardous Waste, Training and Research in Hazardous Waste and Transfer of Technology;
- Assist FEPA(now Federal Ministry of Environment, FME) in training and research in the areas of :
 - (i) Industrial, Domestic and Hazardous Waste Management
 - (ii) Development/Adaptation/Popularization of Cleaner Production Technology for Nigeria
 - (iii) Reduction of gaseous emissions and other industrial effluents
 - (iv) Incorporation of 'waste to wealth' strategy into waste management practices
 - (v) Provisional of Technical Support for FEPA(now FME) in the implementation of 1989 Basel Convention on Transboundary movement of hazardous Waste
 - (vi) Other projects identifiable and of relevance to the objectives of FEPA(now FME) mandate

Some of the “ Waste to Wealth” programs of the center successfully executed are :

- Recycling of automotive waste engine oil/crankcase oil which is a major land-based source of aquatic pollution into reusable product
- Conversion of slag from automotive battery manufacture into ceramic tiles and bricks for building houses and poverty alleviation
- Recycling of admixture of assorted plastic wastes and polythene

The Centre has also been actively involved in national efforts for capacity building and training on sound chemicals management and had conducted the Comprehensibility Testing and training for the national capacity building project for GHS implementation in Nigeria.

The laws in place require that chemicals should be registered, and managed from 'cradle to grave', that is from importation through formulation, usage, distribution through to disposal.

Some of the existing legislative instruments on chemicals include;

- (i) The Federal Environmental Protection Agency Act 58 of 1988 as amended by Act 59 of 1992 and 1999. This covers all aspects of environmental protection and pollution control in an integrated manner including natural resources conservation. The decree regulates the management of all categories of hazardous substances including chemicals and pesticides.
- (ii) The National Agency for Food and Drug Administration and Control (NAFDAC) Act 15 of 1993, as amended by Decree 19 of 1999, regulates and controls the importation, exportation, manufacture, advertisement, distribution and use of food, drugs, cosmetics, medical devices, bottled water and chemicals.
- (iii) The Factories Act 1990, Chapter 126 Vol. III Laws of the Federation of Nigeria, being implemented by the Factories Inspectorate Division of the Federal Ministry of Labour and Productivity, (FML&P) which concerns itself with the occupational health and safety of workers from chemicals and other risks in the workplace.

There are also other regulations, guidelines and standards that regulate and control chemical management and safety issues within various government agencies.

Some of the activities undertaken by Government to monitor and enforce existing legislation include; inspections, awareness raising and training programmes, advocacy, investigations, prosecutions, sanctions and warnings.

6 STATUS OF RATIFICATION OF THE VARIOUS CHEMICALS AND WASTE CONVENTIONS

Nigeria ratified the Basel Convention in March 1991, the Rotterdam Convention in June 2001 and the Stockholm Convention in May 2004, with the Federal Ministry of Environment, Housing & Urban Development as the Focal Point for these Conventions and also the National SAICM Focal Point.

7 KEY STAKEHOLDERS FOR THE STUDY

7.1 All key Ministries with their agencies

Federal Ministry of Environment, Housing & Urban Development (FMEH&UD)
Federal Ministry of Labour & Productivity (FML)
Federal Ministry of Agriculture & Rural Development (FMA)
Federal Ministry of Health (FMH)
Federal Ministry of Finance
Federal Ministry of Industry and Trade (FMI)
Ministry of Foreign Affairs (MFA)
Federal Ministry of Internal Affairs
Federal Ministry of Transport (FMT)
Federal Ministry of Justice (FMJ)
Federal Ministry of Science & Tech
National Environmental Standards & Regulations Enforcement Agency (NESREA)
National Agency for Food, Drug Administration & Control (NAFDAC)
Nigerian Ports Authority
Standards Organisation of Nigeria
National Planning Commission (NPC)
Consumer Protection Council (CPC)
Nigeria Maritime Administration & Safety Agency (NIMASA)
National Authority on Chemical Weapons Convention

7.2 Key Industrial and Agricultural Associations

Crop Life Nigeria
Manufacturers' Association of Nigeria
National Industrial Safety Council of Nigeria

7.3 Chemical manufacturers

Chemical & Allied Products PLC

7.4 Chemical importers (Major importers)

D.N Meyer Plc., Lagos
Chizzy Nigeria Limited
Irving Sinat Company Limited
Nigerian Distilleries Limited
Patem Global Nigeria Ltd]
Syngenta Nigeria Limited]agrochemicals
Saro Agrochemicals]

7.5 Chemical exporters

Chemical & Allied Products PLC

7.6 Chemical consumers

APER Farmers Association of Nigeria,
Chemical Dealers Association of Nigeria (CDA)

7.7 NGOs –(Environmental), women associations, and those supporting children

Nigerian Environmental Study Action Team (NEST)
Nigerian Environmental Society (NES)
Friends of the Environment (FOTE)
Safe Water for Africa Community Initiative (SWACI)

7.8 Trade unions

Association of Nigerian Clearing and Licensing Agents (ANCLA)
Chemical and Allied Union (CAU)
APER Farmers Association of Nigeria (AFAN)
Chemical Dealers Association of Nigeria (CDA)
Road Transport Association of Nigeria (RTAN)

7.9 Law enforcement agencies

Nigeria Customs Service,
Federal Road Safety Commission

7.10 Academia and Centres of excellence (Research and Teaching) and National Cleaner Production Centres

- National Research Institute for Chemical Technology
- Federal Ministry of Environment-University Linkage Centre for Cleaner Production/ Basel Convention Coordinating Centre
- Federal Ministry of Environment-University Linkage Centre for Human Resources Development
- Institute of Chartered Chemists of Nigeria
- Institute of Public Analysts of Nigeria,
- Nigeria Red Cross Society

7.11 The Media (Electronic and print covering environmental issues) -

Radio Nigeria
Shelter Communications Limited
National Newspapers
National Television Stations

7.12 Summary of stakeholders participating in the study

Table 7.1 Nigeria Government Stakeholders	
1	Federal Ministry of Environment (FME)
2	Federal Ministry of Health (FMH)
3	Federal Ministry of Agriculture & Rural Development (FMA)
4	Federal Ministry of Labour (FML)
5	Federal Ministry of Industry and Trade (FMI)
6	Federal Ministry of Transport (FMT)
7	Ministry of Foreign Affairs (MFA)
8	Federal Ministry of Justice (FMJ)
9	National Planning Commission (NPC)
10	Consumer Protection Council (CPC)

Table 7.2 Nigeria NGOs			
1	NEST	Nigerian Environmental Study Action Team	NGO
2	SWACI	Safe Water for Africa Community Initiative	NGO
3	NES	Nigerian Environmental Society	NGO
4	CDA	Chemical Dealers Association of Nigeria (CDA)	Trade Union
5	ANCLA	Association of Nigerian Clearing and Licensing Agents	Trade Union
6	FME-HRD LC	Federal Ministry of Environment-University of Lagos Linkage Centre for Human Resources Development	Quasi Govt

These details on these stakeholders who participated in the study are in Annex 10

8 SITUATION ANALYSIS FOR THE KEY AREAS WITHIN SAICM²

In undertaking the situation analysis exercise within government and non government stakeholders, it is noteworthy that government stakeholders were able to assess needs within the various sectors using the wide range of questions provided for in Questionnaire 2 as indicated in the Annexes, while questions for the Civil society were only able to cover the areas indicated in the report.

8.1 Risk reduction

Part 1: Statistical data

Category 1: Government stakeholders (Ministries and Government Agencies)

RISK REDUCTION																
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
1.1	Impact of chemicals and wastes on humans and environment	1	None at all													
		2	Not much					x	x		x	x		4	40	
		3	Moderate		x	x					x				3	30
		4	Considerable	x			x							x	3	30
		5	Very much													
TOTAL														10	100	
1.2	Measures in Nigeria that protect human health and the environment from chemical exposure	1	None at all													
		2	Not much					x	x	x	x			4	40	
		3	Moderate	x	x	x	x						x	x	6	60
		4	Considerable													
		5	Very much													
TOTAL														10	100	
1.3	H & Env															
	Knowledge of National Institutes involved in risk management	1	None at all						x	x	x			3	30	
		2	Not much	x	x	x	x	x				x	x	7	70	
		3	Moderate													
		4	Considerable													
		5	Very much													
TOTAL														10	100	
	Social Eco															
	Knowledge of National Institutes involved in risk management	1	None at all			x	x	x		x	x	x	x	7	70	
		2	Not much	x	x				x					3	30	
		3	Moderate													
		4	Considerable													
		5	Very much													
TOTAL														10	100	
1.4	Institutional knowledge of stoppage of production and use of risk chemicals															
		1	Not aware													
		2	Slightly aware				x	x	x	x	x	x	x	7	70	
		3	Very much aware	x	x	x								3	30	
TOTAL														10	100	
1.5	Category of the	1	Not sure						x	x	x	x	x	5	50	

² The data collected from the Questionnaire 2 is presented here

RISK REDUCTION															
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%
	measures cited in 1.4 above	2	Others												
		3	Admin	X	X	X	X	X						5	50
		4	Legal												
	TOTAL													10	100
1.6	Efficiency of measures in cited in 1.4 above	1	Not sure												
		2	Inadequate	X	X	X	X	X	X	X	X	X	X	10	100
		3	Adequate												
	TOTAL													10	100
1.7	Knowledge of incidences of chemical releases to environment	1	Yes	X	X	X	X	X	X	X	X	X	X	10	100
		2	No												
	Total													10	100
1.8	If yes in 1.7 above; level of preparedness to address incidences	1	None at all												
		2	Low	X	X	X	X	X	X	X	X	X	X	10	100
		3	Moderate												
		4	High												
	Total													10	100
1.9	If yes in 1.7 above; source of information is?	1	TV	X	X	X	X							4	40
		2	Papers					X	X	X	X	X	X	6	60
		3	Radio												
		4	Personal Contacts												
	Total													10	100
1.10	Institutional awareness of Principle 15 of Rio Declaration	1	Yes	X	X	X	X	X	X	X	X	X	X	10	100
		2	No												
	Total													10	100
1.11	Extent of Application & Promotion of Pollution Prevention in your organization	1	None at all												
		2	Low					X	X		X	X		4	40
		3	Moderate	X	X	X	X			X			X	6	60
		4	High												
	Total													10	100
1.12	If "None" in 1.11 above; state reasons	1	None at all												
		2	Not enough												
		3	Poor culture												
		4	Inadequate funding												
	Total														
1.13	National capacity & readiness to tackle global concerns	1	Very low												
		2	Low												
		3	Moderate	X	X	X	X	X	X	X	X	X	X	10	100
		4	High												
	Total													10	100
1.14	Challenges to 1.13 Human resource	1	Very low												
		2	Low	X	X	X	X	X	X	X	X	X	X	10	100

RISK REDUCTION																
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
		3	Moderate													
		4	High													
	Total													10	100	
	Challenges to 1.13 Financial resource	1	Very low													
		2	Low													
		3	Moderate													
		4	High		X	X	X	X	X	X	X	X	X	X	10	100
	Total													10	100	
	Challenges to 1.13 Lack of Political Will	1	Very low													
		2	Low		X	X	X	X	X	X	X	X	X	X	10	100
		3	Moderate													
		4	High													
	Total													10	100	
	Challenges to 1.13 Admin Capacity	1	Very low													
		2	Low													
		3	Moderate		X	X	X	X	X	X	X	X	X	X	10	100
		4	High													
	Total													10	100	
	Challenges to 1.13 Other Poverty & Sustainable Development Priorities	1	Very low													
		2	Low													
		3	Moderate													
		4	High		X	X	X	X	X	X	X	X	X	X	10	100
	Total													10	100	
	Challenges to 1.13 Poor Linkage of Environment issues to Development	1	Very low													
		2	Low													
		3	Moderate													
		4	High		X	X	X	X	X	X	X	X	X	X	10	100
	Total													10	100	
1.15	Awareness on the Quantity, type and toxicity of hazardous waste generated in your country	1	Not at all													
		2	Not much		X	X	X	X	X	X	X	X	X	X	10	100
		3	Moderate													
		4	Considerable													
		5	Very much													
	Total													10	100	
1.16	Extent of awareness on how hazardous waste is generated	1	Not at all													
		2	Not much							X	X	X	X		4	40
		3	Moderate				X	X	X					X	4	40
		4	Considerable		X	X									2	20
		5	Very much													
	Total													10	100	
1.17	Extent of awareness on how hazardous waste is stored	1	Not at all													
		2	Not much			X	X	X		X	X	X	X	X	8	80
		3	Moderate		X				X						2	20
		4	Considerable													
		5	Very much													

RISK REDUCTION															
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%
	Total													10	100
1.18	Extent of awareness on how hazardous waste is transported	1	Not at all												
		2	Not much		x	x	x	x	x	x	x	x	x	9	90
		3	Moderate	x										1	10
		4	Considerable												
		5	Very much												
	Total													10	100
1.19	Extent of awareness on how hazardous waste is treated	1	Not at all												
		2	Not much		x	x	x	x	x	x	x	x	x	9	90
		3	Moderate	x										1	10
		4	Considerable												
		5	Very much												
	Total													10	100
1.20	Extent of awareness on how hazardous waste is disposed	1	Not at all												
		2	Not much		x	x	x	x	x	x	x	x	x	9	90
		3	Moderate	x										1	10
		4	Considerable												
		5	Very much												
	Total													10	100
1.21	Knowledge of institutions which recover & recycle hazardous materials and waste	1	Not at all												
		2	Not much		x	x	x	x	x	x	x	x	x	9	90
		3	Moderate												
		4	Considerable	x										1	10
		5	Very much												
	Total													10	100
1.22	From 1.21; would you describe their operations as environmental friendly	1	Not at all												
		2	Not much		x	x	x	x	x	x	x	x	x	9	90
		3	Moderate	x										1	10
		4	Considerable												
		5	Very much												
	Total													10	100
1.23	Knowledge of cleaner production concept (theory& practice)	1	Not at all												
		2	Not much						x	x	x	x		4	40
		3	Moderate		x	x	x	x					x	5	50
		4	Considerable	x										1	10
		5	Very much												
	Total													10	100
1.24	Knowledge of institutions in R&D producing new, safer chemical & biological materials	1	Not at all												
		2	Not much				x	x	x	x	x	x	x	7	70
		3	Moderate	x	x	x								3	30
		4	Considerable												
		5	Very much												
	Total													10	100
1.25	If score in 1.24 is 2-														

RISK REDUCTION																
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
	5; state names of organisations, and your area of concern		International Institute of Tropical Agriculture (IITA)													
1.26	Knowledge of role of chemicals and waste conventions in risk reduction	1	Not at all													
		2	Not much					x	x		x	x		4	40	
		3	Moderate		x	x	x				x			x	5	50
		4	Considerable	x											1	10
		5	Very much													
	Total													10	100	
1.27	Any training and awareness to deal with poisoning and chemical incidences?	1	Not aware	x	x	x	x	x	x	x	x	x	x	10	100	
		2	No													
		3	Yes													
	Total													10	100	
1.28	Knowledge of institutional awareness on risk assessment, management and communication	1	Not at all													
		2	Not much					x	x	x	x	x	x	6	60	
		3	Moderate		x	x	x							3	30	
		4	Considerable	x										1	10	
		5	Very much													
	Total													10	100	
1.29	If score is 2-5, Has your institution benefited from training & awareness?	1	Not at all						x	x	x	x		4	40	
		2	Not much	x	x	x	x	x					x	6	60	
		3	Moderate													
		4	Considerable													
		5	Very much													
	Total													10	100	

Category 3: Civil Society/ NonGovernment Stakeholders

Question	Description	Scale	Description	NEST	SWACI	NES	CDA	ANCLA	FME-HRD LC	Total	%	
1.1	To which extent do you describe your knowledge of the impact of chemicals and wastes to human beings and the environment	1	None at all									
		2	Not much									
		3	Moderate				X	X			.33	33.33
		4	Considerable			X					.166	16.66
		5	Very much	X	X					X	.50	50
	TOTAL									1.0	100	
1.2	Is your organization aware of any measures in your country that protect humans and the environment from unsafe and unnecessary exposures to chemicals?	1	None at all		X					.166	16.66	
		2	Not much				X	X		.33	33.33	
		3	Moderate									
		4	Considerable							X	.166	16.66
		5	Very much	X		X					.33	33.33
	TOTAL									1.0	100	
1.3	To what extent are you aware of the national institutions involvement in comprehensive risk management strategies for the various components through addressing these components aimed at pollution prevention, risk elimination		None at all		X					.166	16.66	
			Not much				X	X	X	.5	50	
			Moderate	X							.166	16.66
			Considerable									
			Very much				X				.166	16.66
	TOTAL									1.0	100	

Part 2: This section present the written views of stakeholders extracted from the Questionnaires

Category 1: Ministries and agencies

Question	Description	Stakeholder	Views
1.34	Name of organizations involved in research and development to produce new chemicals or no-chemicals	International Institute of Tropical Agriculture (IITA)	The IITA is primarily involved in non-chemical research for increased agricultural yields and production

8.2 Knowledge and information

Category 1: Government stakeholders (Ministries and Agencies)

Q	Knowledge and Information	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
2.1	Source of information on chemicals/waste	1	Others		x	x	x	x	x	x	x	x	x	9	90	
		2	Foreign sources	x										1	10	
		3	Local Govt													
		4	Central Govt Statistics													
	TOTAL													10	100	
2.2	Adequacy of information for chemical management throughout life-cycle of chemical	1	None at all													
		2	Not much			x	x	x	x	x	x	x	x	8	80	
		3	Moderate	x	x										2	20
		4	Considerable													
		5	Very much													
	TOTAL													10	100	
2.3.1	Adequacy of Information:- Complexity of Language used	1	Not possible													
		2	Low						x	x	x	x		4	40	
		3	Medium	x	x	x	x	x						x	6	60
		4	High													
		5	Very high													
	TOTAL													10	100	
2.3.2	Effects on human health and environment	1	Not possible													
		2	Low			x		x	x	x	x	x		6	60	
		3	Medium				x							x	2	20
		4	High	x	x										2	20
		5	Very high													
	TOTAL													10	100	
2.3.3	Potential uses	1	Not possible													
		2	Low						x	x	x	x		4	40	
		3	Medium			x	x	x						x	4	40
		4	High	x	x										2	20
		5	Very high													
	TOTAL													10	100	
2.3.4	Protective measures	1	Not possible													
		2	Low			x		x	x	x	x	x		6	60	
		3	Medium	x	x		x							x	4	40
		4	High													
		5	Very high													
	TOTAL													10	100	
2.3.5	Regulations	1	Not possible													
		2	Low													
		3	Medium			x	x	x	x	x	x	x	x	8	80	
		4	High	x	x										2	20
		5	Very high													
	TOTAL													10	100	
2.4	Popular modes of chemical information dissemination	1	Electronic	x	x								x	3	30	
		2	Print media	x	x	x	x	x	x				x	7	70	

Knowledge and Information														Total	%
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10		
	TOTAL													10	100
2.5	Awareness of GHS on Classification & Labelling of Chemicals	1	Yes	x	x	x	x	x	x	x	x	x	x	10	100
		2	No												
	Total													10	100
2.6	Has any work started on GHS implementation	1	Not aware												
		2	Slightly aware						x	x	x			3	30
		3	Very much aware	x	x	x	x	x					x	x	7
	Total													10	100
2.7	Has your institution benefited from any training?	1	Not yet			x			x	x	x	x		5	50
		2	Yes	x	x		x	x					x	5	50
	Total													10	100
2.8	If 'yes' in 2.7, who conducted the training? See Section 12		UNITAR												
2.9	Presence of Laws ensuring confidentiality of commercial & industrial information	1	Yes	x	x	x	x	x						5	50
		2	No						x	x	x	x	x	5	50
	Total													10	100
2.10	Is information on chemicals relating to health, safety & environment confidential?	1	Yes												
		2	No	x	x	x	x	x	x	x	x	x	x	10	100
	Total													10	100
2.11	Extent to which institutions generate scientific information on chemicals & waste management.	1	Not aware												
		2	Low	x	x	x	x	x	x	x	x	x	x	10	100
		3	Medium												
		4	High												
		5	Very High												
	Total														
2.12	Extent of interface between local institutions and policy making bodies	1	Not aware						x		x			2	20
		2	Low		x	x	x	x		x		x	x	7	70
		3	Medium	x										1	10
		4	High												
		5	Very High												
	Total													10	100
2.13	Awareness on information on hazard & risk assessments	1	No clue						x		x	x		3	30
		2	Slightly aware	x	x	x	x	x		x			x	7	70
		3	Very much aware												
	Total													10	100
2.14	If response in 2.13 is 2-3 dissemination; is via	1	Personal contacts	x	x	x	x	x						5	50
		2	Informal	x	x	x	x	x		x			x	7	70
		3	Formal	x	x	x	x	x		x			x	7	70
	Total														
2.15	Any knowledge of National Environment Standards aimed at reducing chemical/wastes effects	1	Yes	x	x	x	x	x	x	x	x	x	x	10	100
		2	No												
	Total													10	100
2.16	Is your organization consulted when National Environmental Standards are being set?	1	Yes	x	x	x	x	x	x	x	x	x	x	10	100
		2	No												
	Total														
2.17	Access to international database	1	Not at all								x	x		2	20

Knowledge and Information														Total	%	
Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10			
	on chemical safety data to promote risk reduction strategies	2	Not much			x		x	x	x			x	5	50	
		3	Moderate	x	x		x							3	30	
		4	Considerable													
		5	Very much													
	Total													10	100	
2.18	Extent of involvement in providing inputs, information, financial; to efforts to reduce unsound management of chemicals	1	Not at all						x	x	x			3	30	
		2	Not much		x	x	x	x					x	x	6	60
		3	Moderate	x											1	10
		4	Considerable													
		5	Very much													
	Total													10	100	
2.19	If score in 2.18 is 1-2; describe the problem		Inadequate capacity in the mainstreaming of sound chemicals.													
2.20	Knowledge & information on the role chemicals and waste conventions	1	Not at all													
		2	Not much			x		x	x	x	x	x	x	7	70	
		3	Moderate		x		x							2	20	
		4	Considerable	x										1	10	
		5	Very much													
	Total													10	100	

Category 3: Knowledge and information – NonGovernment

Question	Description	Scale	Description	NEST	SWACI	NES	CDA	ANCLA	FME-HRD LC	Total	%
2.2	Does your organization consider that there is sufficient information and knowledge on chemicals management in your country to enable chemicals to be adequately assessed and managed safely throughout their life cycle?	1	None at all								
		2	Not much	X	X	X	X	X	X	6	100
		3	Moderate								
		4	Considerable								
		5	Very much								
	Total									6	100

8.3 Governance

Category 1: Government Stakeholders

Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
3.1	Promotion of sound management programs for chemicals and waste in your organization	1	Not apply													
		2	Not a priority													
		3	Low													
		4	Moderate						x	x	x	x		4	40	
		5	Very much	x	x	x	x	x					x	6	60	
TOTAL													10	100		
3.2	Your institution's working with other sectors in Govt in promoting sound chemicals mgt to all sectors	1	Not at all													
		2	To some extent						x	x	x	x		4	40	
		3	Very much	x	x	x	x	x					x	6	60	
		TOTAL													10	100
3.3	Your institution's working with other sectors in Govt & Stakeholders in identifying priorities to chemicals mgt activities	1	Not at all													
		2	To some extent						x	x	x	x		4	40	
		3	Very much	x	x	x	x	x					x	6	60	
		TOTAL													10	100
3.4	If score in 3.3 is 2-3; who provided training on how to identify priorities	1	NGO													
		2	Regional organizations													
		3	International organizations	x	x	x	x	x					x	6	60	
		4	Govt	x	x	x	x	x	x	x	x	x	x	10	100	
TOTAL																
3.5	Is your institution aware on how national laws & regulations are enforced?	1	Not at all													
		2	Not much													
		3	Moderate													
		4	Considerable	x	x	x	x	x	x	x	x	x	x	10	100	
		5	Very much													
Total													10	100		
3.6	Comments															
3.7	Your knowledge of "corporate environment & social responsibility" concept	1	Not at all													
		2	To some extent		x	x	x	x	x	x	x	x	x	9	90	
		3	Very much	x										1	10	
Total													10	100		
3.8	If score in 3.7 is 2-3; then rank the corporate community in observing, promoting relevant codes of conduct, including the concept	1	Low			x		x	x	x	x	x	x	7	70	
		2	Moderate	x	x		x							3	30	
		3	High													
Total													10	100		
3.10	Involvement of women in decision making on chemicals policy and mgt.	1	Not at all													
		2	To some extent			x		x	x	x	x			6	60	
		3	Very much	x	x		x						x	4	40	
Total																
3.11																
3.12	Knowledge of the need to															

Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%
	promote mutual support between trade & environmental policies	1	Not at all												
		2	To some extent		x	x			x					3	30
		3	Very much	x			x	x		x	x	x	x	7	70
	Total													10	100
3.13	If score in 3.12 is 2-3; state your extent of involvement	1	Not at all												
		2	To some extent		x	x			x					3	30
		3	Very much	x			x	x		x	x	x	x	7	70
	Total													10	100
3.14	If score in 3.13 is 2-3; describe your participation	1	Passive												
		2	Active		x	x	x	x	x	x	x	x	x	9	90
		3	Very active	x										1	10
	Total													10	100
3.15	Knowledge of the incentives which support business to develop & improve products that advance strategic approach to chemicals mgt.	1	Not aware		x	x	x	x	x	x	x	x	x	9	90
		2	Aware	x										1	10
		Total													10
3.16	Awareness of conventions Basel	1	Aware	x	x	x	x	x	x	x	x	x	x	10	100
		2	Not aware												
	Stockholm	1	Aware	x	x	x	x	x	x	x	x	x	x	10	100
		2	Not aware												
	Rotterdam	1	Aware	x	x	x	x	x	x	x	x	x	x	10	100
		2	Not aware												
	Montreal Protocol	1	Aware	x	x	x	x	x	x	x	x	x	x	10	100
		2	Not aware												
	ILO Convention on Chemical Safety	1	Aware	x	x	x	x	x	x	x	x	x	x	10	100
		2	Not aware												
	Total														
3.17	Extent to which Focal points of the above conventions interact	1	Not aware												
		2	Passive												
		3	Active	x			x			x				3	30
		4	Very active												
	Total														
3.18	Extent to which your institution liaises closely with other stakeholders' management of chemicals & waste.	1	Not aware												
		2	Passive												
		3	Active	x	x	x	x	x	x	x	x	x	x	10	100
		4	Very active												
	Total														
3.19	If your score in 3.17 is 2-4; how do you participate with other stakeholders	1	Informal	x	x	x	x	x	x	x	x	x	x	10	100
		2	Formal	x	x	x	x	x	x	x	x	x	x	10	100
		Total													
3.20	What is the name of the structure referred to in 3.18?		Chemicals and wastes coordination office within the Ministry of Environment												
3.21	Is there multi-sectoral/ multi-stakeholder mechanism to	1	Not aware												
		2	None												

Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
	develop National Plans & priority actions in your country?	3	Yes informal	x	x	x	x	x	x	x	x	x	x	10	100	
		4	Yes formal													
	Total													10	100	
3.22	Knowledge on how international agreements are ratified via the National system															
		1	Not aware													
		2	Aware	x	x	x	x	x	x	x	x	x	x	x	10	100
	Total													10	100	
3.23	Knowledge on how international agreements are domesticated into National laws															
		1	Not aware													
		2	Aware	x	x	x	x	x	x	x	x	x	x	x	10	100
	Total													10	100	
3.24	Knowledge of the national Focal Points for various Chemicals & waste conventions															
		1	Not aware													
		2	Aware	x	x	x	x	x	x	x	x	x	x	x	10	100
	Total													10	100	
3.25	How is coordination amongst the focal points effected?	1	No idea													
		2	Ad hoc													
		3	Informal	x			x								2	20
		4	Formal													
	Total															
3.26	If score in 3.25 is 4; name the structure															

Governance – Category 3: Non-Governmental stakeholders

Question	Description	Scale	Description	NEST	SWACI	NES	CDA	ANCLA	FME-HRD LC	Total	%	
3.1	In your organization's programmes is sound management of chemicals and waste promoted?	1	None at all									
		2	Not much									
		3	Moderate				x	x			2	33.33
		4	Considerable									
		5	Very much	x	x	x				x	.4	66.660
	TOTAL									6	100	

8.4 Capacity-building and technical cooperation

Category 1: Government stakeholders

Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%
4.1	Capacity to train others a)chemicals management	1	None							x	x	x	x	4	40
		2	Low		x	x	x	x	x					5	50
		3	Moderate	x										1	10
		4	High												
	Total													0	100
	Capacity to train others (b) Waste management	1	None		x	x	x	x	x	x	x	x	x	9	90
		2	Low												
		3	Moderate	x										1	10
		4	High												
	Total													10	100
4.2	Information Source for capacity building														
		1	Website searches	x	x	x	x	x	x	x		x	x	10	100
		2	UN Organizations	x	x	x	x	x	x	x	x	x	x	10	100
		3	Foreign Embassies	x	x	x	x					x	x	60	60
		4	Govt / Ministries	x	x	x	x	x		x		x	x	8	80
	Total														
4.3	Awareness of role of chemicals & waste conventions on capacity building and tech. coop.	1	None at all												
		2	Not much			x		x	x		x			4	40
		3	Moderate		x		x			x		x	x	5	50
		4	Considerable	x										1	10
		5	Very much												
	Total													10	100

Category 3: Capacity-building and technical cooperation - Non-Government Stakeholders

Question	Description	Scale	Description	NEST	SWACI	NES	CDA	ANCLA	FME- HRD LC	Total	%
4.3	To what extent are you aware of the role of the Chemicals and waste conventions on capacity building and technical cooperation?	1	None at all				x	x		.2	33. 33
		2	Not much	x	x					.2	33. 33
		3	Moderate								
		4	Considerable			x			x	2	33. 33
		5	Very much								
	TOTAL									1.0	100

8.5 Illegal international traffic

Category 1: Government stakeholders

Q	Description	Scale	Description	1	2	3	4	5	6	7	8	9	10	Total	%	
5.1	Ranking of knowledge on the treaty in prevention of Illegal international traffic:- (a) Basel	1	Nothing at all						x		x	x	x	4	40	
		2	Very low		x	x	x	x		x				5	50	
		3	Low													
		4	Moderate	x											1	10
		5	High													
	Total		1											10	100	
	Ranking of knowledge on treaty in prevention of Illegal international traffic:- (b) Stockholm	1	Nothing at all						x		x	x	x	4	40	
		2	Very low		x	x	x	x		x				5	50	
		3	Low													
		4	Moderate		x										1	10
		5	High													
	Total													10	100	
	Ranking of knowledge on treaty in prevention of Illegal international traffic:- (c) Rotterdam Rotterdam	1	Nothing at all						x		x	x	x	4	40	
		2	Very low		x	x	x	x		x				5	50	
		3	Low													
		4	Moderate	x											1	10
		5	High													
	Total													10	100	
	Montreal															
	Ranking of knowledge treaty in prevention of Illegal international traffic:- (d) Montreal	1	Nothing at all						x		x	x	x	4	40	
		2	Very low		x	x	x	x		x				5	50	
		3	Low													
		4	Moderate	x											1	10
		5	High													
	Total													10	100	
5.2	Extent of Domestication of treaty by government:- (a) Basel	1	Not aware									x	x	2	20	
		2	Very low		x	x	x	x	x	x	x			7	70	
		3	Low	x											1	10
		4	Moderate													
		5	High													
	Total													10	100	

Q	Description	S c a l e	Description	1	2	3	4	5	6	7	8	9	10	Total	%
	Extent of Domestication of treaty by government:- (b) Stockholm	1	Not aware									x	x	2	20
		2	Very low		x	x	x	x	x	x	x			7	70
		3	Low	x										1	10
		4	Moderate												
		5	High												
	Total													10	100
	Extent of Domestication of treaty by government:- (c) Rotterdam	1	Not aware									x	x	2	20
		2	Very low		x	x	x	x	x	x	x			7	70
		3	Low	x										1	10
		4	Moderate												
		5	High												
	Total													10	100
	Extent of Domestication of treaty by government:- (d) Montreal Protocol	1	Not aware									x	x	2	20
		2	Very low		x	x	x	x	x	x	x			7	70
		3	Low	x										1	10
		4	Moderate												
		5	High												
	Total													10	100
5.3	Extent of Information sharing between your govt ant other govts on prevention and control of Illegal International Traffic Shared info	1	Not aware			x		x	x	x	x	x	x	7	70
		2	Low	x	x		x							3	30
		3	Moderate												
		4	High												
	Total													10	100
5.4	Awareness of role of chemicals and waste conventions on prevention of Illegal International Traffic	1	Not aware												
		2	Not much		x	x	x	x	x	x	x	x	x	9	90
		3	Moderate	x										1	10
		4	Considerable												
		5	Very much												
	Total													10	100

Illegal international traffic
Category 3: Non-Government Stakeholders

Question	Description	Scale	Description	NEST	SWACI	NES	CDA	ANCLA	FME-HRD LC	Total	%
5.4	To what extent are you aware of the role of the Chemicals and waste conventions on prevention of illegal International traffic	1	None at all				x	x		2	33.3
		2	Not much	x						.1	16.6
		3	Moderate		x					.1	16.6
		4	Considerable			x				.	16.6
		5	Very much						x	1	16.6
TOTAL										6	100

9 SUMMARY OF GAP ANALYSIS

9.1 Risk reduction

Issue 1 - Knowledge of the impact of chemicals and wastes to human beings and the environment

Based on the statistics above it is apparent that more efforts have to be directed towards -

- Incorporating the concept of pollution prevention in policies, programmes and activities on chemicals and wastes management
- Promotion of reduction of the risks posed to human health and the environment by hazardous chemicals and wastes through hazard evaluations

Issue 2 – Protection of humans and the environment from unsafe and unnecessary exposures to chemicals

- Establishment of environment and health surveillance programme

Issue 3 - National institutions involvement in comprehensive risk management strategies

- Establishment of comprehensive chemicals registration and control system which controls risks from the initial point of importation, use/handling to the disposal.

Issue 4 - Training or awareness programme in Risk assessment, management and communication

- Building the capacity of stakeholders through specialized training and awareness in risk assessment, management and communication

9.2 Knowledge and information

Issue 1 - Knowledge of the impact of chemicals and wastes to human beings and the environment

- Generation and sharing of information on inherent hazards of chemicals and wastes
- Strengthen the exchange of technical information among the academic, industrial, governmental and intergovernmental sectors.

Issue 2 – Protection of humans and the environment from unsafe and unnecessary exposures to chemicals

- Establish procedures to ensure that any chemical put into circulation is accompanied, at a minimum, by appropriate and reliable safety data sheets, which provide information that is easy to access, read and understand
- Undertake awareness-raising for consumers, in particular by educating them on best practices for chemical use, about the risks that the chemicals they use pose to themselves and their environment and the pathways by which exposures occur

Issue 3 - National institutions involvement in comprehensive risk management strategies

- Include a range of preventive strategies, education and awareness-raising and capacity-building in risk communication.
- Promote the establishment of national inspection systems for the protection of employees from the adverse effects of chemicals.

Issue 4 - Training or awareness programme in risk assessment, management and communication

- Undertake training programmes in hazard evaluations in accordance with the requirements of harmonized health and environmental risk assessments.

9.3 Governance

Issue 1 - Promotion of national programmes on sound management of chemicals and wastes among stakeholders

- Formalize and strengthen inter-ministerial and multi-stakeholder coordinating mechanisms on chemicals management issues, including coordination of national Government and multi-stakeholder concerns
- Develop national chemicals safety information exchange systems;

Issue 2 - Enforcement of national laws and regulations regarding chemicals

- Addressing gaps in implementation of existing laws and policy instruments promulgated in the context of national environmental management regimes for chemicals safety

- Strengthening efforts to implement an integrated approach to the safe use of chemicals by establishing effective mechanisms for following up and updating information on international instruments related to hazardous substances

9.4 Capacity-building and technical cooperation

Issue 1- Capacity of organization to train others

- Train customs officials to detect illegal transboundary movements of waste.
- Undertake training programmes for preventing the exposure of waste handlers and recyclers, particularly waste scavengers, to hazardous chemicals and wastes

Issue 2 - Role of the chemicals and waste conventions on capacity building and technical cooperation

- Develop national and local capacities to monitor, assess and mitigate chemical impacts of dumps, landfills and other waste facilities on human health and the environment
- Implement demonstration projects on waste minimization and efficient resource management in different countries with bilateral or multilateral support.

9.5 Illegal international traffic

Issue 1 - Knowledge in the operations of MEAs aimed at preventing illegal international traffic.

- Establishment and maintenance of information networks;
- Establishment of regional, subregional and national management and monitoring systems to prevent illegal traffic;

Issue 2 - Domestication of International treaties

- Establishment of an administrative framework for efficient enforcement and training of inspectors on legal restrictions.

10 SUMMARY OF RELEVANT AREAS WHERE PROJECTS COULD BE DEVELOPED AS SUGGESTED BY STAKEHOLDERS

In establishing critical areas where projects could be developed, stakeholders had completed Questionnaire 3 as a group with the understanding of the challenges faced by various sectors and the need to set priorities in this regard.

Category 1 – Government stakeholders

Part 1: Statistical data

SAICM AREA	POSSIBLE PROJECTS	PREFERENCE	NO OF STAKEHOLDERS	%
		1 Not important		
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	2 Low		
		3 Moderate		
		4 High		
		5 Very High	10	100
		TOTAL	10	100
		1 Not important		
	Occupational Health and Safety	2 Low		
		3 Moderate	7	70
		4 High		
		5 Very High	3	30
		TOTAL	10	100
	Risk assessment, management and communication	1 Not important		
		2 Low		
		3 Moderate		
		4 High		
		5 Very High	10	100
		TOTAL	10	100
	Chemicals of global concern	1 Not important		
		2 Low		
		3 Moderate		
		4 High	5	50
		5 Very High	5	50
		TOTAL	10	100
	Highly toxic pesticides-risk management and reduction	1 Not important		
		2 Low		
		3 Moderate	5	50
		4 High	5	50
		5 Very High		
		TOTAL	10	100
	Waste management (minimization)	1 Not important		
		2 Low		
		3 Moderate		
		4 High	8	80
		5 Very High	2	20
		TOTAL	10	100
	Formulation of prevention and response measures to mitigate environmental and health impacts	1 Not important		

SAICM AREA	POSSIBLE PROJECTS	PREFERENCE	NO OF STAKEHOLDERS	%
		2 Low		
		3 Moderate		
		4 High	10	100
		5 Very High		
		TOTAL	10	100
	The Role of GHS in risk Reduction	1 Not important		
		2 Low		
		3 Moderate		
		4 High	10	100
		5 Very High		
		TOTAL	10	100
	<i>Tools and Approaches for applying precaution</i>	1 Not important		
		2 Low		
		3 Moderate		
		4 High	10	100
		5 Very High		
		TOTAL	10	100
Knowledge and Information		1 Not important		
	Research, monitoring and data management	2 Low		
		3 Moderate		
		4 High	10	100
		5 Very High		
		TOTAL	10	100
	Hazardous data generation and availability	1 Not important		
		2 Low		
		3 Moderate	4	40
		4 High	3	30
		5 Very High	3	30
		TOTAL	10	100
	Globally Harmonized System (GHS) of Classification and Labelling	1 Not important		
		2 Low		
		3 Moderate	10	100
		4 High		
		5 Very High		
		TOTAL	10	100
	Information management and dissemination	1 Not important		
		2 Low		
		3 Moderate		
		4 High	10	100
		5 Very High		
		TOTAL	10	100
	Highly toxic pesticides risk management and reduction	1 Not important		
		2 Low		
		3 Moderate	5	50
		4 High	5	50
		5 Very High		
		TOTAL	10	100
	Life Cycle management	1 Not important		

SAICM AREA	POSSIBLE PROJECTS	PREFERENCE	NO OF STAKEHOLDERS	%
		2 Low		
		3 Moderate		
		4 High	5	50
		5 Very High	5	50
		TOTAL	10	100
	Creation of National and International Registers	1 Not important		
		2 Low		
		3 Moderate	5	50
		4 High	5	50
		5 Very High		
		TOTAL	10	100
	Use of Indicators to monitor children's environmental health	1 Not important		
		2 Low		
		3 Moderate		
		4 High	3	30
		5 Very High	7	70
		TOTAL	10	100
GOVERNANCE	International Chemicals and waste conventions-promotion of ratification and synergies	1 Not important		
		2 Low		
		3 Moderate	7	70
		4 High	3	30
		5 Very High		
		TOTAL	10	100
	Stakeholder participation in decision making processes	1 Not important		
		2 Low		
		3 Moderate	7	70
		4 High	3	30
		5 Very High		
		TOTAL	10	100
	Assessment of national chemical management to identify gaps and prioritize action	1 Not important		
		2 Low		
		3 Moderate	6	60
		4 High	4	40
		5 Very High		
		TOTAL	10	100
	Implementation of integrated national programmes for sound management of chemicals	1 Not important		
		2 Low		
		3 Moderate		
		4 High		
		5 Very High	10	100
		TOTAL	10	100
	GHS (review of national legislation and align with GHS requirements)	1 Not important		

SAICM AREA	POSSIBLE PROJECTS	PREFERENCE	NO OF STAKEHOLDERS	%
		2 Low		
		3 Moderate	7	70
		4 High	3	30
		5 Very High		
		TOTAL	10	100
	Social and economic considerations	1 Not important		
		2 Low		
		3 Moderate		
		4 High	10	100
		5 Very High		
		TOTAL	10	100
	Legal, Policy and institutional aspects	1 Not important		
		2 Low		
		3 Moderate	3	30
		4 High	7	70
		5 Very High		
		TOTAL	10	100
	EIAs to include chemicals and hazardous waste	1 Not important		
		2 Low		
		3 Moderate	5	50
		4 High	5	50
		5 Very High		
		TOTAL	10	100
CAPACITY BUILDING AND TECHNICAL COOPERATION	Capacity-building to support national actions	1 Not important		
		2 Low		
		3 Moderate		
		4 High	5	50
		5 Very High	5	50
		TOTAL	10	100
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	1 Not important		
		2 Low		
		3 Moderate	7	70
		4 High	3	30
		5 Very High		
		TOTAL	10	100
	Remediation of contaminated sites and poisoned individuals	1 Not important		
		2 Low		
		3 Moderate	5	50
		4 High	5	50
		5 Very High		
		TOTAL	10	100
	Capacity to implement GHS	1 Not important		
		2 Low		
		3 Moderate	3	30
		4 High	7	70
		5 Very High		
		TOTAL	10	100

SAICM AREA	POSSIBLE PROJECTS	PREFERENCE	NO OF STAKEHOLDERS	%
	Waste management	1 Not important		
		2 Low		
		3 Moderate		
		4 High	8	80
		5 Very High	2	20
		TOTAL	10	100
ILLEGAL AND INTERNATIONAL TRAFFIC	Prevention of illegal traffic in toxic and dangerous goods	1 Not important		
		2 Low		
		3 Moderate		
		4 High	5	50
		5 Very High	5	50
		TOTAL	10	100

Category 2 – NonGovernment stakeholders
Part 1:Statistical data

PRIORITY AREA	POSSIBLE PROJECTS	PREFERENCE	%
		1 Not important	
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
		1. Not important	
	Occupational Health and Safety	2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Risk assessment, management and communication	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Chemicals of global concern	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Highly toxic pesticides-risk management and reduction	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80

PRIORITY AREA	POSSIBLE PROJECTS	PREFERENCE	%
		5 Very High	
	Waste management (minimization)	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Formulation of prevention and response measures to mitigate environmental and health impacts	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	The Role of GHS in risk Reduction	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Tools and Approaches for applying precaution	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
Knowledge and Information		1 Not important	
	Research, monitoring and data management	2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Hazardous data generation and availability	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Globally Harmonized System (GHS) of Classification and Labelling	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Information management and dissemination	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100

PRIORITY AREA	POSSIBLE PROJECTS	PREFERENCE	%
	Highly toxic pesticides risk management and reduction	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Life Cycle management	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Creation of National and International Registers	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Use of Indicators to monitor children's environmental health	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
GOVERNANCE	International Chemicals and waste conventions-promotion of ratification and synergies	1 Not important	
		2 Low	
		3 Moderate	60
		4 High	
		5 Very High	
	Stakeholder participation in decision making processes	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Assessment of national chemical management to identify gaps and prioritize action	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Implementation of integrated national programmes for sound management of chemicals	1 Not important	

PRIORITY AREA	POSSIBLE PROJECTS	PREFERENCE	%
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	GHS (review of national legislation and align with GHS requirements)	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Social and economic considerations	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Legal, Policy and institutional aspects	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	EIAs to include chemicals and hazardous waste	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
CAPACITY BUILDING AND TECHNICAL COOPERATION	Capacity-building to support national actions	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	1 Not important	
		2 Low	
		3 Moderate	
		4 High	80
		5 Very High	
	Remediation of contaminated sites and poisoned individuals	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Capacity to implement GHS	1 Not important	

PRIORITY AREA	POSSIBLE PROJECTS	PREFERENCE	%
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
	Waste management	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100
ILLEGAL AND INTERNATIONAL TRAFFIC	Prevention of illegal traffic in toxic and dangerous goods	1 Not important	
		2 Low	
		3 Moderate	
		4 High	
		5 Very High	100

Part 2A: Summary of preferred projects – Government Stakeholders

Scores are presented in percentages for the **high** or **very high** % in each category

SAICM AREA	Possible Projects	Very high or High %
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	100% (Very high)
	Occupational Health and Safety	30% (very high)
	Risk assessment, management and communication	100% (very high)
	Chemicals of global concern	50% (very high); 50%(high)
	Highly toxic pesticides-risk management and reduction	50 % (high)
	Waste management (minimization)	20%(Very high); 80%(high)
	Formulation of prevention and response measures to mitigate environmental and health impacts	100% (high)
	The Role of GHS in risk Reduction	100% (high)
KNOWLEDGE AND INFORMATION		
	Research, monitoring and data management	100% High
	Hazardous data generation and availability	30% High
	Globally Harmonized System (GHS) of Classification and Labelling	40% High
	Information management and dissemination	100% High

SAICM AREA	Possible Projects	Very high or High %
	Highly toxic pesticides risk management and reduction	30% High
	Life Cycle management	100% High
	Creation of National and International Registers	70% High
	Use of Indicators to monitor children's environmental health	70% Very high, 30% High
GOVERNANCE	International Chemicals and waste conventions-promotion of ratification and synergies	30% High
	Stakeholder participation in decision making processes	30% High
	Assessment of national chemical management to identify gaps and prioritize action	40 % High
	Implementation of integrated national programmes for sound management of chemicals	100% High
	GHS (review of national legislation and align with GHS requirements)	30% High
	Social and economic considerations	100% High
	Legal, Policy and institutional aspects	70% High
	EIAs to include chemicals and hazardous waste	50% High
CAPACITY BUILDING AND TECHNICAL COOPERATION	Capacity-building to support national actions	50% Very high; 50% High
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	30% High
	Remediation of contaminated sites and poisoned individuals	50% High
	Capacity to implement GHS	70% High
	Waste management	20% Very high; 80% High
ILLEGAL AND INTERNATIONAL TRAFFIC	Prevention of illegal traffic in toxic and dangerous goods	50% Very high; 50% High

Part 2B: Summary of preferred projects – Non-Government Stakeholders

Scores are presented in percentages for the **high** or **very high** % in each category

PRIORITY AREA	Possible Projects	Very high or High %
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	70%
	Occupational Health and Safety	70%
	Risk assessment, management and communication	100%
	Chemicals of global concern	60%
	Highly toxic pesticides-risk management and reduction	70%
	Waste management (minimization)	90%
	Formulation of prevention and response measures to mitigate environmental and health impacts	100%
	The Role of GHS in risk Reduction	90%
KNOWLEDGE AND INFORMATION	Research, monitoring and data management	90%
	Hazardous data generation and availability	80%
	Globally Harmonized System (GHS) of Classification and Labelling	100%
	Information management and dissemination	100%
	Highly toxic pesticides risk management and reduction	80%
	Life Cycle management	90%
	Creation of National and International Registers	90%
	Use of Indicators to monitor children's environmental health	80%
GOVERNANCE	International Chemicals and waste conventions-promotion of ratification and synergies	80%
	Stakeholder participation in decision making processes	100%
	Assessment of national chemical management to identify gaps and prioritize action	90%
	Implementation of integrated national programmes for sound management of chemicals	100%
	GHS (review of national legislation and align with GHS requirements)	100%
	Social and economic considerations	80%
	Legal, Policy and institutional aspects	90%
EIAs to include chemicals and hazardous waste	70%	
CAPACITY BUILDING AND TECHNICAL COOPERATION	Capacity-building to support national actions	90%
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	100%
	Remediation of contaminated sites and poisoned individuals	100%
	Capacity to implement GHS	100%
	Waste management	90%
ILLEGAL AND INTERNATIONAL TRAFFIC	Prevention of illegal traffic in toxic and dangerous goods	100%

Part 2 C Summary of areas chosen by both Government stakeholders and NGOs

		NGOs (6)	Government stakeholders (10)
PRIORITY AREA	Possible Projects		
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	Yes	Yes
	Occupational Health and Safety	Yes	NO
	Risk assessment, management and communication	Yes	Yes
	Chemicals of global concern	Yes	Yes
	Highly toxic pesticides-risk management and reduction	Yes	Yes
	Waste management (minimization)	Yes	Yes
	Formulation of prevention and response measures to mitigate environmental and health impacts	Yes	Yes
	The Role of GHS in risk Reduction	Yes	Yes
KNOWLEDGE AND INFORMATION			
	Research, monitoring and data management	Yes	Yes
	Hazardous data generation and availability	Yes	No
	Globally Harmonized System (GHS) of Classification and Labelling	Yes	NO
	Information management and dissemination	Yes	Yes
	Highly toxic pesticides risk management and reduction	Yes	NO
	Life Cycle management	Yes	Yes
	Creation of National and International Registers	Yes	Yes
	Use of Indicators to monitor children's environmental health	Yes	Yes
GOVERNANCE			
	International Chemicals and waste conventions-promotion of ratification and synergies	Yes	No
	Stakeholder participation in decision making processes	Yes	NO
	Assessment of national chemical management to identify gaps and prioritize action	Yes	NO
	Implementation of integrated national programmes for sound management of chemicals	Yes	Yes
	GHS (review of national legislation and align with GHS requirements)	Yes	NO
	Social and economic considerations	Yes	Yes
	Legal, Policy and institutional aspects	Yes	Yes
	EIAs to include chemicals and hazardous waste	Yes	Yes
CAPACITY BUILDING AND TECHNICAL COOPERATION			
	Capacity-building to support national actions	Yes	Yes
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	Yes	NO
	Remediation of contaminated sites and poisoned individuals	Yes	Yes
	Capacity to implement GHS	Yes	Yes
	Waste management	Yes	Yes
ILLEGAL AND INTERNATIONAL TRAFFIC			
	Prevention of illegal traffic in toxic and dangerous goods	Yes	Yes

Comments on the choices above

The establishment of general frameworks for risk assessment procedures and controls by government and the elimination of barriers to information detailing inherent hazards of chemicals and hazardous wastes are considered as priority concerns within the national system, while the application of life-cycle management approaches is given high ranking in view of its importance in ensuring that chemicals management decisions are consistent with the goals of sustainable development.

Chemical risks can also have direct or indirect impact on the progress of development, thus the use of indicators to monitor children's environmental health in their protection from adverse effects of chemicals is particularly important in safeguarding the health of this particular vulnerable which might be seriously threatened through exposure to toxic chemicals. For instance, the exposure to lead and several other compounds has been associated with impaired intellectual development that may be linked with reduced economic and developmental potentials.

Integration of national programmes for sound management in national strategies, to inform the development assistance cooperation priorities with considerations for socioeconomic aspects is also ranked high in view of the cross-cutting nature of chemicals management issues

Notwithstanding benefits from the national GHS Capacity building project, the need to also strengthen capacity within other key GHS sectors such as agriculture and transport which were not fully covered by the project cannot be overemphasized. The strengthening of national strategies for prevention, detection and control of illegal traffic in hazardous chemicals and wastes has been identified as a national priority in view of associated damage to human health and the environment from their transboundary movement and disposal.

The massive illegal traffic in toxic and dangerous products is viewed as high priority by civil society stakeholders, with knowledge/Information and capacity building in chemical management issues being seen to be at its lowest ebb. The challenge of very minimal information and knowledge with regards to relevant activities on environmental and health impacts of chemicals is also of grave concern to nongovernmental stakeholders. This is viewed as being based on one part on non-implementation of integrated national programmes for sound management of chemicals such as SAICM, lack of capacity to implement chemical management issues and above all poor funding of the relevant sector.

11. COMMENTS ON THE OUTLINE OF THE TRAINING FROM COUNTRY EXPERTS

The proposed training outline in Questionnaire 4 seems to cover the key aspects of addressing the growing gaps between the capacities of different countries to manage chemicals safely, including the need to improve synergies between existing instruments and processes and the growing sense of urgency regarding the need to assess and manage chemicals more effectively to achieve the 2020 goal of ensuring that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment. Additional topics ranked as priority have also been included in the table for possible training consideration.

12. ASSESSMENT OF COUNTRY POTENTIAL TRAINERS

The crop of some potential trainers identified in this current exercise (Questionnaire 5) have been involved in:

- Global, regional and national chemicals management agenda.
- Rendering support to the learning and development of other colleagues, using own areas of expertise as appropriate.
- Contributing ideas for the better use of specialist skills, knowledge and expertise.
- Continuous development of appropriate knowledge particular to their responsibilities.
- Feeding back what they have learnt to improve working practices and team delivery.
- Performing consulting assignments in collaboration with other stakeholders by planning and facilitating training workshops, seminars etc
- Initiating and coordinating outreach activities.
- Making presentations on assigned topics/activities.
- Leading and/or participating in large, complex field missions, including provision of guidance to external consultants, government officials and other parties as necessary.

This exercise with more time, it can cover more national institutions.

13. CONCLUSIONS AND RECOMMENDATIONS

13.1 Conclusions

It is expected that the current exercise of undertaking a needs assessment on the national chemicals and wastes management capacity in Nigeria will contribute towards developing a regional needs assessment for Africa, which will facilitate the effective implementation of SAICM in the region.

13.2 Recommendations

13.2.1 General

In view of identified gaps revealed through the needs assessment there is need for:

- (i) a more effective governance structure to help make the strategic approach a lasting success;
- (ii) the establishment of a platform for cooperation and coordination of activities amongst the key ministries and agencies regulating chemicals at the highest level of authority, in order to reduce duplication of efforts and inconsistencies perceived by the regulated communities;
- (iii) synergies and partnerships among the relevant regulatory institutions and civil societies to implement effectively the strategic approach for the benefit of the country and citizens;
- (iv) the establishment and constitution of a multi-stakeholder “National Committee on Management of Hazardous Substances” as an Inter-ministerial Body that will be responsible for integrating the issues of chemicals safety/management into national development plan in line with the “Johannesburg Plan of Implementation”. This body will be high-level in nature with the necessary political backing;
- (v) an integrated regulatory framework to address the entire lifecycle of chemicals, in order to avoid the current piecemeal, overlapping and conflicting regulations;
- (vi) creation of awareness programme for; (i) chemical users and consumers to educate them on the hazards inherent in misuse/handling of chemicals and (ii) policy makers and legislators, in order for them to realize the importance of making chemicals management programmes/issues a priority in budgetary allocations. (iii) Customs (iv) rural communities as well as, (v) all importers and users of chemicals;
- (vii) training and staff development by organizations in health and safety of chemicals;

- (viii) development of comprehensive risk management strategies for the various components through addressing these components aimed at pollution prevention, risk elimination;
- (ix) establishment of environment and health surveillance programme;
- (x) establishment of a comprehensive chemicals registration and control system which controls risks from the initial point of importation, use/handling to the disposal;
- (xi) establishment of procedures that any chemical put into circulation is accompanied, at a minimum, by appropriate and reliable safety data sheets, which provide information that is easy to access read and understand;
- (xii) knowledge and information sharing among key sectors and actors within the society on chemicals management to enable chemicals to be adequately assessed and managed safely throughout their life cycle;
- (xiii) awareness creation among the civil society on the role of the chemicals and waste conventions on capacity building and technical cooperation and the prevention of illegal international traffic;
- (xiv) the very urgent need for the review and enforcement of national legislation in line with the global SAICM, FAO code of chemical management and alignment with GHS requirements with increased strategic public awareness programme;
- (xv) strengthening of the BCCC to undertake national capacity building for chemicals and hazardous wastes management in the context of SAICM and related MEAs;
- (xvi) the urgent need for a national survey to ascertain the quantity of hazardous waste generated by various sectors of the economy;

13.2.2 Areas for possible projects development.

		NGOs (6)	Government stakeholders (10)
PRIORITY AREA	Possible Projects		
RISK REDUCTION	Building of capacities to deal with poisoning and chemical incidences	Yes	Yes
	Occupational Health and Safety	Yes	NO
	Risk assessment, management and communication	Yes	Yes
	Chemicals of global concern	Yes	Yes
	Highly toxic pesticides-risk management and reduction	Yes	Yes
	Waste management (minimization)	Yes	Yes
	Formulation of prevention and response measures to mitigate environmental and health impacts	Yes	Yes
	The Role of GHS in risk Reduction	Yes	Yes
KNOWLEDGE AND INFORMATION			
	Research, monitoring and data management	Yes	Yes
	Hazardous data generation and availability	Yes	No
	Globally Harmonized System (GHS) of Classification and Labelling	Yes	NO
	Information management and dissemination	Yes	Yes
	Highly toxic pesticides risk management and reduction	Yes	NO
	Life Cycle management	Yes	Yes
	Creation of National and International Registers	Yes	Yes
	Use of Indicators to monitor children's environmental health	Yes	Yes
GOVERNANCE			
	International Chemicals and waste conventions-promotion of ratification and synergies	Yes	No
	Stakeholder participation in decision making processes	Yes	NO
	Assessment of national chemical management to identify gaps and prioritize action	Yes	NO
	Implementation of integrated national programmes for sound management of chemicals	Yes	Yes
	GHS (review of national legislation and align with GHS requirements)	Yes	NO
	Social and economic considerations	Yes	Yes
	Legal, Policy and institutional aspects	Yes	Yes
	EIAs to include chemicals and hazardous waste	Yes	Yes
CAPACITY BUILDING AND TECHNICAL COOPERATION			
	Capacity-building to support national actions	Yes	Yes
	Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals	Yes	NO
	Remediation of contaminated sites and poisoned individuals	Yes	Yes
	Capacity to implement GHS	Yes	Yes
	Waste management	Yes	Yes
ILLEGAL AND INTERNATIONAL TRAFFIC			
	Prevention of illegal traffic in toxic and dangerous goods	Yes	Yes

14. **BIBLIOGRAPHY**

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3. Nigeria Industrial Directory (2005)
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15. Annexes