

**REPUBLIC OF KENYA**



**MINISTRY OF ENVIRONMENT AND MINERAL RESOURCES**



**DRAFT  
IMPLEMENTATION PLAN FOR  
STRATEGIC APPROACH TO INTERNATIONAL CHEMICAL  
MANAGEMENT (SAICM)  
IN KENYA**

**October 2011**

The project “Strengthening Capacities in Kenya for National SAICM Implementation” was developed with the technical assistance of the United Nations Institute for Training and Research (UNITAR) and the financial support of the Strategic Approach to International Chemicals Management (SAICM) Quick Start Programme Trust Fund.



**unitar**

United Nations Institute for Training and Research

## EXECUTIVE SUMMARY

The Strategic Approach to International Chemicals Management (SAICM) objective is to achieve the goal of the Johannesburg World Summit on Sustainable Development that by 2020 chemicals should be produced and used in ways that lead to the minimization of significant adverse effects on human health and the environment. Accordingly to facilitate SAICM implementation, Kenya has developed a national chemicals profile, draft Terms of Reference for interministerial coordination mechanism and has carried out its SAICM implementation capacity assessment. The profile and capacity assessment that Kenya is faced by risks posed by chemicals and hazardous waste and all possible interventions in chemicals production, import, export, use, transport and disposal are all a priority in Kenya.

From these processes has come this implementation plan for SAICM in Kenya. It has its priorities, key actors, sub activities and timelines.

It has been developed by representatives of stakeholders involved in chemicals management coordinated by the Ministry of Environment and Mineral Resources assisted by the United Nations Institute for Training and Research through SAICM Quick Start Trust Fund. This present plan endeavours to address how Kenya is to implement SAICM, address chemicals risks measured by those indicators<sup>1</sup>.

### The SAICM Implementation Plan

The plan follows the guidelines in SAICM Secretariat/UNITAR's *Guidance for Developing SAICM Implementation Plans* (2009).

Chapter 1 gives the background of the plan. The SAICM Implementation Plan for Kenya (2011-2014), has as its goal the reduction of risks to human health and the environment arising due to chemical exposure. The plan focuses a priority list risks and hazardous activities that have been identified by stakeholders as critical, urgent and of the highest priority to Kenya. It provides a framework and actions of how, who and where Kenya needs to address risks posed by chemicals and hazardous waste. It proposes methodologies to strengthen national processes policies, legislations, commissions, education programmes, information network, etc to facilitate the implementation of chemicals risk reduction and management activities at the national, county and enterprise levels drawing from the outputs of the National Chemicals Profile and the submissions of the SAICM stakeholders during the process of capacity assessment and stakeholder consultation.

Chapter two gives the vision and objectives and chapter three describes the base on which it will lie, since its achievements could have immense potential benefits for Kenya providing structure, focus, and control to chemicals. It will be achieved through strategies and project planning and execution that save time, effort, resources, and reduce the risk to human health and the environment. Recognizing that chemicals risk reduction involves everybody, it will assist with communication, coordination, commitment and coordination of ongoing programmes. In the short term, it might increase likelihood of mobilizing international funding and facilitate monitoring of SAICM implementation and promoting regular evaluation of the plan in an integrated manner for chemicals and hazardous waste in Kenya.

The plan has a short (2011-2015) and long term component (2011-2019). Its implementation framework represents what stakeholder agree is are realistic and attainable, strategies, capacities building through mainstreaming chemicals in institutional national policies, strategies and development activities and with bilateral and multilateral initiatives in Kenya,. It will allow Kenya's main chemicals management needs to be met and to monitor impacts of SAICM implementation in line with Kenya's international commitments.

It is fundamental to obtain its diffusion by all stakeholders. Government institutions, civil society organizations and disciplines that take part in chemicals management to processes in Kenya will

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<sup>1</sup> Annex 1

through this plan have activities that promote practical ways of risk reduction because basically all activities address the persistent problem of health, the lack of adequate financial resources, the lack of prioritization of sound management of chemicals are of critical interest to stakeholders.

Chapter three therefore describes how the plan builds on current situation for chemicals and wastes in their life cycle. Chapter one addresses the sector linkages while chapter 2 defines the goals. Chapter 3 is the situational analysis building from pure chemicals to hazardous wastes. The actions are derived from SAICM Global Action Plan work area. From them it identifies and proposes priority objectives, activities, and timelines, and actors, measures of progress and implementation modalities especially the link between chemical safety and sustainable development needs being fully reflected in national budgeting processes under medium Term Expenditure Framework, multilateral project funding and on capacity building of bilateral development cooperation agencies.

Chapter four is on the strategy. Key activities are to reinforce coordination mechanisms with international support especially with the intergovernmental Organisations in chemical safety as well as funding institutions. Partnership projects will include concepts to strengthen the institutional and technical capacity of Kenya to implement SAICM at national and regional level especially to and set up a national Integrated Information Network and chemicals database on chemicals and hazardous substances. Partners will be support each other in the for formulation of prevention and response measures to mitigate environmental and health impacts of emergencies involving chemicals and hazardous substances; prevent adverse effects of hazardous substances on the health of children, pregnant women, fertile populations, the elderly, the poor and susceptible environment and to respond to highly toxic pesticides, POPs, mercury, electronic waste, and globally harmonized classification

Chapter four describes the operationalisation of the SIP Through activities of NEMA special attention will be given to training on enforcement and compliance and in this regard this SIP presents a draft charter for interministerial coordination. To fulfil Kenya's need for information-sharing, especially on chemical safety and the potential hazardous chemicals in products, strengthening the engagement of multiple stakeholders in sound chemicals management across sectors the plan will promote synergies between multilateral environmental agreements that Kenya is party in the chemicals and waste cluster in order to achieve the goals of the national and international chemicals agendas. To address worker and public safety the plan will as a priority strengthen the implementation of systems for the prevention of chemical and industrial accidents and for emergency preparedness and response. It will address ICCM agreed indicators of progress and implementation means, possibly with ministries departmental and enterprise targets and timetables to assess progress on implementation of measures taken to minimize risks at sub regional, national and county levels.

However, environment, health and chemical sector managers have been identified. Of critical importance will be the department of Multilateral Environmental Agreements in Directorate of Environment in the Ministry of Environment and Mineral Resources. It is proposed that A SAICM Coordination Office be established which will serve the SAICM Implementation Committee (SIC). SIC will lead in decision-making on chemical safety and strengthen cooperative action on policy issues including emerging ones such as nanotechnology, biotechnology, and e-waste. The activities are detailed in the Gantt Chart Annex 1.

The trigger actions will be:

- (a) Setting a permanent SAICM Coordination Office to oversee the implementation
- (b) Identifying relevant stakeholders that will be involved with chemical safety;
- (c) Establishing communication mechanisms with stakeholders;
- (c) Providing opportunities for stakeholder representatives to participate in planning, for example by inclusion in national coordinating committees, where appropriate, and
- (ci)Developing partnership projects

According to the UNITAR guidance the SAICM work areas are too many to address once. The guidance recommends prioritisation. For this reason, the SIP will have 13 priority programs as shown

in the summary table. For each activity or task a trigger action is proposed. To assist address where to start, where such action is ongoing it is marked by symbol (✓) and where there is no action, it is so indicated by X.

Financial resources are important; a rough estimate is made of the total costs. In this regard, to assist in capacity building and technical cooperation, a leading member of the intergovernmental organisation on chemicals management is indicated. At the end is a suggested timeline for the activity. The total start up budget is estimated at Kshs 523 million, spread in all participating institutions this represents. This represents 0.05% of Kenya's budget for the financial year 2011/2012.

As chemicals contribute 6% of Kenya's gross domestic product, mainstreaming 0.05% of chemicals programmes into development processes should not be a challenge.

## ACRONYMS

AOP	Annual Operational Plan
ASP	African Stockpiles Project
BAT	Best Available Techniques
BEP	Best Environmental Practices
DOHSS	Department of Occupation Health Safety Services
EAC	East African Community
EIA	Environment Impact Assessment
EMCA	Environment Management and Coordination Act
FAO	Food and Agriculture Organisations
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GHS	Globally Harmonised System of Classification
GoK	Government of Kenya
GPA	Global Plan of Action
ICCM	International Conference on Chemicals Management
IGOs	Intergovernmental Organisations
ILO	International Labour Organisations
IOMC	Inter-organization Programme for the Sound Management of Chemicals
IPM	Integrated pest management
IPM	Integrated Pest Management
ISWM	Integrated Solid Waste Management
IVM	Integrated Vector Management
KARI	Kenya Agricultural Research Institute
KEBS	Kenya Bureau of Standards
KEMRI	Kenya Medical Research Institute
KEPHIS	Kenya Plant Health Inspectorate services
KNCP	Kenya National Chemicals Profile
MDGs	Millennium Development Goals
MEA	Multilateral Environment Agreement
MEMR	Ministry of Environment and Mineral Resources
MF	Ministry of Finance
MOE	Ministry of Education
MTEF	Medium Term Expenditure Framework
MOH	Ministries of Health

NCP	National Chemical Profile
NEC	National Environment Council
NEMA	National Environmental Management Authority
NEMA	National Environment Management Authority
NET	National Environment Tribunal
NGOs	Non-Governmental Organizations
ODS	Ozone Depleting Substances
OPS	Overarching Policy Strategy of SAICM
OSHA	Occupational Safety and Health Act
PCBs	Polychlorinated biphenyls
PCPB	Pest Control Products Board
PIC	Prior Informed Consent of Rotterdam Convention
POPs	Persistent Organic Pollutants
PPP	Public Private Partnership
PRTR	Pollutant Release and Transfer Register
SAICM	Strategic Approach to International Chemicals Management
SERC	Standards and Enforcement Review Committee
TOR	Terms of Reference
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for training and Research
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

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# 1 BACKGROUND

## 1.1 Strategic Approach to International Chemicals Management

In 1992, 150 countries adopted the principles in the *Rio Declaration and Agenda 21*, recognizing the importance of investing in improving human health and the environment as an indispensable prerequisite for achieving sustainable development in the 21st Century. The subject of environmentally sound chemicals management is raised in Chapter 19 of Agenda 21, as a key element for achieving socially and economically sustainable development at global, regional and national levels. It further drives the objective of Chapter 9. In 1994, the International Conference on Chemicals Safety was convened, at which the Inter-Governmental Forum on Chemicals Safety (IFCS) was established. This Forum agreed on the priority actions for the implementation of the programme areas of Chapter 19 of Agenda 21 of the United Nations Environment Programme (UNEP). Since then, Kenya has developed the National Environment and Action Plan of 1994 and the sessional paper on environment and development of 1999.

The World Summit on Sustainable Development (WSSD) in Johannesburg in September 2002 established that, by 2020, chemicals should be used and produced in ways that lead to minimization of significant adverse effects on human health and the environment. In support of this goal, the International Conference on Chemicals Management (ICCM) in February 2006 in Dubai adopted SAICM composed of an overarching strategy and the Global Action Plan (GAP)<sup>2</sup>. SAICM takes into account existing initiatives such as the Basel, Stockholm and Rotterdam Conventions. Apart from the adopting SAICM, Kenya has taken steps geared towards capacity-building in chemicals management and implementation of national and regional chemical and wastes initiatives.

To support the SAICM process at the regional level, the Ministers of Health and Environment of Africa adopted the Libreville Declaration in 2008 on linkages on health and environment.<sup>3</sup> It was agreed to continue the actions necessary to implement SAICM and integrate the health and environmental sectors. This reflects the need and willingness to achieve sound chemicals management across inter-ministerial mandates.

## 1.2 Implementation of SAICM in Kenya

In November 2010, a SAICM National Stakeholders Meeting for Kenya was held, with the participation of national chemicals stakeholders<sup>4</sup>. The priorities were selected based on priorities identified in the national chemical international efforts to establish SAICM as the integrated approach facilitating the sound management of chemicals in Kenya.

The EA Sub region<sup>5</sup> has initiated steps to develop appropriate coordination arrangements<sup>2</sup> according to their specific circumstances. Such arrangements could include the establishment of East African

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<sup>2</sup> *Strategic Approach to International Chemicals Management: SAICM Texts and Resolutions of the International Conference on Chemicals Management* (ISBN 978-92-807-2751-7).

<sup>3</sup> Libreville Declaration is available in the website of UNEP Regional Office for Africa

<sup>4</sup> Report of the national Workshop on capacity assessment , [www.environment.saicm.go.ke](http://www.environment.saicm.go.ke)

regional SAICM coordination mechanisms for all stakeholders, including representatives of Governments, organizations, the private sector, civil society, etc. The functions of such mechanisms could include:

- Facilitating full involvement of all stakeholders in SAICM implementation in sub-region on issues of cross border relevance.
- Facilitating coordination through available political, legal and institutional mechanisms;
- Facilitating exchange of information between countries in the sub region;
- Identifying and mobilizing available institutional support in the sub regions, for example from East African regional secretariats, ministerial forums, etc.

#### **1.2.1 Rationale and Context of the National SAICM Plan**

The Overarching Policy Strategy identifies the functions to develop appropriate institutional arrangements according to their national circumstances<sup>6</sup>. Such arrangements include the establishment of a national coordination mechanism, such as an inter-ministerial committee for all stakeholders, including representatives of Governments, organizations, the private sector, civil society, etc.

The key elements of an action plan are given below:

- (a) National, circumstances;
- (b) Institutional arrangements;
- (c) Financial Resources;
- (d) Implementation arrangements, triggers and sustainability;
- (e) Reporting, monitoring and evaluation;
- (f) Stakeholders engagement;

#### **1.2.2 Overview of the Participation and Preparation Process**

The Kenyan SAICM Committee<sup>7</sup> will serve as the national coordination mechanism. Functions of the committee will include:

- (a) Facilitating full involvement of all stakeholders in SAICM implementation in Kenya;
- (b) Facilitating progress reporting on Kenyan implementation;
- (c) Facilitating information exchange within the Kenya and with other regions;

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<sup>5</sup> The Current members of the East African Community include Kenya, Tanzania and Uganda. Rwanda and Burundi are in the process of becoming members.

<sup>6</sup> Report of EA SAICM Workshop

<sup>7</sup> This was the recommendation of the Workshop on Legal and institutional strengthening for East African region held in Dar Es Salaam in November, 2010

### 1.2.3 Linkage to National Development Strategies

The concept of “mainstreaming chemicals management into development process” is important in understanding the linkages between chemicals and poverty reduction by translating chemicals management into a language understood by development and finance ministries. There is also need for sectors to address each other. Partnerships among Governments, intergovernmental organizations, the private sector and other stakeholders on the ground are essential for implementation of the SAICM and the legal instruments on chemicals.

Sustainable development can add value to the existing chemicals processes by mainstreaming risk concerns into the broader context of sustainable development, linking chemicals to climate change, energy, health awareness and prioritizing chemicals management in the national development planning, enhancing synergy among existing mechanisms and legal instruments, and promoting life cycle approach. Fig 1 is a graphic representation of the life cycle representing production, extraction as mined products use transport and disposal upon becoming waste and some of the sectors involved in chemicals management.



**Fig1. Chemicals Life cycle**

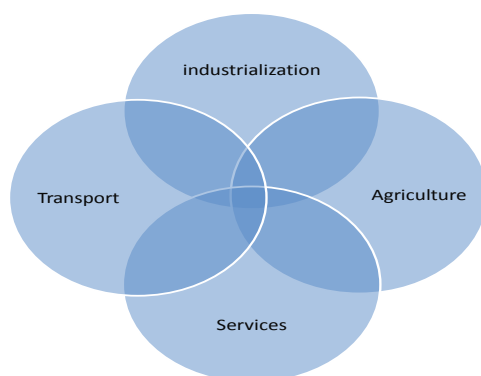
Establishing links between the management of production, use and disposal of chemicals with other sectors need not be solely focused on protecting the environment and health, but may also ensure Economic benefits as a cross cutting issue. The National Capacity Assessment Workshop held in November 2010 established critical links to chemical management priorities for Kenya. The implementation plan is therefore expected to offer cross sectoral overarching objectives such as “pro-poor growth” exemplified in Economic stimulus

programmes<sup>8</sup> or “fiscal sustainability” that involves a series of sectoral targets and measures with direct link to environment and health issues. Table 3 shows possible targets for Kenya.

**Table 1: Examples of targets for various sectors**

<b>Agriculture</b>	<ul style="list-style-type: none"> <li>• Phase out of ODS – e.g. methyl bromide</li> <li>• Phase out of class I and II pesticides</li> <li>• Introduction of organic fertilizers</li> <li>• Compliance to Maximum Residue levels for agriculture and fisheries products</li> </ul>
<b>Industry</b>	<ul style="list-style-type: none"> <li>• Phase out of CFCs and ODS solvents</li> <li>• All manufacturers adopt cleaner production</li> <li>• Efficient implementation of ISO 14000 EMS</li> <li>• Enterprises embark to implement BAT/BEP Guidelines</li> <li>• All meet environmental audit targets 100% of EMCA</li> <li>• Phase out of lead containing products</li> </ul>
<b>Transportation</b>	<ul style="list-style-type: none"> <li>• Antioxidants, sulphur</li> <li>• Phase out of ODS products</li> </ul>

## Interrelation between Sectors



**Fig 2 Interrelationship of sectors**

There is quite a lot of intersection among sectors. Many chemicals cut a cross sector. For example water is a medium of transmission to all. Of the toxic chemicals classic example is DDT which used for agriculture as well as the control of malaria carrying mosquitoes. Lindane is another pesticides commonly also used as pharmaceutical to control head lice. In transport petrochemicals and petroleum based products are used in energy, agriculture and services. They pose the same risks of flammability, ignitability and can be toxic at certain circumstances.

<sup>8</sup> Economic Stimulus Programme, *Kazi Kwa Vijana* Youth Empowerment Programme Office of the Deputy Prime Minister and Minister for Finances.

## **2 GOAL AND OBJECTIVES**

Given that the SAICM implementation process has achieved some progress at the international and regional levels since its entry into force in 2003, it should be clarified that the present proposal for the SAICM Implementation Plan for Kenya has been developed within the general framework of this process (which includes the three basic texts of the SAICM negotiations: the Overarching Policy Strategy, the Global Plan of Action, and the Dubai Declaration), while taking into account the particular characteristics of the countries in this region, such as priorities and funding opportunities to implement actions.

This plan was elaborated on the basis of activities which have been carried out by the Kenyan Committee on Chemical Safety since its establishment.

### **2.1 Goal**

To have a national strategy and program for sound management of chemicals that will ensure that Kenya meets the WSSD goal that by 2020 chemicals are produced and used in ways that do not adversely affect human health and environment

### **2.2 Broad Objective**

To build on programs and develop initiatives of sound chemicals management being undertaken by various stakeholders addressing the inadequacies, coherence, synergy and coordination

### **2.3 Specific Objectives**

The implementation plan is built on recommendations contained in the Kenya National Chemicals Profile and The Capacity Assessment that were developed in 2011. The KNCP analyses the status, strengths gaps and remedies to sound chemicals management. This needs to be reviewed in the periodic strategic plans of institutions, annual work plans and development plans. The 15 specific objectives are:

- Objective 1: National coordination regarding chemicals issues among decision-makers and the public by putting chemicals-related issues higher on the country's development priority list; and those responsible for chemicals issues improve their knowledge of external funding opportunities – and details of the process of obtaining such funding.
- Objective 2: Developing an emergency preparedness/response plan in all local authorities and enterprises to promote Management of Chemicals at National Level
- Objective3: Promoting technology transfer, cleaner production, industry and civil society participation in chemicals management
- Objective 4: Enhancing laboratory services, research for monitoring of pollutants and assessment of alternatives to toxic chemicals
- Objective 5: Implement Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
- Objective 6: Capacity building in the identified institutions related to risk assessment, including the generation and utilization of data and its storage in a chemicals databank.
- Objective 7: Establishing effective financing mechanisms through inclusion of chemicals programme in Medium Term Expenditure Framework process.
- Objective 8: Promote safer alternatives as suggested by the National Implementation Plan, the PIC and the mercury but not implemented.

- Objective 9: Address governance and advocacy issues
- Objective 10: Capacity Building and Technical Cooperation
- Objective 11: Technical and Financial Resource Mobilisation
- Objective 12: Resources Mobilisation at Local and enterprise levels
- Objective 13: Develop, finance and implement Partnership Projects
- Objective 14: Promoting East African Regional Cooperation on chemicals issues
- Objective 15: Monitoring and Evaluation of SAICM implementation in Kenya

### 3 SITUATION AND GAP ANALYSIS

#### 3.1 National Information

The current population of Kenya is estimated at 38.6 (2009 census) million. Agriculture, manufacturing and services are the major sectors consuming toxic chemicals. Agriculture dominates Kenya's economy accounting (with forestry and fishing) for about 24 % of GDP and is the largest consumers of chemicals followed by manufacturing, with 13%. The other is the informal sector, which is large and growing. It currently employs about 40% of the labour force and uses chemicals in the small industries as well as services. The sector contains small-scale and unregulated activities of chemicals use and it is in these activities that the impacts of toxic chemicals and wastes on human population and the environment are mostly manifested.

#### 3.2 Chemicals Production, Import, Export and Use

According to the Kenya National Profile, Kenya is not a major producer of chemicals. However, there is extensive extraction of minerals that contributes to manufacturing process, including soda ash, fluorspar, diatomite and titanium. The main manufacturing enterprises, both large and small, represent an estimated 6% of the GDP. Transport and energy sectors use petrochemicals products and generate toxic waste from service stations, garages, etc. It also uses thereby chemicals in power generation from fossil fuels, batteries, oil, refrigeration/metal treatment, etc.

In addition, rapid expansion of the agricultural sector has resulted in increased demand for agrochemicals. However, Kenya does not have pesticide-manufacturing facilities and only formulates. The active ingredients are imported and the formulation carried out locally. This activity is associated with dust; offensive smells and related air pollution issues. Most of the industries have installed dust control equipment for indoor environment. Approximately 8370 metric tonnes of pesticides with a value of Ksh 4.68 billion were imported into the country in 2005, and with a round figure of 5-7,000 tons per year. In the year 2005, more insecticides were imported in comparison to other pesticides. These include fumigants, rodenticides, growth regulators, defoliators, proteins, and wetting agents. Data is based on applications for importation of pest control products for commercial purposes approved by the Pest Control Products Board in Table 1.

**Table 2: Volume and value of pesticides imported in 2005**

Category	Quantity in Kg.	Value in Ksh
Fungicides	2,490,421.07	1,492,432,125.78
Herbicides	1,909,757.60	833,766673.43
Insecticide	2,960,230.00	2,100,159,886.85
*Others	1,010538.40	248,774,625.00
<b>TOTAL</b>	<b>8,370,947.07</b>	<b>4,675,133,311.06</b>

Source: Agricultural Association of Kenya

Approximately 65 metric tonnes worth KSHS 52million were exported from Kenya to the neighbouring countries mainly (Burundi, Uganda and Tanzania) .The pesticides exported were mainly cypermethrin, sarbofuran and chlorfenvinphos.



The operators need to focus on treating/recovering the collected dust which is part of their products. These products impact on the environment during usage. The accompanying wastes comprise organo-chlorines or organophosphate compounds, which are indiscriminately disposed of in the environment. Importation, exportation and use of pesticides are regulated under Pest Control Products Act, while stockpiles and waste are controlled under relevant Multilateral Environmental Agreements (MEAs).

Pesticides impacts are adequately covered in the National Kenya Profile.

Manufacturing chemicals are varied and diverse. There has not been proper documentation of quantities, especially for low volume and highly toxic ones.

Petroleum is the key large volume chemicals manifestly flammable, hazardous, and toxic. Of the large scale industrial chemicals, plastics industry is the most developed and produces goods made of Polyvinyl Chloride (PVC), polyethylene, polystyrene and polypropylene. Most raw materials are imported in the form of granules. There are about one hundred and seventy registered manufacturers of plastics of various grades. Some are associated with serious environmental and health implications, especially pungent smells, etc.

### **3.3 Hazardous Waste**

For purpose of the SAICM Implementation Plan, waste streams are as defined by the Basel and Bamako Conventions, which have been used by NEMA to develop waste regulations and guidelines. They include industrial waste (21%) residential waste (61%), agricultural waste (10%), clinical waste (8%), and services.

It is estimated that the bulk of hazardous and toxic waste enter the environment as liquid waste. Most liquid waste containing hazardous waste is discharged into water resources or carried by runoff, eventually ending in surface water and ground water. Of the 172 local authorities, only 32 have some form of sewage treatment and disposal facilities. Nairobi and Kisumu cities are some of the local authorities with conventional treatment plants and thirty (30) local authorities have oxidation lagoons, which can only treat organic waste and are not able to treat toxic chemicals. Much hazardous waste sludge from these treatments works end up as run-off.

#### **3.3.1 Industrial Waste**

Sources of industrial hazardous mixed waste include:

- 14 tanneries;
- Petrochemical Industries;
- Chemical based Industries;
- Iron and Steel Scrap refining factories;
- Non ferrous Metals refining for cadmium, chromium;
- Motor vehicle and automotive components manufacturers; etc.

#### **3.3.2 Landfills and Contaminated Sites**

A programme to reduce general air pollution in compliance with EMCA and the Stockholm Convention is under way. It is addressing dioxins and furans. Nearly every local authority has a designated dumping site which is erroneously called a landfill which is often abandoned quarries. There is currently no sanitary landfill although one is planned for and for that reason generally all past and present dump sites are regarded as contaminated. They include Dandora Dumping Site, with over

1 million tons, Kangoki Dumping Site in Thika, which serve a large number of chemical and leather industries. Approximately 500 tons of hazardous residues are in many of abandoned factory sites.<sup>9</sup>

### 3.4 Risks

There have been reported accidents during manufacturing, transport, use, and disposal of chemicals. Many of the cases are rarely documented. The manifestations include:

- Proliferation of water weeds such as the water hyacinth in Lake Victoria and *Sylvania molesta* in Lake Naivasha is an indicator of impacts
- Frequent cases of livestock deaths near places with identified hazardous waste
- Sporadic flamingo deaths alleged because of toxic waste streams from identified hazardous waste sources
- A number of reported diarrhoeal and cholera symptom cases due to drinking polluted water from factories dealing with chemicals that lead to hazardous waste.

There has not been systematic documentation of case.

#### 3.4.1 Risk Reduction Efforts

There are many initiatives undertaken by industry to control chemicals and waste management, including traditional pollution control, measures, Implementation of Environmental Management Systems, especially ISO 14000EMS Certification. Many enterprises now are on cleaner production programs and Kenya has company of the year Awards (COYA) in which environmental performance is considered.

##### 3.4.1.1 Stakeholder Participation

SIP will tap into the stakeholder efforts by programmes of NEMA, and KAM to promote corporate partnerships and promote Corporate Responsibility because if businesses reduce waste production and manage the rest of the waste in the best way possible, business benefits that can be expected, savings are made on waste collection and disposal costs, eliminating unnecessary wastage of raw materials and resources. Former waste materials are turned into resources; extra reasons for customers to choose company products and services, through being seen as a 'green and clean' business. A key benefit is that it reduces the risks and liabilities of r business through full compliance with legal requirements, licenses and standards. While industries must report the type of waste they produce they are not obliged to disclose the amount of waste they generate, it therefore calls for good working ethics for each company to monitor how much they produce and set up reduction activities. It is the duty of all industries to look into ways of striking a balance between achieving economic goals and environmental protection. This will ensure continued survival for both industries and future generations. SIP will:

- To ensure that knowledge and information on hazardous substances and hazardous substances management are sufficient to enable hazardous substances to be adequately assessed and managed safely throughout their life cycle;
- Formulation of prevention and response measures to mitigate environmental and health impacts of emergencies involving hazardous substances; and
- Prevention of the adverse effects of hazardous substances on the health of children, pregnant women, fertile populations, the elderly, the poor and susceptible environment.

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<sup>9</sup> National Report to the 8<sup>th</sup> Meeting of the conference of the parties to the Basel Convention

### 3.4.1.2 Private Sector Partnerships

industries and private companies have obligations to address chemical issues unidentified under their environmental impact assessment, audits, dictates of markets and home grown corporate responsibilities. How a company manages its business processes to generate stakeholder value, while having a positive impact on the community and minimizing any adverse impact on the environment. Companies will be encouraged to consider integrating chemical issues to core values with business activities addressing potential threats to natural resources, threats to human health from generated wastes and incentives for waste generation reduction for recycling of that which is generated.

### 3.4.1.3 Civil Society Involvement

There is an ever increasing but still very low level of chemicals and waste management consciousness in the Kenya society, understanding that chemicals must be managed in a sound way and that waste needs to be collected and disposed of in an environmentally safe way, and that recovery of reusable matter and technique of disposal can pay for much of the service. The Capacity Assessment Report details this inadequacy as a key barrier.

### 3.4.1 Trade Related Risks

Trade is a critical chemicals issue as Kenya is an exporter of commodities susceptible to contamination when environmental pollution occurs. For example, the Lake Victoria Environment Monitoring Program and the Fisheries Department has since 2004 been monitoring pesticide residues in fish, water and sediments. The monitoring is a requirement by the European Union for fish export from Kenya to the region. The fish export ban to the European Union (EU) in the late 1990s was lifted after Kenya produced convincing analytical results on the safety of the fish in relation to pesticide residues<sup>10</sup>. World Trade Organization (WTO) notifications and the European Union (EU) Directives and Regulations related to pesticides, places the organization in a consultancy position for food commodities exporters, and non-agricultural chemical users. This monitoring Table 3 shows chemical elements critical to sectors that use chemicals.

## 3.5 Illegal Trade

SAICM OPS objective 6 is on reduction of international illegal trade. In relation to this, it is important to note that Kenya is a transit state for chemicals into the East and Central African region. Key institutions can support reduction in international illegal trade.

Illegal traffic occurs if the transboundary movement of hazardous wastes takes place under the following conditions:

- without notification pursuant to the provisions of the Basel Convention to all States concerned (i.e. Parties which are States of export or import, or transit States, whether or not Parties to the Basel Convention); or
- without the consent of a State concerned; or
- through consent obtained by falsification, misinterpretation or fraud; or
- when the movement does not conform in a material way with the documents; or
- when the movement results in deliberate disposal of hazardous wastes in contravention of the Convention and of general principles of international law (Article 9).

These conditions were seen as prevalent.

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<sup>10</sup> Report of the Kenya Plant Health Inspection Services (KEPHIS) 2005

### **3.5.1 Export**

Section 91 Subsection 4 of EMCA states that no hazardous waste shall be exported to any country from Kenya without a valid permit granted by NEMA and a Written Consent given by a competent authority of a receiving country.

The Kenya National Profile notes that this is not happening, especially while in transit.

### **3.5.2 Transit Wastes**

Section 91 Subsection 5 of EMCA states “No Hazardous Waste shall be transported within or through Kenya without a valid permit granted by NEMA”. Many requests come from France, Netherlands and Britain.

The Basel Convention recognized the right of countries to prohibit the import of hazardous wastes. The Convention obliges parties to prohibit the export of hazardous wastes to countries exercising this right, as well as to non- parties to the Basel Convention (article 4). Exporting countries need the legal and institutional infrastructure necessary to prohibit the export of hazardous wastes and potential importing countries need the infrastructure to prohibit their import.

For Kenya, there is a lack of the technical expertise necessary for the proper identification of elements of imported hazardous waste and its human health and environmental impacts. Exporting companies are aware of this lack of technical expertise on the part of these destination countries; hence they often disguise the hazardous wastes as useful commodities that are relatively harmless.

## **3.6 Emergency Preparedness**

Disaster and emergency preparedness level in the country for the management of chemical related accidents is nonexistent. There have been several large scale accidents that have put the need to have this preparedness top priority. The implementation matrix has done this (Annex 3), the record of small scale accidents that have occurred are indicators of the need to put in place structures at national and local levels that will be able to respond rapidly and efficiently.

## **3.7 Priority Concerns Related to Chemicals Production, Import, Export and Use**

The priorities identified related to chemicals production, import, export and use relate to governance and national sound chemicals management.

### **3.7.1 Governance**

Good governance can ensure that chemicals management issues are “mainstreamed” into national development planning. Kenya is faced with challenges that will affect how well it can meet international obligations in the various Multilateral Environmental Agreements (MEAs).

#### **3.7.1.1 Gaps**

There are many regulations on chemicals that would need reviewing and harmonizing to provide the basis for governance and coordination among stakeholders, improve the capacity to comply, enforce

and meet international commitments, regulations on the sound management of chemicals are fragmented and scattered in different pieces of legislation which makes it difficult to enforce; there are important initiatives being undertaken.

The SIP development process showed that to mobilize resources following gaps need consideration;

- i. Low priority given to toxic chemicals issues on the national agenda;
- ii. Absence of a clear national chemicals management policy;
- iii. Revenues from chemical safety-related legal procedures (e.g. fees, taxes, fines) flowing into national treasury or ministries without adequate “recycling” of funds for strengthening the national chemicals management infrastructure;
- iv. Absence of a planning capacity strengthening strategy for the improvement of chemicals management at the national level and lack of knowledge on how to design such a strategy;
- v. Lack of a central co-coordinating body that can, facilitate the exchange of information concerning the financial aspects of chemicals management;
- vi. Instruments that provide incentives for industry and trade to contribute to an adequate national chemicals safety/management infrastructure; and
- vii. Inadequate knowledge on procedures to explore and obtain external financial assistance

#### **3.7.1.2 Obstacles and challenges**

A number of obstacles have contributed to the failure to date to fully integrate sound chemicals management into national development strategies. These include:

- i. The perception that chemicals management is strictly an environmental issue, not a public health and development issue;
- ii. Insufficient data about occurrence and distribution of many chemicals and chemicals in products;
- iii. Failure in communication among government agencies preparing applications for development assistance;
- iv. A lack of coordination between various ministries and specialised with respect to chemicals management;
- v. A heavy focus in public health assistance on curing infectious diseases, rather than preventing chemical-related diseases

In general, Kenya does not have a National policy on chemical safety but relies on international norms and practices. Development of the National Environment policy is still in the process of being concluded. In addition, Kenya does not have a comprehensive legislation on chemicals safety. It is rather found in a multiplicity of legislations covering aspects of safety, health, use of pesticides, chemicals, waste management. It also lacks legislation on industrial chemicals (used in manufacturing/processing facilities) and consumer chemicals.

#### **3.7.1.3 Institutional gaps**

The important institutional gaps are:

##### **i) NGOs and Community Based Organizations**

Currently, there are very few non - governmental organizations (NGOs) involved in SAICM Implementation. This is mainly due to the fact that this is a highly technical area, which requires high level of training, which is often lacking in many NGOs. Capacity needs to be built.

## **ii) Enforcement**

Cases of poisonings, misuse of pesticides, etc., sometimes take too long to be prosecuted and thus justice is either denied or delayed. Pest Control Products Board is required to collect evidence and present it to the State Law office for prosecution. This often takes too long. There has been a desire that PCPB be upgraded to corporate status so thus it can be able to address this lack of capacity as this status or identity of the PCPB can hasten investigation and prosecution of cases without referring to the Attorney General.

## **iii) Customs**

There are capacity gaps for customs officers to manage chemicals in international trade with regard to description, labelling, packing, handling and hazard classification of goods. There is inadequate screening and analytical laboratory equipment for fast and effective identification and monitoring of illegal and dangerous chemicals, entering into Kenya. This needs upgrading.

## **iv) Analytical**

There are gaps in laboratory capacity and finance to enable it improve monitoring and enforcement of regulations related to chemicals and wastes. Most of the equipment in the specialised departments are over nine years old and most facilities are not operational. Financial constraints have limited modernization resulting in the necessity of out-sourcing of some services.

There is a need to equip the laboratories of the institutions/counties with modern, efficient chemical monitoring equipment at all the provincial offices and addressing capacity building issues.

### **3.7.2 Programmatic National Framework for Sound Chemicals Management**

Integrating chemicals management into national development priorities in a coordinated and programmatic manner is the single most urgent action that could support SAICM implementation as, according to stakeholders, all the objectives of SAICM overarching policy are of high priority.

The detailed assessments and categorization are contained in worksheets provided in Annex 3 to this assessment report.

## **3.8 National list of priorities for action**

A list of priorities has been identified that suggests that especially Kenya needs to put in place better and more efficient working relationships between stakeholders involved in chemicals and waste management.

These priorities are given below, not in any order of importance. Sectors will now further prioritise them.

- a. Establishing an inter-institutional national coordination mechanism
- b. Develop integrated national chemicals management programmes
- c. Successful sound chemicals management programmes be replicated and where possible up-scaled in other towns and counties aside from just concentrating them in Nairobi and Mombasa
- d. Establishing effective financing mechanisms and Government expenditure budgeting by mainstreaming chemicals programmes into the Medium Term Expenditure Framework (MTEF) process

- e. Building capacities to enable access to international funds and develop systems for socio-economic considerations; enhance systems for liability and compensation under the Basel Convention on liability and redress.
- f. Promoting safer alternatives (NIP for PBTs POPs and develop programmes addressing mercury and other chemicals of global concern)
- g. Develop programmes to deal with highly toxic chemicals, especially lead, cadmium, mercury, in addition to ODS, and POPs, which are highly toxic chemicals and chemicals of global concern (global, regional and national concern)
- h. Strengthening implementation of regulations on pesticides handling, development of regulations on transportation of pesticides
- i. Implementing the Globally Harmonised System of Classification and Labelling of chemicals (GHS)
- j. Safe use, storage, and transportation of industrial chemicals, through the development of regulations on toxic chemicals
- k. Development of a Pollutant Release and Transfer Register (PRTR)
- l. Strengthen enforcement of OSHA
- m. Effective regulation on promotion of industry participation and responsibility.

### 3.9 Cross Sector Issues

Chemicals and waste management is a multi-sectoral issue. Table 3 presents sectors involved in chemicals and waste management in Kenya.

**Table 3. Sectors Relevant to Chemicals Management and Chemicals of Importance**

Sector	Relevance/chemical categories
Agriculture, Fishing, Forestry	Fertilizers, pesticides, persistent organic pollutants (POPs), Polychlorinated Terpenyls, Ozone Depleting Substances, Mercury, Lead, Nitrates
Energy and Mining	SO <sub>2</sub> , NO <sub>x</sub> , Polychlorinated biphenyls, Dioxins, Volatile organic carbons, Heavy Metals, Lead, Fluorides, Mercury
Health	POPs, Particulates (SO <sub>2</sub> , NO <sub>x</sub> ), Dioxins, DDT, Mercury, Fluoride
Industry and Trade	Basic chemicals, VOCs, metals, Polychlorinated Vinyl Chloride, ODSs, POPs, Dioxins, lead in Paints etc
Information and communication	E-waste, solvents, heavy metals
Transportation	Sulphur Oxides, Nitrogen Oxides, Dioxin, Hydrocarbons, CFCs, Polychlorinated Aromatic Hydrocarbons
Water and Sanitation	PAH, Heavy metals, PCPs, PCBs, Dioxins, Organic solvent.

There are also those areas which are cross sectoral and influence chemicals management. Table 4 shows the cross cutting sectors where could be used for mainstreaming sound chemicals management into development processes. They include finance, education, law, justice, and legislature (Parliament and representation). Table 4 shows how this comes about.

**Table 4:** Cross Cutting Sectors with Relevance to SAICM Implementation

<b>Finance</b>	<ul style="list-style-type: none"> <li>• Budgeting environmental remedial measures and conservation.</li> <li>• Environmental impact assessments and mitigations</li> <li>• Fiscal policies of incentives and non-incentives</li> <li>• Discretionary environmentally related penalties and fines</li> <li>• Charges to entry and exit of chemicals and wastes</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Research and Training</li> <li>• Governance</li> <li>• Capacity building</li> <li>• Advocacy</li> <li>• Knowledge and information</li> </ul>
<b>Law and Justice</b>	<ul style="list-style-type: none"> <li>• Law enforcement officers</li> <li>• Judiciary determines fines and penalties</li> </ul>
<b>Parliament</b>	Legislation, International agreements, Corrective measures and avenues of redress.

### 3.10 Measures to Support SAICM Implementation

#### 3.10.1 Risk reduction

Progress has been achieved in certain areas. For example, at the international level, the Kenyan Government has indicated its wish to continue to collaborate under bilateral, regional and multilateral arrangements to support SAICM.

The following initiatives are undertaken that contribute to chemicals management and support SIP:

- i. Undertaking of Environmental Audits (EAs) for all ongoing projects and Environmental Impact Assessment (EIA) for all new projects.
- ii. Developing and promoting awareness programmes on the importance of sustainable production and consumption patterns in departmental strategies and action plans.
- iii. Establishing and supporting cleaner production activities and centres and providing incentives for investment in cleaner production, pollution control and greener technologies.
- iv. Training programmes to small and medium-sized enterprises on cleaner production and using of information technologies, through its information and communication technology.
- v. Integrating production and consumption patterns into sustainable development policies, programmes and strategies and, where applicable, into poverty reduction strategies, such as the Kenya Youth Empowerment Programme, Nairobi Rivers Rehabilitation Programs.
- vi. Programmes including decision-making on investment in business development and infrastructure by corporate social responsibility initiatives of formal enterprises are ongoing, though insufficient.
- vii. Promoting internationalization of environmental costs and use of economic instruments, taking into consideration the polluter pay principle, with due regard to the public interest, and without distorting international trade and investment.
- viii. Development of waste management systems, with priorities placed on waste prevention and minimisation, reuse and recycling and environmentally sound disposal facilities in Nairobi, Nakuru and Kisumu.
- ix. Facilitating and mobilizing resources to enhance industrial productivity and competitiveness as well as industrial development and transfer of environmentally sound technologies.
- x. Kenya has trained several Customs, enforcement and regulatory officers.



### **3.10.2 Capacity Building Activities in implementing MEAs**

The implementation of the SIP will benefit into ongoing programmes.

As a first step, it is important to review the implementation of the international conventions, such as the Stockholm, Basel and Rotterdam Conventions, the sound management of mercury, and the Globally Harmonized System for classification and labelling of chemicals (GHS), among others, which can help in better sound management of chemicals.

For example, the Basel Convention has been used to develop Kenya's Environmental Management and Coordination Act as well as Waste Regulations 2006. The Rotterdam Convention has been used extensively to regulate highly toxic pesticides and pesticide formulations. However, there is no record of its use to control industrial chemicals. In 2007, Kenya developed the national implementation plan for the Stockholm Convention on Persistent Organic Pollutants which formed the basis for action on the highly toxic pesticides. Other pertinent examples include banning and restricting toxic chemicals under the Stockholm Convention on Persistent organic pollutants. SIP will have to build on those programmes and activities.

Although Kenya has managed to achieve some progress in the fulfilment of these strategic activities, it is necessary to reinforce training and promote intersectoral activities. This would identify new opportunities for synergy and explore other mechanisms of coordination between ministries, the private sector and related sectors at the national level, towards the sustainable implementation of international agreements related to chemicals.

At the moment, projects are being developed to facilitate and implement national activities related to SAICM. These projects will focus mainly on the SAICM objectives, namely: risk reduction; knowledge and information; governance; and capacity building and technical cooperation. Currently these projects will be funded by the SAICM Quick Start Programme but efforts will be made to access the Global Environment Facility. In addition, national resources funds will be mobilized from the Medium Term Expenditure Framework. They include: legislation development, Libreville Declaration implementation, poison centre creation and disposal of obsolete pesticides management.

### **3.10.3 Governance Structure Strengthening**

At the national level, Kenya is establishing inter-ministerial coordination mechanism for chemicals management, as well as mechanisms for coordination with the private sector and with civil society. However, the committees of the majority of the sectors do not have a specific mandate which could allow them to have particular responsibilities and resources. This leads to low levels of follow-up and informal operation of these groups. SIP will address this.

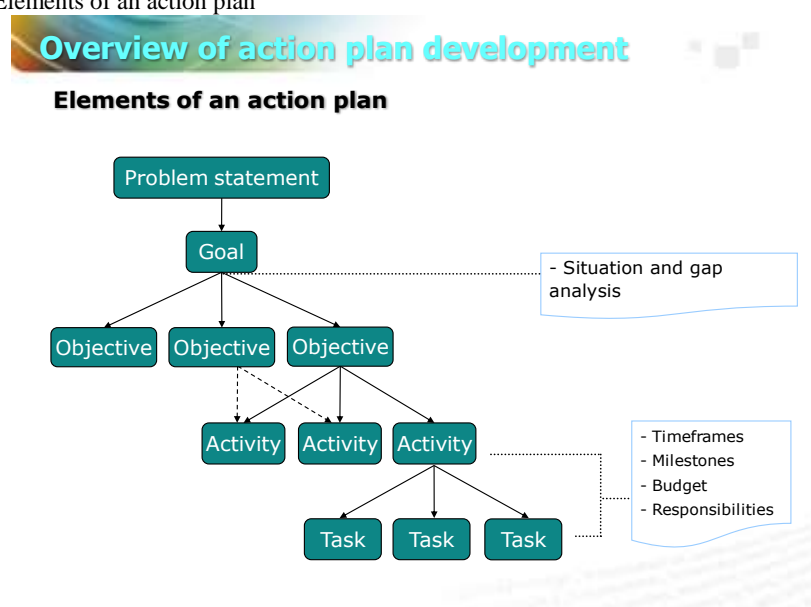
Some sectors have developed sound coordination, e.g. the petroleum sector. An inter-institutional technical committee for petroleum safety exists and brings together officials responsible for chemicals petro-products in the environment, agriculture and health Ministries, and is coordinated by the Petroleum Institute of East Africa which is driven by private sector interests. It is therefore important to address coordination at the time of implementing the plan, by developing networks and mechanisms for information exchange. The appropriate and early establishment of these mechanisms will contribute not only to the sustainability of achieving the SAICM goal but also the strengthening of national capacities. It can provide an avenue for cooperation and exchange of successful experience, methodologies and technologies which have been tried and tested in other countries or in other regions either under UNITAR program or through IOMC institution and could be useful to Kenya.

## 4 IDENTIFICATION OF STRATEGIES

To encourage national participation of all sectors, the national SAICM implementation Plan identifies some basic strategies to facilitate its implementation as shown in Fig 2<sup>11</sup>.

- i. Raise awareness regarding chemicals issues among decision-makers and the public;
- ii. Put chemicals-related issues higher on a country's development priority list;
- iii. Ensure regulatory agencies for chemicals issues understand the country's internal decision-making processes for allocation of financial resources; and
- iv. Those responsible for chemicals issues improve their knowledge of external funding opportunities – and details of the process of obtaining such funding.

Fig 3<sup>12</sup>: Elements of an action plan



For each priority are activities and tasks identified.

The activities include:

- Setting up a coordination mechanism
- mainstreaming chemicals management into national development agenda
- Use of existing chemicals and waste institutional structure(ODS Committee, SAICM Committee, etc from government and KAM, AAK from private sector to develop and expand activities in the plan
- Establishment of local, national and regional cooperation and technical assistance networks, especially with the secretariats of the SAICM, Ozone, Climate Change, Rotterdam Basel and Stockholm Convention \secretariat
- Implementation of GHS

<sup>11</sup>Chemicals, and Waste Management Programme

UNITAR Guideline on developing implementation plans, [www.unitar.org/cwm](http://www.unitar.org/cwm)

<sup>12</sup> UNITAR Guidance for developing SAICM Implementation Plans, 2009 edition

- National joint plans of action with ministries and other organizations and institutions (in line with Libreville Declaration) working in Kenya on chemicals and waste management agenda, as well as the synergy between initiatives and/or Conventions activities
- Promote the life-cycle approach as a framework for decision-making on health and environmental impacts caused by chemicals and chemical waste
- Emergency preparedness

The priority work areas here below are based on the results of the *capacity assessment on SAICM*. These priorities have been selected keeping in mind the scope of action in Kenya, which has been developing a series of activities linked to chemicals management.

#### **4.1.1 Management of Chemicals at National Level**

The following priority issues have been identified to address chemicals management at national level:

- i. Develop linkages between health and environment.
- ii. Regularly conduct assessment of national chemicals management situation to identify gaps and prioritize action
- iii. capacity building aimed at improving human health protection due to chemicals use
- iv. Promoting industry and civil society participation in chemicals management
- v. Enhancing Laboratory capacity and research strengthening
- vi. Implementing Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
- vii. Capacity building related to risk assessment, including the generation and utilization of data

#### **4.1.2 Set up a National Coordination Mechanism**

To address intersect oral issues, the following priorities have been suggested

- i. Establishing an inter-institutional national coordination mechanism targeting informal and SMEs
- ii. Develop Integrated National Chemicals Management Programmes
- iii. Establishing effective financing mechanisms through inclusion of chemicals programme in MTEF process, building capacities on project formulation to enable access to international funds, develop systems for socio-economic considerations; enhance systems for liability and compensation.
- iv. Promote safer alternatives (NIP for PBTs POPs but no implementation, no programme addressing Hg and other chemicals of global concern) especially lindane and endosulfan.
- v. Develop programmes to deal with highly toxic chemicals of global concern
- vi. Strengthening implementation of regulations on pesticides handling, development of regulations on transportation of pesticides and implementation of the GHS
- vii. Development of regulations on toxic chemicals, strengthen implementation of the GHS and development of a PRTR
- viii. Strengthen enforcement of OSHA, implementation of the GHS, effective regulation and promotion of industry participation and responsibility; enforcement of information dissemination (MSDS), education and training on safe use of chemicals to more industries.

#### **4.1.3 Promoting Governance and Advocacy**

To address governance issues, the following priorities have been suggested;

- i. Review of existing legislation to make them more comprehensive
- ii. Building capacity for agencies to enforce the relevant acts (OSHA and PCP Act)
- iii. Develop guidelines to promote adoption of clean production
- iv. Create a database on hazardous chemicals and continuous updating
- v. Develop training modules on Occupational health and safety for chemicals management

#### **4.1.4 Capacity Building and Technical Cooperation**

To address capacity building and technical cooperation, the following has been identified:

- i. Train more inspectors & prosecutors
- ii. Integrate chemicals management in national programmes through implementation of the NIP
- iii. Initiate collaborative mechanism to address technology information sharing and research among all stakeholders
- iv. Promote voluntary initiatives in the private sector and enhance Civil society response (CSR) initiatives by channelling part of CSR funds towards chemicals related risk responses, education and awareness initiatives and encourage more sectors to participate in the voluntary initiatives
- v. Build Capacities of Civil Society on chemical issues and mobilize a critical mass of NGOs and industries to participate in the SAICM process and seek adequate financial resources.

### **4.2 Resource Requirements**

The SIP activities require both human and financial resources. The degree to which resources are allocated for chemicals related activities is often a reflection of their priority in the broader policy context. Unless SIP related issues are recognized at the policy-making level as part of the national development planning agenda, developing an effective programme, however basic, through national planning processes may be a considerable challenge. National resources are invariably limited, while at the same time the problems associated with development, many of which are not immediately recognized as being related to chemicals issues, are numerous and serious. The plan of action recognizes the need for sustainable finances that are predictable, adequate and accountable. Resource considerations should be made early in the process to ensure realistic planning and project proposal development.

The possible strategy will initially involve the following fundamental steps;

- Review of ongoing programmes and projects, management options and related financial requirements against possible funding sources and budgeting processes
- Explore national budgeting possibilities with the parastatals concerned through the MTEF process.

- Use of ministries and other agencies responsible for coordination of assistance from international funding agencies and bilateral donors, and
- Contact with the relevant international funding agencies to explore the potential for financial and/or technical assistance.

### **4.3 Financial resources mobilisations at local level**

The bulk of the activities will tap from locally based finances. Mobilization of adequate resources at national and international levels is critical for SIP. This may include utilizing the following existing opportunities and mechanisms.

- The provisions of EMCA incentives( e.g the plastics initiative)
- Studying technical assistance guidelines under various MEAs and aggressively developing project concepts on them;
- Addressing issues of cost-effectiveness of products of processes and alternatives through introduction of environmental economic instruments as has been done with plastic waste;
- Promoting non-chemical alternatives to chemicals especially at farm level(pyrethrum growing), use of compost
- A better understanding of SAICM Quick Start Trust Fund and the Global Environment Facility.
- Further use of the Multilateral Ozone Fund

These financial mechanisms for mobilizing resources from national and international sources include the following:

- (a) Arranging funding to implement SAICM through national budgeting processes, including carefully designed economic instruments intended to internalize external costs of the sound management of chemicals;
- (b) Mobilizing private sector contributions at the national level, as appropriate
- (c) Mobilizing international funds for SAICM implementation;
- (d) Providing for the inclusion of national chemicals management into bilateral and multilateral development programmes.
- (e) Mobilizing private sector contributions at the East African regional level, as appropriate e.g. through the Petroleum Institute for East Africa;
- (f) Mobilizing and facilitating access to international funding
- (g) Including East African region chemicals management in relevant East African region development programmes and the programmes of work of East African regional organizations.
- (h) Mobilizing national funding through relevant institutions in the region that can assist SAICM implementation such as the African Development Bank, among others;
- (i) Including Kenyan chemicals management in relevant Kenyan development programmes
- (j) Securing sustainable international funding for the implementation of SAICM, including through promoting the provision of new resources to support sound chemicals management through the Global Environment Facility and other such funding mechanisms;

- (k) Mobilizing specialized agency and other intergovernmental organization funds and programmes to support SAICM activities; and
- (l) Ensuring full funding of the Quick Start Programme
- (m) The use of economic instruments has been identified as a possible strategy in the mobilization of resources for the implementation of the SIP. It is envisaged that the application of such instruments, together with collaboration with private sector associations, will go a long way towards achieving environmental conservation targets.
- (n) Kenya recognizes the importance of economic instruments for environmental conservation. This has been specifically identified and provisions have been included in the EMCA, 1999. In addition, *guidelines* on the use and application of economic instruments have been drafted awaiting finalization after all regulations are gazetted.
- (o) It is also expected that key manufacturers, suppliers and users should play a key role in resource mobilization for chemicals management particularly toxic chemicals management. Indeed, they should take a lead in providing the co-financing that is necessary for successful implementation of the SIP.
- (p) As a member of the global family of nations, Kenya has received support from various national, regional and international organizations for implementation of the chemical and wastes Conventions.

The selection of the method will be dependent on the sector, institution and circumstances.

#### **National Budgets:**

The national Resources/Funds include public budgets. Others are user charges have been suggested as economic instrument and are included in the document on plastic waste management<sup>13</sup> which often includes company self-financing. Environmental funds are being managed by the National Environment Trust Fund and commercial banks currently with Kenya Commercial and Equity banks as trail blazers in this endeavour.

## **4.4 International Funds**

### **4.4.1 Possible sources of funding for SAICM Implementation**

The SIP envisages assistance from the following potential financial and technical sources;

- The SAICM Quick Start Trust Fund
- Convention Secretariats
- Global Environment Facility
- Intergovernmental Organizations of the IOMC
- Bilateral Development Agencies
- Non Governmental Organizations and the civil Society

The activities summarised in below and detailed in Gantt Chart indicate estimated financial requirements.

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<sup>13</sup>Unep/gok/kam project Design of Economic instrumental for the management of solid waste, [www.unep.org/roa](http://www.unep.org/roa)

#### **4.4.2 GEF Eligibility**

Many of the SIP implementation activities match GEF funding priorities as they include, for example: Capacity-building; Policy and regulatory reforms; and demonstrations of innovative technologies and practices (*e.g.*, development and application of DDT alternatives).

#### **4.4.3 Non Governmental Organizations**

The civil society plays a key role in the realization of the goals of the SAICM and other chemical agreements. In order to ensure success in the implementation of these Conventions the role that NGOs play is vital especially with regard to advocacy and introduction. Their funding sources need to be explored.

#### **4.4.4 Tapping into UNEP Programmes**

The United Nations Environment Programme (UNEP) with its head quarters in Nairobi, Kenya plays an active role in chemical management. UNEP has under its wing most of the chemical and waste management programmes and Kenya should take the advantage of this relationship and proximity. UNEP also is the seat of the Ozone Secretariat managing the Vienna Convention on the protection of ozone layer and the secretariat for the multilateral ozone fund.

#### **4.4.5 The Africa Stockpiles Programme (ASP)**

Kenya has ratified the Stockholm Convention and therefore qualifies to benefit from the Africa Stockpiles Programme (ASP). The ASP complements the Stockholm Convention in addressing chemical and hazardous materials management. The objective of the ASP is to clean up and safely dispose of all obsolete pesticides in Africa and establish preventive measures to avoid their future accumulation. The programme aims to dispose of all obsolete pesticides and associated wastes that have accumulated over long time periods. The ASP also catalyses the development of preventive measures and provides capacity-building and institutional strengthening on important issues relating to chemicals. Kenya does not have an ongoing programme on chemicals with ASP.

#### **4.4.6 Food and Agriculture Organisation (FAO)**

Food and Agriculture Organization (FAO) is critical to chemicals. It is the secretary to the Rotterdam convention on Prior Informed Consent Procedure on hazardous industrial chemicals and pesticides in international trade. This is the principle agent covering pesticide use particularly with regard to the agricultural industry, which is its primary focus.

#### **4.4.7 International Labour Organization (ILO)**

The International Labour Organization (ILO) steps in where issues of human health and in particular employee safety in work environments where Toxic chemicals and other potentially harmful chemicals are exposed to the employees. It supports Kenya on matters of OSHA.

#### **4.4.8 World Health Organization (WHO)**

The World Health Organization participates also in the protection of human health and will carry out research into eliminating health risks resulting from chemicals. In Kenya WHO is involved in finding alternatives to toxic chemicals that are detrimental to human health such as

DDT. Working with these organizations is important as it benefits the country by easing access to information, human resources and financial resources. Involvement in programs and projects organized by these organizations also encourages cooperation with other countries, which is effective in the realization of the objectives of the Convention. WHO together with UNEP are leading in the implementation of the Libreville Declaration on health and environment linkages.

#### **4.5 Partnership Projects**

The Government of Kenya, the private sector and Kenyan civil society have traditionally supported socio-economic development initiatives in the country. High levels of education and awareness of the impact of Toxic chemicals on human beings and wildlife are important ingredients in resource mobilization for national implementation of the provisions of the Stockholm Convention. There are projects in Dandora, Kibera, Kisumu and Nakuru implemented by the civil society.

#### **4.6 Suggested Programmes**

##### **4.6.1 Technology Access and Transfer**

Capacity to implement SAICM will be strengthened through effective partnerships directly and indirectly with stakeholders in capacity building projects and awareness raising activities. Technology transfer will be key. It will utilise intergovernmental institutions.

Implementation will be driven at the national, East African regional and county levels. The national action plan provides for a bottom-up approach to identifying specific objectives, strategies and activities that will be used to reflect the needs of counties. Based on inputs from Governments, relevant organizations and stakeholder could explore the following possibilities;

- Capacity to develop sound, clean and sustainable technologies
- Upgrading technologies for small scale enterprises for continuous minimization of releases of highly toxic chemicals
- Clean technology into the informal sector and services for ferrous/nonferrous scrap reuse, waste management
- Training on BATs /BEPs guidelines to assess what is practical;
- Recycling, Reclamation and re-use of wastes
- Waste reduction at source by use of cleaner production technologies
- Stockpile management and disposal of hazardous substances, products and wastes
- Safe alternative to chemicals and ecological agricultural practices (including non-chemical use and especially Good Agricultural Practices;
- Training of custom officers at ports of entry.

##### **4.6.2 Knowledge and Information Sharing**

The main tasks could include efforts to :

- To acquire, generate, store and disseminate information and operationalise of chemicals database
- Information technology infrastructure at the Provincial and district levels
- Laboratory facilities enhanced at KEMRI, Government Chemist, KEPHIS, universities, private sector etc
- District, municipality, national and regional websites at offices of DEC's
- Audio visual programs at national level to be distributed to provinces(8) and districts(70) as well as local authorities;



- Development of research and training capacity on highly toxic chemicals to academias and polytechnics.
- To run training programmes in local institutions e.g., KIRDI, KEMRI, KARI, KEPHIS so that they can develop training materials/modules, curricula development etc. specific to their POPs mandate;
- Laboratory equipment, maintenance and servicing at universities in every province especially for analyzing PCBs, dioxins and furans;
- Cost effective analytical methodology to be adopted and adapted to local needs especially for field and hand held equipment
- Organizing training of trainers workshops and seminars for BATs and BEPs for specific priority sectors;
- Utilization of indigenous knowledge as a non-chemical alternatives

#### **4.6.3 East African Regional Level**

The regional aspect of SIP is also critical. The Lake Victoria Environmental Management Programme and the East African Community will be involved in certain aspects. They include:

- (a) Securing adequate political commitment across the nations of Kenya, Uganda, Tanzania, Burundi and Rwanda;
- (b) Raising awareness among stakeholders concerning the need for sound chemicals management in transport and protection of international inland waters such as Lake Victoria, the Indian Ocean etc;
- (c) Mainstreaming sound chemicals management into East African regional programmes and agreements;
- (d) Identifying current and new sub national implementation programmes and activities that can be made regional or sub regional;
- (e) Developing coherent and consistent strategies for implementing SAICM at the East African regional level by implementing aspects of the Africa Regional Plan of SAICM;
- (f) Strengthening East African regional ministerial environmental forums to facilitate the implementation of SAICM;
- (g) Encouraging East African regional economic institutions to support activities related to SAICM.

Ongoing regional activities to build on include;

- Generation of national/regional data (e.g. emission factors, bio-indicators etc.
- Collaboration with regional centers (e.g. Basel Convention Centers, ICIPE)
- Laboratory accreditation and establishment of sub-regional accreditation bodies under the EMCA programme.
- Joint position on multilateral agreements.

#### **4.6.4 Specific tasks**

Partnership projects such as:

- i. Open burning project partnership project for Eastern Africa under the SCs SIP – will foster synergies between Stockholm and Basel Convention blend in the e- waste and electrical component as most end up being subjected to open burning.
- ii. Partnership programmes as the adverse impacts of transboundary movement of waste affects many entities e.g. e-waste, international waters, goods in transit, illegal trade.
- iii. A partnerships project to demonstrate safer alternatives of waste disposal other than incineration.
- iv. Develop local experts on chemical waste management.
- v. Link what is happening in the Eastern African region because of sharing similar ecological issues – the inventories – the issues can be developed into partnership programmes under Basel and the Stockholm Conventions’ technical guidelines to be rolled out in the eighth meeting of the Basel for financing by SAICM QSP and the GEF.
- vi. Mobilizing new and additional financial resources including by using existing Multilateral Financial Institutions and mechanisms for joint regional programmes and activities.

#### **4.7 Monitoring and Evaluation**

Under the coordination of the Kenya SAICM Committee, progress in implementing SAICM in Kenya will be reviewed. Evaluating the implementation of SAICM in Kenya will require gathering of implementation information for reporting to SIC. Actions regarding reporting, monitoring and evaluation include, establishing indicators for monitoring, reporting and evaluating progress on implementation.

At the end of each year, the SAICM Focal Point will prepare annual report and prepare an Annual Operational Plan (AOP), which outlines various tasks to be carried out at the regional level, in accordance with the particular needs of each sector. Where applicable to each sector, this AOP should be formally approved by the GoK and financial agencies and executing bodies and be included in medium term expenditure frameworks.

##### **4.7.1 Annual Reports**

The progress reports of the Plan will be presented every year to the 4<sup>th</sup> Annual chemical forum, following formats and guidelines defined by the ICCM and MEMR. The reports will be prepared by the SAICM focal Point and include (but not be limited to) the following information; brief description of activities implemented, main problems encountered during the implementation period and measures taken to resolve these problems, evaluation of progress in light of the objectives of the Plan, and details of expenditure.

##### **4.7.2 Mid-term review and Final Evaluation**

At the beginning of the fourth year, a complete mid-term review should be carried out (4 years); in the same manner.

#### 4.8 Implementation Plan 2012-2019

To encourage national participation of all sectors, the national SAICM implementation Plan identifies some basic strategies to facilitate its implementation as shown in Fig 2<sup>14</sup>. The plan has 15 objectives based on priorities identified by stakeholders in the capacity assessment process and the plan development

##### Objective 1.

**National coordination regarding chemicals issues among decision-makers and the public by putting chemicals-related issues higher on the country's development priority list; and those responsible for chemicals issues improve their knowledge of external funding opportunities – and details of the process of obtaining such funding.**

This will be achieved with the following activities:

- Setting up an interministerial chemicals coordination mechanism in 2012
- Use existing chemicals and waste institutional structure (ODS Committee, SAICM Committee, etc from government and KAM, AAK to carry out activities in the plan)
- Implementing national joint plans of action with ministries and other organizations and institutions working in Kenya on chemicals and waste management agenda, as well as the synergy between initiatives and/or Convections activities

This activity will be lead by the Ministry of Environment and Mineral Resources

##### **Objective 2 Develop an emergency preparedness and response plan in all local authorities and enterprises**

- i. Form a chemicals emergency task force in 2012
- ii. Initiate and complete emergency preparedness plan before 2013
- iii. Hold workshops to determine capacity building needs and set up emergency response centre and equip it by 2013
- iv. Ensure core groups like police and local *askaris* are trained and for informal enterprises with a view that all will be trained by 2014
- v. Equip all major users with chemical emergency equipment, goggles, eyemasks, cover all by 2015
- vi. Setting a chemicals database at NEMA by end of 2012.

This activity will be lead by NEMA.

##### **Objective3 To promote Management of Chemicals at National Level**

To address chemicals management at national level, linkages between health and environment will be developed from the regularly conducted assessment of national chemicals management situation to identify gaps and take corrective action. This will be carried out through position papers, workshops, field visits and reports detailed in objective 14. Chemicals management in national programmes will be integrated through implementation of the multilateral environmental agreements and especially the Stockholm on Persistent organic Pollutants, carry out all actions required by Basel Conventions as a party and all those that are required by The Rotterdam Convention on toxic industrial Chemicals and pesticides in International Trade. This will be carried out by all stakeholders taking guidance from the

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<sup>14</sup>Chemicals and Waste Management Programme  
UNITAR Guideline on developing implementation plans, [www. unitar.org/cwm](http://www.unitar.org/cwm)

above quoted multilateral environmental agreement. The SAICM implementation Committee will include this as part of the evaluation and develop appropriate indicators annually.

**Objective3 Promoting Technology Transfer , Cleaner Production ,industry and civil society participation in chemicals management**

Through industry associations and their representatives in the SAICM Implementation Committee, industry and private sector will undertake the following activities:

- i. In the implementation period mobilize private sector contributions through business associations such as the petroleum, agriculture and manufacturing at the East African regional level, as appropriate through the Common Market for Southern and Eastern Africa
- ii. Enhance uptake of activities that build capacity to develop sound, clean and sustainable technologies through utilisation of MEA technical guidelines and guidance and the Stockholm Convention Social Economic guidelines in workshops, seminars, EIAs and EAs
- iii. Formulate programmes for upgrading technologies for small scale enterprises for continuous minimization of releases of highly toxic chemicals for partnership in the chemicals lifecycle by 2013
- iv. Through industry associations and through command and control mechanisms, introduce cleaner production and green technology into the informal sector and services for ferrous/nonferrous scrap reuse, waste management by 2015
- v. Hold training activities workshops and demonstration projects on BATs /BEPs guidelines to implement and assess what is practical emphasising on recycling, reclamation and re-use of wastes
- vi. Cooperate with public and the informal sector in the management of identified obsolete pesticide, industrial product stockpile and their disposal of hazardous substances as products or as wastes
- vii. Continuous training and certification of custom officers at ports of entry.

**Objective 4 Enhancing Laboratory services, research for monitoring of pollutants and assessment of alternatives to toxic chemicals**

- i. Acquire, generate, store and disseminate information and see operationalisation of chemicals database by 2012
- ii. Building information technology infrastructure capacity to use CD ROMs as chemicals literature libraries, and at the Provincial and district levels by 2012
- iii. Laboratory facilities will be enhanced at Kenya Medical Research Institute, Government Chemist, Kenya Plant Health Inspectorate Services, universities and research institutions, private sector etc to regularly analyse POPs and PIC chemicals by 2015
- iv. District, municipality, national and regional websites at offices of District Environment Committee by 2012
- v. Audio visual programs at national level to be distributed to provinces (8) and districts (70) as well as local authorities by 2013;
- vi. Develop of research and training capacity on highly toxic chemicals to academia's and polytechnics throughout the plan period.
- vii. Run training programmes in local institutions e.g KIRDI, KEMRI, KARI, KEPHIS so that they can develop training materials/modules, curricula development etc. specific to their POPs mandate;
- viii. Procure laboratory equipment, maintenance and servicing at universities in every province especially for analyzing PCBs, dioxins and furans;

- ix. Put in place Cost effective analytical methodology to be adopted and adapted to local needs especially for field and hand held equipment
- x. Organizing training of trainers workshops

**Objective 5 Implement Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**

- i. Hold training workshop on Globally Harmonised System of Classification
- ii. Identify an institution to be the home of GHS
- iii. Seek technical assistance on implementing GHS across Kenya

**Objective 6 Capacity building in the identified institutions related to risk assessment, including the generation and utilization of data and its storage in a chemicals databank.**

Capacity building will be a continuous process but the following will be the initial activities

- i. Building capacity for agencies to enforce the relevant Acts (OSHA and PCP Act) to address Basel, Stockholm and Rotterdam Conventions by 2013
- ii. Develop nations guidelines to promote adoption of clean production by 2012
- iii. Create a database on hazardous chemicals and continuous updating by 2012
- iv. Develop training modules on Occupational health and safety for chemicals management by 2013
- v. Hold workshops and seminars for BATs and BEPs for specific priority sectors every year;
- vi. Develop activities that utilize indigenous knowledge as a non-chemical alternatives and promote in annual report.

**Objective 7**

**Establishing effective financing mechanisms through inclusion of chemicals programme in Medium Term Expenditure Framework process.**

This objective will seek to mobilise domestic sources of finances by ensuring that the regular budget archives the target of Ksh 500Million estimates in this plan through activities that will:

- i. Ensure chemicals and hazardous regulatory agencies for understand the country's internal decision-making processes for international environmental governance on chemicals by holding at least one workshop of 30 people every year
- ii. Each SAICM stakeholders studying technical assistance guidelines under various MEAs and aggressively developing project concepts on them;
- iii. Develop capacities on project formulation to enable access to international funds so as to develop at least two chemicals projects annually by holding at least two training workshops every year and putting finances aside for co financing
- iv. Develop systems for socio-economic considerations such as social indicators that will promote an understanding and *enhance* systems for liability and compensation.

This activity will initially be triggered by MEMR and other will get the cue.

**Objective 8 Promote safer alternatives as suggested by the National Implementation Plan, the PIC and the mercury but not implemented.**

This objective will be for all stakeholders each by their own capacity, mandate and preparedness. It will be achieved by the following activities:

- i. Develop programmes to deal with highly toxic chemicals of global concern such as lead in paint by 2012 for the whole plan period
- ii. Complete a mercury emissions inventory by 2011
- iii. Enforcement activities of regulations on pesticides handling, development of regulations on transportation of pesticides and development of new ones on toxic chemicals,
- iv. Strengthen enforcement of OSHA by holding more training programmes and worker protection clothing
- v. Promote non-chemical alternatives to chemicals especially at farm level (pyrethrum growing), use of compost
- vi. Develop programmes that promote safe alternative to chemicals and ecologically sustainable agricultural practices, non-chemical use and especially good agricultural practices;

The above activities to be carried out by SIC will be carried out by all stakeholders.

#### **Objective 9 Address governance and advocacy issues**

Under the review which have been done by iLIMA and others:

- i. Review of existing legislation to make them more comprehensive by 2013
- ii. Promote voluntary initiatives in the private sector by increasing more ISO 14000EMS Certification or GREENDOT
- iii. Financing institutions and donors to enhance Civil society response (CSR) initiatives by channelling part of CSR funds towards chemicals related risk responses, education and awareness initiatives and encourage more sectors to participate in the voluntary initiatives
- iv. Throughout the Plan Period, build capacities of Civil Society on chemical issues and mobilize a critical mass of NGOs and industries to participate in the SAICM process and seek adequate financial resources.

#### **Objective 10 Capacity Building and Technical Cooperation**

This objective will help to link chemicals management gaps and address capacity building and technical cooperation needs. The following will be undertaken:

- i. Hold awareness raising workshops on Basel Convention guidelines in 2012
- ii. Hold one workshop for Pollutant Release Transfer Register in 2012
- iii. Train identified and recruit more inspectors and prosecutors who will be trained using the Basel Convention Judicial Manual
- iv. Initiate collaborative mechanism to address technology information sharing and research among all stakeholders activities so as to tap technical assistance programmes of the Intergovernmental Organisations on Management of Chemicals
- v. Initiate PRTR in Kisumu and Eldoret in 2012

#### **Objective 11 Technical and Financial Resource Mobilisation**

The use of economic instruments has been identified as a possible strategy in the mobilization of resources for the implementation of the SIP. It is envisaged that the application of such instruments, collaboration with private sector associations, will go a long way towards achieving environmental conservation targets. This objective will ensure that SAICM activities get adequate and predictable finances. The SIC therefore will:

- Review the ongoing chemicals management programmes and projects, management options and related financial requirements against possible financing sources and budgeting processes

with a view to give a coherent guidance to project formulation, co financing, partnership and leverage by 2012

- Explore national budgeting possibilities with the parastatals concerned through the MTEF process mainstreaming of chemicals and waste issues into ongoing and future bilateral activities starting with 2012 budget cycle,
- Use of ministries and other agencies responsible for coordination of assistance from international funding agencies and bilateral donors to each develop a funding request,
- Maintain contact with the relevant financing agencies to explore the potential for cooperation
- Include chemicals management initiatives into relevant Kenyan bilateral development programmes activities and initiatives.

### **Objective12 Resources Mobilisations at Local and enterprise levels**

This objective will be applied to help local authorities and enterprises fill the financing gaps while addressing risks posed by chemicals. Although many of them are going on, they need to be accelerated by the following actions:

- Put current provisions of EMCA incentives (e.g the plastics initiative) into practice
- Address issues of cost-effectiveness of products of processes and alternatives through introduction of environmental economic instruments as has been done with plastic waste;
- Promote the development of projects by SAICM Quick Start Trust Fund and the Global Environment Facility.
- Arrange funding to implement SAICM through national budgeting processes, including carefully designed economic instruments intended to internalize external costs of the sound management of chemicals;
- Mobilizing private sector contributions in awareness, publicity and chemicals database activities
- Mobilizing international funds through project concepts;
- Ensuring the inclusion of national chemicals management into bilateral and multilateral development programmes.

### **Objective 13 Develop, finance and implement Partnership Projects**

Capacity to implement SAICM will be strengthened through partnerships directly and indirectly with stakeholders. The activities to be carried out are.

- i. Establishment of local, national and regional cooperation and technical assistance networks, with the SAICM, Ozone, Climate Change, Rotterdam, Basel and Stockholm Conventions \secretariats
- ii. Promoting the sound chemicals management through the Global Environment Facility in partnership with UNEP,WHO, UNDP, FAO, UNIDO supported by UNITAR through the development of a capacity building project to address priority areas addressed in this plan and which are within the chemicals structure financed by the GEF;
- iii. Mobilizing specialized and bilateral agencies and other intergovernmental organization funds and programmes to support the plan.

This activity will be coordinated by SIC institutions led by the SAICM Coordination Office

#### **Objective 14 Promoting East African Regional Cooperation on chemicals issue**

This objective is to ensure that SIC addresses regional cooperation and minimise transboundary illegal trade. The key activities will be to:

- i. Secure political commitment across the nations of Kenya, Uganda, Tanzania, Burundi and Rwanda;
- ii. Raise awareness among stakeholders concerning the need for sound chemicals management in transport and protection of international inland waters such as Lake Victoria, the Indian Ocean etc;
- iii. Mainstream sound chemicals management into East African regional programmes and agreements;
- iv. Identify current and new sub national implementation programmes and activities that can be made regional or sub regional;
- v. Develop coherent and consistent strategies for implementing SAICM at the East African regional level by implementing aspects of the Africa Regional Plan of SAICM

#### **Objective 15 Monitoring and Evaluation of SAICM implementation in Kenya**

Under the coordination of the Kenya SAICM Committee, progress in implementing SAICM in Kenya will be reviewed by gathering of implementation information for reporting to SIC, meeting, National Reporting for MEAs

- i. Indicators will be established
- ii. Each year, the SAICM Focal Point will prepare annual report
- iii. Every year to the 4<sup>th</sup> Annual chemical forum, following formats and guidelines defined by the International Conference on Chemicals Management.
- iv. The reports will be prepared by the SAICM focal Point and include brief description of activities implemented, main problems encountered during the implementation period and measures taken to resolve these problems,
- v. Evaluation of progress in light of the objectives of the Plan, and details of expenditure.
- vi. At the beginning of the fourth year, a complete mid-term review should be carried out (4 years); in the same manner.



## 5 PROPOSED NEXT STEPS AND FOLLOW UP

The next steps should follow the logical framework detailed in Annex 3.

### 5.1 Formation of Coordination Mechanism

After the presentation of the document at the SAICM National Forum in 2011, the implementation will start. Successful implementation of SAICM will require the active engagement of all stakeholder groups. Approaches to be considered and identifying relevant stakeholders that are involved with chemical safety; establishing communication mechanisms with stakeholders; and providing opportunities for stakeholder representatives to participate in planning, by inclusion in national coordinating committees, where appropriate.

**Table 5:** Summary of Action Plans and estimated budget

NO.	Action	Cost Kshs (000,000)	US\$
1.	National Coordination	30	295,072
2.	Interministerial Coordination	28	275,400
3.	Programmatic Management	81	796,695
4.	Resource Mobilisation	85	836,038
5.	Governance and Advocacy	10	98,357
6.	Capacity building and technical cooperation	145	1,421,986
7.	E-waste, Cadmium, chemicals in products and nanotechnology	3	29,507
8.	Mercury, lead and other priority chemicals	20	196,714
9.	Globally Harmonised system of classification	8.5	83,603
10.	Research, Monitoring and data sharing	30.5	299,990
11.	Human health and chemicals	29	285,236
12.	Social Economic consideration and mainstreaming	16	157,371
13.	Promotion of industry participation	40	393,429
	<b>Total</b>	<b>526</b>	<b>5,169,398</b>

### 5.2 Formation of a SAICM Implementation Committee Committee (SIC)

A National SAICM Steering Committee will be formed and will consist of representatives from Government - Permanent Secretaries (or their representatives) from the Ministries of Environment and Mineral Resources, Planning, National Development and Vision 2030, Finance, Ministry of Agriculture (Pest Control Products Board), Industrialization, Trade water and Irrigation.

The committee will have powers to co-opt additional members if necessary. The committee will meet at least twice yearly. Extraordinary meetings may be convened as needed. The Plan will be managed by a Project Management Unit (PMU) if a funded project is made or a section within DMEAS which will be headed by a full time National Program Coordinator (paid through the program) or officer who will be report to the Director MEAS. Among other responsibilities, the National Program Coordinator will promote the Program among other Government institutions, Non-GOK institutions and donor agencies.

### 5.3 Responsibilities

The Directorate of Environment and NEMA will provide logistical and administrative support for program activities such as meetings. The Government and the donor(s) will ensure that sufficient time and resources are allocated to the National Program Coordinator to carry out functions effectively.

For effectiveness, development of this strategy will aim at strengthening efficient utilization of current capacities while addressing the deficiencies identified in the SIP. Furthermore, as part of the NEMA strategic plan, it should support NEMA's overall strategy by streamlining procedures of consultation and coordination among lead institutions involved in the management of chemicals and wastes to reduce duplication. DOE Specific Priority Actions that require building capacity to implement the convention. It will also oversee that the actions, priorities, responsible, timelines and monitor progress. The estimated budget s will need to be reworked in light of existence or lack of existence of similar programmes within the short and long-term plans.

Follow up actions include:

- Hold three workshops for government, private sector and NGOs, to work out modalities for synergies and partnerships and identify main points of a chemical safety strategy.
- Host three Meetings Per year of three (3) days for the Standards and Enforcement Review Committee to review international chemicals agenda
- The revision of Kenya's Vision 2030 to include SIP

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## **Annex 1. Terms of reference for SAICM implementation and action plan**

### **Background**

Recognizing the identification of capacity needs for sound chemicals management and SAICM implementation, national priority setting, sound governance, and Action Plan development as important components of many of the “work areas” listed in the Global Plan of Action; and acknowledging the “development or updating of national chemical profiles and the identification of capacity needs for sound chemicals management” as a strategic priority of the Quick Start Programme: this proposed project aims to assist Kenya to prepare a National Profile, establish an inter-ministerial coordination mechanism, prepare a National SAICM Capacity Assessment, undertake national SAICM priority setting, and strength the national governance framework for SAICM implementation. Once governance-related issues are examined in the context of the development of the National Profile and National SAICM Capacity Assessment, and discussed at the National SAICM Forum, Kenya will translate issues raised in these processes into a coherent action plan to strengthen governance for SAICM implementation. In addition, Kenya aims to develop sound Action Plans (including addressing Partnership Projects and financial resource mobilisation).

### **The team will**

Develop and provide input to the National Chemicals Profile, inter-ministerial coordination mechanism establishment, National SAICM Capacity Assessment;

- i. study the legal and policy issues of project administrative issues
- ii. study the terms of reference produced for the establishment of an inter-ministerial coordination mechanism,
- iii. Study the report of the National SAICM Capacity Assessment Report,
- iv. Participate in a priority setting strengthening the national governance meetings to develop a framework for SAICM implementation.
- v. Ensure governance-related issues are examined in the context of the development of the National Profile and National SAICM Capacity Assessment, and discussed at the National SAICM Forum after which Kenya will translate issues raised in these processes into a coherent national policy to strengthen governance for SAICM implementation.

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## Annex

### Objectives Actions, Lead Institution, Tasks and Timelines

	Objectives	Activity/Task		BUDGET (000 000)		Ongoing act	Possible IOMC partner		2011	2012	2013	2014	2015	2016	2017	2018	2019
1	<b>SAICM Coordination</b>	Set up SAICM Coordination and national coordination mechanism (SCO)	Formalise SCO with budget	4	MEMR	√											
		Develop an integrated national chemicals management programmes that address risk reduction, technology update for their specific risks for manufacturing, transport, energy, petroleum	Formation of SIC	10	SIC	√	UNITA R										
		Establishing inclusive effective financing mechanisms starting with the Government Budget of 2012/2013 through inclusion of chemicals programme in Medium Term Expenditure Framework(MTEF) process,	Present SIP to next MTEF	2	MEMR and SIC institutions /DMEAS	X	UNDP										
		Formulate projects to enable access to funds available from the international financing mechanisms targeting initially each institution of SIC and each member of IOMCs, taking into consideration socio-economic	SCO form a project formulation subcommittee of SIC	14	SIC Institutions /SCO/DMEAs	X	UNEP/ GEF/ UNEP/ MF										

		considerations <sup>15</sup>																
	<b>Sub Total</b>			<b>30</b>														

2	<b>Inter-ministerial Coordination Mechanism</b>	Build capacity of SAICM national institutions to receive, access, interpret and apply chemical data for sound management of chemicals	SCO form a project formulation subcommittee of SIC	10	MEMR/SCO	X	UNITAR											
		Develop a programme and workplan for the institutions in SIC	1 <sup>st</sup> meeting of SIC	2														
		Implement the national Joint Plans of Action for the Libreville Declaration <sup>16</sup>	Form HESA	10		√	WHO/ UNEP/ ROA											
		2 <sup>nd</sup> International Conference on Chemicals Management Adopt performance indicators	Attend 1 <sup>st</sup> OEWG	6	MEMR	X	SAICM SECRETARIAT											
	<b>Sub Total</b>			<b>28</b>														

<sup>15</sup>

<sup>16</sup> Libreville declaration on Linkages of Health and the environment



3	<b>Management of chemicals at national level</b>	Update Kenya national Chemicals Profile	3	MEMR/SIC													
		Conduct assessment of national chemicals management situation to identify gaps and prioritize action	2		√												
		As part of EIAs /and EA ensure that ecm is included in in every project approved for implementation,	1	NEMA/Private Sector	√	UNDP/WB											
		Implement and develop incentives and disincentives on esm of chemicals	2	MEMR/SIC	X	UNDP UNIDO											
		Organise workshops and seminars aimed at aimed at promoting industry and civil society participation in chemical risk reduction	4		X												
		Update the NIP for POPs and include the new POPs in PCPB ban and Restrict List	18	MEMR/PCPB	√	SC/ UNEP/G EF											
		Starting with those laboratories approved by NEMA for environmental carry out work study to assess how their analytical laboratory capacity for monitoring and research in issues of chemicals and	6	NEMA .GCD, KEBS.CWQL , NPHL	X	UNITAR											

	especially priority chemicals can be enhanced.																		
	In cooperation with UNITAR develop a strategy and a programme to implementing Globally Harmonized System of Classification and Labeling of Chemicals (GHS) by 2012.		18	MEMR	X	UNITAR													
	Complete the phase-out of lead in Petrol	MoE to issue policy guidance	2	MoE/PIEA	√	UNEP <sup>17</sup>													
	Develop a standard for Lead in paint	KEBs to set technical committee on lead in petrol	6	KEBS/MoI/MoT	X														
	Participate in the UNEP partnership for Clean fuels	Assign a consultancy to guide	7		X	UNEP													
	i) Develop a coordinated program addressing chemical risks for six SIC member institutions	Organize a retreat for IHIS	2	PCPB/KNBS	X	UNDP/GEF/UNITAR													
	ii) Strengthen at least one institution in the chemicals and	Each SIC institution for its	10	MEMR	√														

<sup>17</sup> UNEP – Clean fuels programme

		waste chemicals related to risk assessment <sup>18</sup>  iii)Set up a chemical data bank on research and data collected and especially including the generation and utilization of data	sector use NPJA			X												
	<b>Sub Total</b>			<b>81</b>														
<b>4</b>	<b>National coordination mechanism and mainstreaming/Resource Mobilization</b>	Update NIP for Stockholm Convention.	Project being considered by GEF likely to commence on 1 <sup>st</sup> Nov. 2011	20	MEMR/SCFP	√	UNEP/GEF											
		Formulate Projects and programmes addressing those POPs that Kenya can develop alternatives for especially DDT and lindane	Initial workshop for updating NIP	10		√												
		Build on projects mercury in artisanal mining, electrical products, and waste disposal	Review ongoing project	4	MEMR/iLIM A	√	UNEP/UNITAR											
		Review and develop programmes to deal with highly toxic chemicals of global	Review activities on PCBs	10	PCPB,NEMA/AAK	X	UNEP											
			Implement the Kargi Report	10														
			Follow up on report on															

<sup>18</sup> Aiming at 4 institutions per financial year

			dumping																
		Review and develop programmes to deal with highly toxic chemicals of global concern currently being addressed the chemicals under the Prior Informed con	In North Eastern province.  Follow up on study on arsenic poisoning	5	PCPB/NEMA/ AAK/	X	UNEP												
		Develop a project and programme for electric and electronic waste etc	Build on response to e-waste guidelines now in NEMA website	4	NEMA and KAM/ Private sector	√	BASEL Secretari at Hewlett Pakard												
		Strengthening enforcement of regulations on pesticides handling, development of regulations on transportation of pesticides by building capacity for inspections, border controls, monitoring,	Finalise on draft chemical regulations	10	PCPB, KRA,NEMA, MOPHS	√	UNEP												
		Initiate of pollutant release and transfer register for selected activities widely distributed in Kenya with a view to having annual inventory of releases in at least 4 cities	Follow up on the outcome of the Nakuru PTR study	8	SIC	X	UNITAR												
		Promote of industry participation and responsibility; enforcement of information dissemination (MSDS), education and training on safe	Develop an action plan	4	KAM/KNCP/ NEMA/	X	UNIDO												

		use of chemicals to industries through workshops and seminars																	
	<b>Sub Total</b>		<b>85</b>																
<b>5</b>	<b>Governance and Advocacy</b>	Review existing legislation to make them more comprehensive in accommodating and domesticating the MEAS and draft New ones	Start with Ilima SAICM report	4	SIC/State law office	√	UNEP												
		At the end of each year implementation requirements for the MEAs Kenya is party to complied with fully	Formalise this through scheduled MEA reporting workshops	2	MEMR	√	Conventi on Secretari at												
		Create a database on hazardous chemicals and ensure continuous updating in the institutions with chemicals monitoring and research programmes	Build on chemicals database draft	4	MEMR	√	UNITAR												
	<b>Sub Total</b>		<b>10</b>																
<b>6</b>	<b>Capacity Building and Technical Cooperation</b>	Develop a project/mainstream activity aimed at strengthening the capacity for DOHSS institutions to enforce the relevant OSHA .	Project concept from DOHSS	4	DOHSS/	X	ILO/WH O												
		Develop a project/mainstream activity aimed at and PCPB through Development of training modules	Project concept from	4	PCPB/DOHSS Academia	√	ILO/FA O												

	on worker safety	DOHSS																	
	Develop a project or a mainstream activity for chemicals management by training inspectors and prosecutors	Develop a training programme	23	NEMA/ Counties	X	Bilateral													
	Integrate chemicals management in county programmes through implementation of the national implementation plans, country programmes and implementation	Develop a GEF project	23	County Governments	X	World Bank													
	Build the capacity of Kenya Cleaner Production Develop	Develop an institutional capacity building project	10	KNCP	√	UNIDO													
	Implement Kenya guidelines to promote adoption and mainstreaming concepts of BAT and BEPs; and esm		70	KNCP/NEMA/ MoI	X	UNEP/ UNEPD TIE													
	Promote voluntary initiatives in the private sector by initiating partnership projects and activities in the line of sound chemicals management		3	KAM/SIC	X	UNIDO/ UNDP													
	Develop a national programme to enhance civil society response (CSR) initiatives by channeling part of CSR funds towards chemicals related risk responses,		4	iLIMA,PSR	X	UNDP/ GEF													
	Mobilize a critical mass of NGOs and industries to participate in the SAICM activities that civil Society as a driver on chemical issues and		4	iLIMA /COTU	X	UNEP													

	SAICM implementation process																		
Sub Total				15 5															
7	Cadmium, Chemicals in products and non technology	Create awareness on the content of cadmium in toys, jewellery, batteries, electric and electronic equipment, nanotechnology, chemicals in products		3	KEBs	X	UNEP												
	Sub Total			3															
8	Mercury, lead, cadmium and priority chemicals of national/global concern, etc	Develop mercury profile in line with the Global Mercury Partnership	Do an inventory for each and develop a thought starter	4	MEMR/MG	√	UNEP												
		In cooperation with UNEP, Strengthen Kenya’s capacity to carry out mercury inventories		4	MEMR/MG	√	UNEP												
		Develop partnership Projects on reduction mercury emissions and exposure such as in ASGM, mercury in products, health care, in schools		4	MEMR/ MOPHS	X	UNEP												
		Develop management guidelines of mercury containing products such as fluorescent bulbs		4	MoE	X	UNEP												
		Use of BAT/BEP guidelines in chemicals sector		4	NEMA	X	UNEP/ WB/ UNIDO												
	Sub Total			20															

Detailed of Some Sub activities

								Years								
	Main Activity	Tasks		BUDGET (000,000)		Ongoing Act	Possible IOMC Partners	2011	2012	2013	2014	2015	2016	2017	2018	2019
9	GHS Implementation in Kenya	Develop of a GHS Project in the Kenya with UNITAR	SCO to develop concept with UNITAR	2	MEMR/ SCO	X	UNITAR									
		Establish roles and responsibilities of the stakeholders in implementation of GHS	Form a subcommittee on GHS	0.5												
		Train relevant officers on implementation of GHS at all stages of chemical life cycle		2												
		Publish and disseminate guidance materials on application of GHS to the grassroots levels.		2												
		Incorporate chemical safety and understanding of the labeling system in schools and university curricular.		2												
	Sub Total			8.5												
10	Research monitoring and data sharing on environmental and health	Promote research into technologies and alternatives that replace highly toxic chemicals e.g. DDT, Lindane, endosulfan, etc	Develop a research strategy	4	SIC	X	UNEP/ ICIP									



		Develop research activities in all aspects of chemical life cycle for industry and agriculture	Hold workshops	0.5	SIC/ME MR	X	IOMC											
		Establish monitoring programmes for priority chemicals, Arsenic, fluoride, air pollutants, dioxins.	Develop a thought starter	10		√	UNEP											
		Build human and technical capacity of research institutions to address the above.		10		√	UNEP											
		Strengthen CIEN chemical data management system at MEMR		2		√	UNEP CIEN											
		Establish and maintain website that provides readily available chemical information to the public at MEMR		2		X	UNEP											
	Sub Total			28.5														
11	Human Health and Chemicals	Create awareness on chemical impacts on health and environment in all health personnel	Review SANA NPJA	2	MOPHS	X	WHO											
		Build capacity for monitoring of chemical impacts on human health in SAICM at KEMRI, DOHSS,		10	KEMRI DOHSS	X	WHO / UNEP											
		Build capacity for dealing with poisoning and chemical accidents in GC/DOHSS		10	Kenyatta Hospital	X	ILO/ WHO											
		Enforce national legislation prohibiting child labour that involves hazardous chemicals.		3	DOHSS/ COTU	X	ILO											

		Create awareness programs and materials on children's chemical safety		3	MoE/ KIE	X	WHO									
		Include chemical safety in education curricula		3	KIE	X	UNEP									
	<b>Sub Total</b>			<b>29</b>												
<b>12</b>	<b>Socio-eco considerations and mainstreaming chemicals management into development processes</b>	Build national capacity to address social and economic aspects of chemicals		4	SIC	X	UNDP									
		Develop a network civil society competent on chemicals and wastes		4	ILIMA		UNDP									
		Include chemicals management in implementation of Vision 2030		2	MOPV		UNDP									
		Include projects on chemicals management under PRSP		2	MOPV											
		Strengthen a programme for Public Private Partnership		2	MoF											
		Strengthen a framework for NGO – public sector in chemicals management		2	PSR											
	<b>Sub Total</b>			<b>16</b>												

13	Promotion of industry participation and waste management	Strengthen the existing loose civil society network to make it more effective.		4	ILIMA											
		Streamline technology transfer information sharing and research among stakeholders		6	SIC											
		Up-scale local research on chemicals recyclers		6	Green belt Movement											
		Create fora for disseminating research findings, symposia, seminars etc		6	SIC											
		Initiate synergies, cooperation, between the chemicals and waste stakeholders		6	SIC											
		Encourage more NGO's to participate in SAICM activities		6	ILIMA											
		Enhance social corporate responsibility in chemicals management in industry		6	KAM											
		<b>Sub Total</b>		<b>40</b>												
14	Promoting East African Regional Cooperation on chemicals issue	Secure political commitment across the nations of Kenya, Uganda, Tanzania, Burundi and Rwanda;														
		Raise awareness among stakeholders concerning the need for sound chemicals management in transport and protection of international inland waters such as Lake Victoria, the Indian														

Comment [D1]: To be co

		Ocean etc;																	
		Mainstream sound chemicals management into East African regional programmes and agreements;																	
		Identify current and new sub national implementation programmes and activities that can be made regional or sub regional;																	
		Develop coherent and consistent strategies for implementing SAICM at the East African regional level by implementing aspects of the Africa Regional Plan of SAICM																	
15	<b>Monitoring and Evaluation of SAICM implementation in Kenya</b>																		
		Indicators will be established																	
		Each year, the SAICM Focal Point will prepare annual report																	
		Every year to the 4 <sup>th</sup> Annual chemical forum, following formats and guidelines defined by the International Conference on Chemicals Management.																	
		The reports will be prepared by the SAICM focal Point and include brief description of activities implemented, main problems encountered during the implementation period and measures taken to resolve these problems																	
		Evaluation of progress in light of the objectives of the Plan, and details of expenditure																	
		At the beginning of the fourth year, a complete mid-term review should be carried out (4 years); in the same manner																	

**Comment [D2]:** To be co



