

REPUBLIC OF KENYA



MINISTRY OF ENVIRONMENT AND MINERAL RESOURCES

**FINAL DRAFT
OF THE
CAPACITY ASSESSMENT FOR THE
SOUND MANAGEMENT OF
CHEMICALS TO DEVELOP NATIONAL
SAICM IMPLEMENTATION PLAN IN
KENYA**

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ACRONYMS

DOHSS	Department of Occupation Health Safety Services
EMCA	Environmental Management Coordination Act
GEF	Global Environmental Facility
INM	Intergovernmental Negotiations on Mercury
ISWM	Integrated Solid Waste Management
IOMC	Inter-organization Programme for the Sound Management of Chemicals
ICCM	International Conference on Chemicals Management
IFCS	Intergovernmental Forum on Chemical Safety
IGOs	Intergovernmental Organisations
IPM	Integrated pest 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
MEMR	Ministry of Environment and Mineral Resources
MOH	Ministries of Health
NCP	National Chemical Profile
NEMA	National Environmental Management Authority
NGO	Non Governmental Organization
ODS	Ozone Depleting Substances
OPS	Overarching Policy Strategy of SAICM
OSHA	Occupational Safety and Health Act
PCPB	Pest Control Products Board
PIC	Prior Informed Consent of Rotterdam Convention
POPs	Persistent Organic Pollutants
SAICM	Strategic Approach to International Chemicals Management
SERC	Standards and Enforcement Review Committee
TOR	Terms of Reference
UNITAR	United Nations Institute for Training and Research
WSSD	World Summit on Sustainable Development

EXECUTIVE SUMMARY

In 2006, at the First International Conference on chemicals management held in Dubai, Kenya joined the world community of nations in adopting the Strategic Approach to International Chemicals Management as the framework for managing chemicals in Kenya.

As a preliminary start up, Kenya is implementing a SAICM Quickstart Project. Using SAICM implementation guidelines developed by the United Nations Institute for Training and Research, Kenya developed the National Chemicals profile. It was adopted in November 2010. The profile has identified Capacity Building and Interministerial Coordination as priority ingredients for sound chemicals management. As a result, a draft national interministerial coordination mechanism is under consideration by the Government of Kenya. This capacity assessment has also been developed through a stakeholder's consultative process.

The general observation is that capacity to implement chemicals management is low, with the following high priority areas. The assessment covered framework and capacities for important chemicals management issues.

For governance framework, it was found that all the governance issues are critical and urgent. There are many regulations on chemicals. The proposed actions would involve reviewing and harmonizing existing chemical regulations to provide the basis for interministerial collaboration and coordination among the stakeholders. It is the capacity to comply, enforce and meet international commitments that is a challenge.

For the important chemicals management issues, the integrating chemicals management into national development priorities in a coordinated and programmatic manner is a challenge and implementation of SAICM will be constrained if this capacity is not build. It also seems like all the objectives of SAICM overarching policy are high priority; however, the highest ones were identified. They include using the assessment to develop a national SAICM implementation plan, building capacity for managing risks at the workplace, strengthening agencies to enforce legislation, promoting stakeholder participation and linking budgeting and financing issues.

The detailed assessments and categorizations are contained in worksheets which are attached to the report. The immediate action is to use the assessment to develop a SAICM implementation plan.

CHAPTER. INTRODUCTION

In 2006, Kenya joined the community of nations on adopting the Strategic Approach to International Chemicals Management. The Ministry of Environment and Mineral Resources and the United Nations Institute for Research (UNITAR) have been cooperating in implementing SAICM in Kenya¹.

Over the past years significant progress has been made by Kenya to strengthen its chemicals management programs as detailed in the Kenya National Chemicals Profile (KNCP)². This progress has been made by various institutions for the diverse sectors of chemical use. Some have progressed more than others, but obviously there is a need to integrate the management of all chemical risks irrespective of the sector as when they affect health and environment of people. A strategy is required to assist stakeholders to respond to chemical impacts. Such a strategic approach for national management of chemicals would need action by the Government institutions and non-governmental stakeholders, (including the business) as well as players involved in chemicals management and use. This capacity assessment details the respective national capacity in Kenya

1.1 Context and Overview

This national capacity assessment for sound chemicals management and SAICM implementation is meant to provide a tool for prioritising and planning the implementation of chemical and hazardous waste at all levels of national development. It aims at prioritizing and planning for SAICM implementation nationally and local levels, catalyzing and encouraging collaboration between government and stakeholders and setting the stage for preparing a SAICM Implementation Plan which could be linked to a integrated national programme for sound chemicals management

The assessment is an outcome of the assessment at the national level which comprised of an assessment of the national governance framework for sound chemicals management and an assessment of capacities and priorities concerning specific chemicals management issues such as risk reduction efforts.

Worksheets are provided for both components of the assessment to facilitate the collection and analysis of information.

1.2 Background on SAICM

This assessment is tailored along the SAICM Global Plan of Action. Kenya is to implement the SAICM. The SAICM development process started through a series of sessions of commencing in 2003 and included key milestones, including:

- UNEP Governing Council, February 2002
- World Summit on Sustainable Development, Johannesburg, September 2002
- World Health Assembly, May 2003
- International Labour Conference, June 2003
- World Summit, New York, September 2005
- SAICM PrepComs 1, 2 & 3
- First session of the International Conference on Chemicals Management (ICCM), February 2006.

The SAICM Prepcom 2 was held in Nairobi in April 2004.

The development process was multi-sectoral and multi-stakeholder in nature, involving representatives of governments, non-governmental organisations (NGOs) from sectors such as agriculture, environment, health, industry, and labour. UNEP, the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), and the Intergovernmental Forum on Chemical Safety (IFCS) were co-convenors of the process.

¹ This capacity assessment has been developed using the april 2007 UNITAR Guidance Document for developing a capacity assessment for the sound management of chemicals and national implementation plans

² The Kenya National chemicals provide available ion www.environment.go.ke



Fig1: Opening session of INC2 of SAICM

1.3 Overview of SAICM Outcomes and Decisions

The overall objective of SAICM is to support the achievement of the 2020 goal agreed at the 2002 Johannesburg World Summit on Sustainable Development (WSSD). The main outcomes of the SAICM process are three key documents³ the Dubai Declaration, the operational strategy and the Global Action Plan.

1.3.1. Dubai Declaration on International Chemicals Management provides an agreed overview of the political commitments made for SAICM. It reflects their "...firm commitment to the Strategic Approach and its implementation." In particular, it reinforces the importance of the linkage of sound chemicals management to sustainable development and poverty eradication, contribution of SAICM to the MDGs (Millennium Development Goals), implementation of international agreements, and the roles of non-governmental stakeholders and importance of partnerships in reducing the risks posed by chemicals to human health and the environment.

1.3.1 Overarching Policy Strategy (OPS) provides information on the scope of SAICM, identifies needs for its effective implementation, and outlines objectives, principles, financial and implementation arrangements. Its five objectives are:

- i. Risk reduction;
- ii. Knowledge and information;
- iii. Governance;
- iv. Capacity-building and technical cooperation; and
- v. Illegal international traffic.

1.3.3. The Global Plan of Action (GPA)

The GPA is a detailed outline of proposed SAICM work areas, activities, actors, timeframes, targets, and indicators of progress related to SAICM implementation. It is also a good framework to address sound chemicals management at national level. The GPA contains 36 work areas, and 273 activities, structured in accordance with the five categories of SAICM objectives in the OPS. It is for use and as a working tool and guidance document for all stakeholders implementing SAICM. Because not all of them are relevant to Kenya, the ones that are, were prioritised.

During its adoption, the global community of nations who are to implement SAICM agreed on initial capacity building activities for implementation of Strategic Approach objectives supported, by a Quick Start Programme (QSP)⁴. In Kenya this is located in Ministry of Environment and Mineral Resources. Its objective is to "support initial enabling capacity building and implementation activities in Kenya.

1.3.4 Linkages between SAICM and Agenda 21

Chemical use affect the bulk of national and sustainable development. To link SAICM with the overall national development strategy, it is important to understand its linkages with national development. So that capacity can be build to streamline the chemicals management into national development plans.

³ <http://www.chem.unep.ch/saicm/SAICM%20texts>

⁴ SAICM OPS, para. 19. See also <http://www.chem.unep.ch/saicm/qsp.htm>.

In this regard, SAICM gives guidance to countries for the implementation relevant provisions of Agenda 21. The following elements of sound national chemicals management in mind are considered.

- (a) Adequate legislation to address production, use, transport, waste disposal
- (b) Information gathering and dissemination;
- (c) Capacity for risk assessment and interpretation;
- (d) Establishment of risk management policy;
- (e) Capacity for implementation and enforcement;
- (f) Capacity for rehabilitation of contaminated sites and poisoned persons;
- (g) Effective education programmes; and
- (h) Capacity to respond to emergencies.

These linkages take into account differing circumstances, development priorities and capacities including technical and financial of diverse chemicals stakeholders. In preparation for this assessment, views of stakeholders in Kenya were sort.

1.4 Enabling Activities for SAICM Implementation

For Kenya, the implementation of SAICM began with an enabling phase to build capacity to develop, with stakeholder participation, a national SAICM implementation plan the Kenya Quick Start Programme, the “*development or updating of national chemical profiles and the identification of capacity needs for sound chemicals management*” This will prepare Kenya for SAICM implementation in a systematic and coordinated manner. It is going to promote development of a sound governance structure that ensures the effective participation of all concerned parties within and outside of government through cross sector representatives. For the quick start activity, a team of stakeholders are steering the process of SAICM implementation representing sectoral stakeholders.

The list of the Steering Committee is attached as Annex 1. Further, this enabling activity is building on capacities built under the Montreal Protocol on substances that deplete the ozone layer, Basel, Rotterdam and Stockholm Conventions, which has been used to develop legislative and build capacity and the source of the recommendations contained in their outputs.

1.4.1 Kenya National Chemicals Profile

The Kenya National Chemicals Profile addresses chemicals production, import, export, transport and use. It diagnosed the existing infrastructure for the sound management of chemicals using UNITAR/IOMC National Profile guidance document. It was endorsed by a select group of stakeholders in November 2010.

1.4.2. Capacity Assessment and Priority Setting

This capacity assessment is the principal enabling activity for national SAICM implementation, especially identification of priorities as an essential step towards preparing a SAICM implementation plan. This takes into account situations and the need to focus on activities that address Kenya national chemicals management needs and priorities. Though it is not possible to implement the many possible actions outlined in the SAICM GPA at once there is need to focus on addressing the most pressing ones. For this reason, a meeting was held at diverse times culminating in stakeholder workshop on 23-24 November 2010. This workshop had the following aims and objectives:-

- i. Better understanding of SAICM 36 Work Areas
- ii. Application of UNITAR methodology to Kenya
- iii. Defining work-plan for preparing assessment for each of the key institutions
- iv. Identifying roles of stakeholders and how they can complement each other

1.4.3. National SAICM Implementation Plan Development

SAICM’s assumes complemented by individual sector action plans on substantive topics of chemicals and waste management. Partnerships among stakeholders will be encouraged as a way to implement the plans. In order to systematically prepare for the implementation of SAICM, the Kenyan governments is expected to identify where synergies and complementarities exist.

- integrate SAICM into relevant programmes and plans, including those for development cooperation⁵; and
- Establish arrangements for implementing SAICM on an inter-ministerial or inter-institutional basis so that all concerned stakeholder interests are represented and all relevant substantive areas are addressed⁶⁷.

The Ministry of Environment and Mineral Resources will spearhead the process in conjunction with development partners, ministries, private sector and civil society.

1.5 Objectives of the National Capacity Assessment

This capacity assessment is building on the information in a NCP adopted by stakeholders in November 2010. It is intended to document and evaluate existing national capacities for SAICM implementation so that actions can be taken for environmentally sound management of chemicals. The key objectives are;

- Catalyze a process of collaboration between government and stakeholders towards understanding and identifying priority needs for SAICM implementation;
- Facilitate identification of activities in government and within stakeholder groups which collectively contribute to SAICM implementation;
- Identify selected areas where partnership projects between government and stakeholder groups, or between various stakeholder groups, may be feasible; and
- Setting the stage for preparation of a SAICM Implementation Plan which is linked to, as appropriate, an integrated national programme for sound chemicals management.

Fig 2 shows the stepwise involvement of the stakeholders

Complementary SAICM Assessment Activities of Non-governmental Stakeholder Groups

Many such assessments revealed how in particular areas Government institutions develop programmes and activities and private sector work together to achieve concrete results through partnership activities. It also generated valuable information for stakeholder groups to review and consider their priorities for the development of action plans specific to their needs.

In this regard, stakeholders met and had an understanding SAICM, testing methodology, defining work plan and roles. The main stakeholders in the capacity workshop were Government departments, parastatal, universities, civil society and the private sector. It is hoped that through their representative's members of the private sector could be involved more intensively in future. Below is an analysis for governance and chemicals management.

⁵ (SAICM OPS paragraph 19 (a))

⁶ (SAICM OPS paragraph 23)

⁷ The UNITAR/IOMC document "Guidance on Action Plan Development for Sound Chemicals Management" provides some guidance on generic issues of developing an action plan (this document is available at: <http://www.unitar.org/cwg/publications/inp.aspx>).

CHAPTER 2. ASSESSMENT OF THE GOVERNANCE FRAMEWORK

2.1 Introduction

Sound chemicals governance can provide an important enabling platform which can help to ensure that chemical management activities are effectively planned and co-ordinated. Working relationships for government and stakeholders in SAICM implementation can be in place to ensure that chemical management issues are “mainstreamed” in national development planning. The assessment of governance issues can also assist in ensuring that there is high-level support to implement SAICM for the key sectors of agriculture, industry, petroleum, etc and provide a basis for developing a coordinated national programme for SAICM implementation at the national, local and enterprise levels. Chapter 4 of the NCP provides for this assessment. The national implementation plan (NIP) for the Stockholm Convention also went in to deal on the Governance capacity.

Guided by the Dubai Ministerial Declaration and the SAICM OPS, the following five areas are considered relevant for conducting a governance assessment:

1. Strength of existing capacities
2. Summary of existing gaps or problems
3. Possible action, who to take action timeline
4. Level of priority for each sector

For chemicals management assess the areas considered were;

- Information generation
- Risk management for chemical safety and also waste
- Information exchange, education and training among key institutions
- Chemical emergency prevention and control

2.2 Proposed Areas for the Governance Assessment

For this assessment, the governance areas considered include:

- Integrating chemicals management into national development priorities, development plans, institutional strategic plans.
- Sound institutional and sectoral national framework
- Legislation and enforcement, voluntary initiatives
- Participation of the private sector and civil society in chemicals management at grass root level and
- International cooperation related to chemicals management among others.

2.2.1. Integrating chemicals management into national development priorities

In addressing governance the OPS recognizes the need of identifying nationally important and urgent issues in chemicals management as the critical initial step.

- Each stakeholder group (government, industry, NGOs, etc.) determines its most important and urgent chemicals management issues, how to initiate action and to trigger start-up
- Compare results and agree on national important and urgent issues by consensus of all groups so as to allocate finances appropriately
- Rate each issue regarding its potential priority in relation to development planning
- Completion of revised worksheets 3

National priorities related to chemicals management and SAICM implementation is reflected in a number of ways, for example, through their appearance in a national sustainable development strategy or national poverty reduction strategy paper. If chemicals-related activities are identified in development plans they represent the result of consensus-building at the national level and donor support to chemicals-related activities may be more likely. The Sessional Paper No 6 on Environment and Development, Vision 2030, Industrialisation to the year 2020. The pieces of legislation, related pieces of legislation were used to assess the capacity. The capacity to financing mechanisms of the chemicals and waste cluster used in chemical programmes were used. They included Global environment facility and the Multilateral Ozone fund.

2.2.2. Sound institutional and programmatic framework

To address the capacity building needs, capacity will be built based on the most appropriate institutional needs because programmatic approach represents a long-term national commitment to chemicals management where relevant government sectors establish and participate in a national chemical safety co-ordinating mechanism, while maintaining their independence to execute individual components and projects within their mandate and competence. Development of a *National Programme for the Sound Management of Chemicals* is being used to conduct an evaluation of progress made and challenges faced at the national level towards reaching the WSSD 2020 goals and the targets established by SAICM, identifying the gaps and building on them, in line with Kenya's national development programs and the Kenya Vision 2030.

2.2.3. Project planning, implementation, monitoring and evaluation

Review of Specific projects was made as to how concrete progress can be made towards building capacities for the sound management of chemicals and achievement of the WSSD 2020 Goal in Kenya. A number of characteristics could contribute towards the sustainable capacity building. These include, for example:

- multi-sectoral and multi-stakeholder consultation/participation in project design and implementation; for example the chemical sectors, complemented by research and intergovernmental organisations.
- sound project planning, monitoring and evaluation;
- evaluation of the sustainability of the capacity and infrastructure for chemicals management.
- building on the experiences gained and lessons learned from previous projects such as in Stockholm convention in other ministries
- linkages of project and activity goals to overall programmatic priorities and
- Utilisation of financing mechanisms at national private sector and in civil society levels

2.2.4 Legislation and enforcement

Legislation and regulations comprise an important component of national chemicals management, a capacity assessment and inter-ministerial coordination. Umbrella legislation such as EMCA established a generic legal framework for the control of chemicals and made the basic principles of sound chemicals management legally binding. The regulatory framework is now being integrated across all sectors and seeks to address the entire life cycle of chemicals, including importation, manufacture, processing, storage, transport, use, disposal and recycling. The existence of a comprehensive and well coordinated legal framework can help to avoid piecemeal, overlapping, or conflicting regulations. A number of regulations on chemicals and waste have been developed in other institutions. The capacity to implement them was also assessed.

2.2.5 Participation of the private sector and civil society in chemicals management

Several civil societies are involved in SAICM implementation in Kenya. In addition, the private sector in particular industry, has also been a net contributor to supporting capacity building, especially given increasing calls by the Kenya Government for this sector to work in partnerships with it. That way they will be more receptive to suggested economic instruments because with systems being developed that work on a cost recovery basis to ensure sustainability. The civil society will be involved in certain aspects of chemicals management capacity building activities, including raising awareness. Multilateral organizations such as the Global Environment Facility and the Multilateral Fund for the Implementation of the Montreal Protocol, the SAICM Trust Fund for example, recognize the potential of civil society and the private sector to assist governments in the "delivery" of chemicals management-related commitments. However, Kenya needs to put more effort to benefit from capacity built and their full potential. How they have mainstreamed their operations to integrate SAICM was also subject to review.

2.3 The Governance Assessment

For each of the five OPS objectives, stakeholders issue areas outlined above, involved in the governance assessment involved experts and sector representatives providing information on the following based on past work were considered especially with regard to including items such as;

- The strength of existing capacities (high/medium/low)
- Existing gaps or problems (if capacity is low)
- Possible action(s)they could take singly or jointly
- Level of priority given for each sector as well as resources allocated to it.

CHAPTER 3. ASSESSMENT OF CAPACITIES FOR IMPORTANT CHEMICALS MANAGEMENT ISSUES

3.1 Introduction

Assessment of capacities for important chemicals management issues addresses the priority issues for Kenya. The basis is GPA. SAICM GPA refers to a number of more specific work areas and chemicals management activities. In light of the large number of these activities, the experts did an initial screening and identified a select number of activities for which a more detailed assessment of capacities, gaps and possible actions could be undertaken. These are summarised in four priorities.

3.2 Proposed Areas for the Chemicals Management Assessment

3.2.1 Information generation and dissemination

In chemicals management data and information is critical to decision making. The NCP has replete with unfortunately sometimes no action can be taken because allegations of poisoning can only be supported by scientific information and data. The information required should be comprehensive, validated and up-to-date for chemicals management. Information is required to: identify chemicals of concern; assess problems that may arise and identify populations and environments at risk; implement focused and effective risk management programmes; monitor and evaluate health and environmental risks; raise awareness; and prepare and respond to chemical accidents and emergencies. It should assist in long term systems such as hazard identification, classification and labelling (GHS), exposure assessment and risk assessment. The critical question is whether it can be used for decision making, to make long term policies, sustainable development and promoting corrective actions.

3.2.2. Risk reduction

This assessment include reduction of risks related to chemical exposure, it encompasses a broad range of options designed to limit adverse effects on health and the environment by reducing the availability, or inherent hazards, of chemicals or by controlling the nature and extent of exposures. Risks may be reduced through the elimination or reduction of the use of hazardous materials, substituting less toxic, persistent or bio accumulative products, implementing safety procedures for the handling of dangerous chemicals and reducing the generation of hazardous waste e.g safe handling and use of pesticides, workplace safety, and promotion of safer alternatives. For Kenya risk reduction was considered based on present efforts, determining whether they are enough, efficient and long term. The assessment took into considerations lessons learnt from the following episodes;

- Many industries now have health and safety committees and many now do have Environmental Health Safety (EHS) officers as required by the factories and other places of work Act.
- Many training workshops which are largely sectoral have been conducted for the oil, horticultural, livestock and other sectors.
- The fish industry is ensuring that toxic elements do not reach maximum residue levels to meet market demand for export and many are certified under the Hazard Analysis Critical Control Point(HACCAP).
- The Kenya Association of Manufacturers under whose umbrella manufacturing sector that addresses specific waste streams, how such efforts could be supported by a sustained information flow sector wise and nationally have been addressed.
- A number of alternatives on use of pesticides have been developed, field-tested, and are in use on either for small or large scale and could be exploited. Stakeholders need to understand the risks they pose are however minimal or limited.
- Research on risk assessment, management and communications has been made by government resulting in alternatives to toxic chemicals and hazardous processes. These alternatives and processes include those for elimination of use of DDT, ODS, POPs etc
- Various research initiatives on Integrated pest management (IPM) approaches made by international Research Institutions such as the International Centre for Insects Physiology and ecology(ICIPE);

- Recycling of certain chemicals and plastic pesticides containers after use is now a common practice in many chemicals stakeholder institutions;
- Activities on scaling up organic farming as an alternative to toxic chemicals.
- Containment of the obsolete toxic chemicals pesticides to minimize environmental contamination and impacts on public health including of substance management in the school curriculum.
- Several incinerators meeting standards are in place
- Environmental management training in school curriculum to include toxic substances management.

The challenge is how to use the risk reduction capacity created. Information generated and lessons learnt to further make long term risk reduction measures across the country.

3.2.3 Accident prevention and control

The most frequent accidents involving chemicals are fires and in transportation.

Chemical accidents and incidents have severely impacted on human health and the environment. In Kenya, they result in a loss of income for enterprises that experience such accidents. The NCP has indicated that proper emergency response procedures need to be in place in cases when an accident cannot be prevented. Examples of issues to be considered under SAICM include chemicals accidents and poisoning prevention, treatment and control as adequate capacity for preparedness and response does not exist.

3.2.4. Knowledge and Information

For the management of the persistent organic pollutants under the Stockholm Convention, Kenya has prepared National Implementation Plans (NIPs). As required by SAICM implementation, such an approach for management of chemicals would need action by the Kenya Government and non-governmental stakeholders (including the business sector and non-governmental organizations), as well as between players involved in chemicals management, to generate data and information. The capacity to collect, analyses, retrieve and disseminate that data is lacking.

a) Data and Information

The sectors of agriculture and water regularly collect data for water quality and pollution the public in laboratories in Nairobi, Kisumu, Mombasa etc. The University of Nairobi do collect data on water quality but that data is rely shared with the public.

Cooperation among relevant government authorities, industry, workers, non-governmental organisations and the public is fundamental to. Widespread awareness of the potential risks associated with the use of chemicals and chemical accidents, as well as an understanding of the ways in which chemicals can be handled safely if such capacities are used. The key data institutions are those in water quality and monitoring son on food veterinary and agricultural products.

b) Analytical and laboratory capacity

Laboratory analytical capacity helps support programmes and policies for chemicals through regulatory analysis, monitoring, and the ability to support health and environmental surveillance. (e.g. for pesticide or workplace exposures, for chemicals in the environment, or for chemical contamination in ground water, etc). The issue of analytical and laboratory capacities is referenced several times in the SAICM GPA. It raises the alarm and is a basis of promoting governance. The only laboratories whose results are used for forensic purposes are in Government Chemist Laboratories in Nairobi and Mombasa which are basically inadequate.

EMCA requires all laboratories to assessed and gazetted and registered. The NEMA controls the list of the gazetted ones

Most laboratories lack sufficient equipments for proper analysis. In general, laboratories have equipments such as ; GC, spectrometers, microscopes, library, lab equipment for soil and plant tissue analysis including x-ray, gas chromatographs, HPLC,s flame photometer, Centrifuges, UV, NMR, ion chromatograph, ion selective meter, PH meters, Radon emission meters, assorted laboratory glassware. Some laboratories like Kenya Plant Health Inspectorate Service, National Agricultural Research laboratory (NARL) Kabete have computers and internet facilities and library for data storage.

Most laboratories do not have the capacity and capability for analysis for randomly toxic chemicals. DDT, Aldrin, Heptachlor are analyzed at university of Nairobi Chemistry department. Kenya Plant Health Inspectorate Service laboratory analyses toxic chemicals in the soil water, plant tissue and animal tissue. No toxic chemicals are analysed at Olkaria geochemistry, the later is used to analyze chemical species of interest to geothermal development.

Methods of analysis applied include laboratory tests, field observation, community views OECD methods, EPA methods, LD50, LD100, cationic analysis done using AAS. In addition, analysis by wet method used in ion chromatograph gas analysis of DDT, Dieldrin, at University of Nairobi Chemistry Department, are done. However they apparently do not store data. Most laboratories Store their data in computers, files and diskettes as a backup in a computerized system.

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70% of the organizations do not have publications and therefore cannot analyse and synthesis the data they collect. It is also noted that many of the laboratories are located in Nairobi and were affiliated to academia such as University of Nairobi Chemistry Department and various labs in college of Health Science, Microbiology Clinical Chemistry and Kenya Bureau Standards. Laboratories like Entomology Division of Vector Borne Diseases in Nairobi. General Service staffs in other laboratories are insignificant. 50 % staff working in laboratories as full time staff, Professional and General Service Staff have the following qualifications; Bachelor and masters degrees in chemistry, Medicine, Occupational Health and Safety, doctorates Higher National Diploma and Ordinary Diploma. However, the data they generate is not fully utilised.

3.3 Identifying Important and Urgent Chemicals Management Issues

On the surface all chemical issues are a priority in Kenya. However, in order further to prioritise in identifying issues considered more important, stakeholder groups reviewed, from their perspectives, various chemicals management issues, such as classification and labelling, safe handling and use of pesticides, training, or chemical accidents.

The Worksheet in **Annex 2 was used** to assist in identifying the priorities of the various stakeholder groups and making a summary assessment and is detailed here below.

CHAPTER 4: Initial Capacity Assessment for Important and Urgent Action

On the overall, chemicals management issues identified include;

4.1 Governance

Governance is important and urgent. Actions will revolve around reviewing and harmonizing the existing chemical regulations to provide national framework for inter-ministerial collaboration on and coordinating mechanism for sound management of chemicals through finalization of an interministerial coordination mechanism. In this regard much has been done to develop the regulation. It is the capacity to comply with international commitment as well as national enforcement that is lacking.

a) Research

For research the capacity status can be summarised as follows

- Kenya is in building capacity for research institutions to address societal problems such as the increasing causes of cancer
- Financing, and coordination with the research institutions and
- Collaboration among the research institutions, Universities, industries and private sector involved in chemicals.

b) Knowledge and Information

- Building information exchange among the government ministries and agencies
- Disaster preparedness to include management of chemical threats (spills, fires, poisoning), explosions etc.
- Development of curricula for medical personnel to address chemicals poisoning at all levels, National, County, enterprise
- Development of materials for awareness creation for school children on prevalent hazardous/dangerous chemicals in school.
- Development of materials for awareness creation on chemicals relevant to the working environment.
- Establishment of poison control centers in all major hospitals in the country.
- Mainstreaming chemicals management issues in the country's work and programmes of action.

Once an initial listing of priority issues was developed, an assessment of the capacities, gaps and possible actions provided a basis for identifying SAICM implementation activities considered most relevant, and for which partnerships could be initiated. This is provided for in worksheets in Annex B

5 Priorities

Four groups were formed to address governance worksheets and then they worked on general priorities.

The priorities are as follows:

Priorities

1: Integrating chemicals management into national development priorities.

The priorities are:

- i. Regularly conduct assessment of national chemicals management to identify gaps and prioritize action for key chemicals namely ODS, POPs, Mercury, lead and cadmium
- ii. Relating human health protection capacity building aiming at improving health protection in chemicals use through linkages between health and the environment joint activities under the Libreville Declaration on health and the Environment in Africa
- iii. Promoting private sector involvement associations, in compliance through voluntary activities industry and civil society participation in chemicals management supported and encouraged by government in corroboration with development partners.
- iv. Enhancing Laboratory analytical capacity across the country with priority given to toxic chemicals
- v. Implementing the Globally harmonized System of classification (GHS)
- vi. Capacity building in risk assessment including the generation and utilization of data for risk assessment, data sharing, retrieval and updating.

2 s: Programmatic National Framework for sound chemicals management .

The priorities are:

- i. Establishing an inter-institutional national coordination mechanism. Action can be development of a project to target informal and SMEs covering institutional building for them in conjunction with trade associations
- ii. Setting national priorities that develops integrated national chemicals management programmes
- iii. Successful programmes be replicated and where possible up-scaled in other towns and counties aside from just concentrating them in Nairobi and Mombasa .
- iv. Establishing effective financing mechanisms and Government expenditure budgeting by mainstreaming chemicals programmes in Medium Term Expenditure Framework (MTEF) process, building capacities to enable access to international funds, develop systems for socio-economic considerations; enhance systems for liability and compensation under the Basel Convention on liability and redress.
- v. Promote safer alternatives (NIP for PBTs POPs and develop programmes addressing mercury and other chemicals of global concern)
- vi. For the highly toxic chemicals and chemicals of global concern (global, regional and national concern): Develop programmes to deal with highly toxic chemicals especially lead, cadmium, mercury, in addition to those of ODS, POPs and PIC.
- vii. Strengthening implementation of regulations on pesticides handling, development of regulations on transportation of pesticides, implement GHS
- viii. Safe use, storage, and transportation of industrial chemicals, through the development of regulations on toxic chemicals, strengthening implementation of GHS, development of Pollutant Release and Transfer Register (PRTR).
- ix. Chemical safety in the workplace: strengthen enforcement of OSHA, implementation of GHS, effective regulation on promotion of industry participation and responsibility, facilitate enforcement of information management and dissemination (MSDS), education and training on safety use of chemicals to increase coverage to more industries.

3: Governance

The key governance priorities include:

- i. Review of existing legislation to make them more comprehensive, more embracing and updated to address present and emerging issues and concerns.
- ii. Building capacity for agencies to enforce the relevant acts (OSHA and PCP Act)
- iii. Wider, more inclusive and mainstreaming of cleaner production (Develop guidelines for adoption) by elevating the institutional mandate of the Kenya National Cleaner Production Centre.
- iv. Hazard data generation and availability (by consolidation of generated data and its continuous monitoring) in as much as it affects health and environment in Kenya.
- v. Training on occupational health and safety especially the need to develop modules for training in chemical safety and management for workers in all sectors.

4: Capacity Building

- i. Assessment of national chemicals management to identify gaps and prioritize actions: to focus on the need for more trained inspectors & prosecutors to promote governance and reduce illegal international trade in banned and restricted chemicals.
- ii. Implementation of integrated national programmes: addressing the chemicals and waste cluster of chemicals and wastes through integrated approach to implementation of the NIPs, action plans etc.
- iii. Stakeholder participation by initiating collaborative mechanism to address technology information sharing and research among all stakeholders
- iv. Voluntary initiatives in the private sector such as the civil society response (CSR). Initiatives need to be enhanced by way of channelling part of CSR funds towards chemical related risks responses and education and awareness initiatives and encourage more sectors to participate in the voluntary initiatives
- v. **Capacities of Civil Society:** The mobilization of critical mass of NGOs and industries to participate in the SAICM process and seek adequate financial resources

Appreciating that all the above priority actions cannot be practically addressed,

5. Cross Cutting /Common priorities

The cross cutting priorities are:

- i. Promote public awareness on proper and safe use of chemicals;
- ii. Cultivate goodwill and collaboration among manufacturers, distributors and the local communities to achieve proper management of chemicals.
- iii. Prioritization of research issues of environmental health risks
- iv. Establish collaboration and synergy among the various institutional programs
- v. Legislation and centralized authority to regulate and coordination related research programs
- vi. Promote public involvement in chemical related issues through consultative meetings with the public,
- vii. Provision of communication channels for conflict resolution; to identify key entry points for public participation in the decision-making process.
- viii. Ensure workers are aware and actually take part in regulatory decision-making processes that relate to chemical safety especially in agriculture and small-scale industries through extension services.



5.1 Action on the Priorities and Plans

The capacity assessment would prioritize and plan for SAICM implementation by catalyzing collaboration between government and stake holders. The key priorities were ranked as below;

- i. Develop a National SAICM Implementation Plan of action (including conducting assessment of chemicals management regularly, establish an inter-institutional national coordination mechanism (project to target informal and SMEs covering institutional building), and implementation, the GHS, E-waste.
- ii. Build capacities for chemical safe handling especially in the workplace, by regular risk assessment and utilization of chemical data and the generation and utilization of data for risk assessment.
- iii. Strengthening capacities of agencies to enforce legislations on chemicals and hazardous waste management.
- iv. Promote stakeholder participation (including private sector, civil society, inter-agency) in chemicals management, information sharing and research, and
- v. Establish effective financing mechanism(s) and project planning ensuring sound management of chemicals.

PRIORITY	ACTIVITY	RESPONSIBILITY
Priority 1	<ol style="list-style-type: none"> 1. SAICM implementation 2. Inter institutional coordination mechanism 3. GHS Implementation programme/Project 4. E-Waste project 	SAICM QSP Steering Committee SAICM QSP Project NEMA with SAICM QSP
Priority 2	<ol style="list-style-type: none"> 1. Safe handling of chemicals 2. Utilisation of chemical data from all sectors 3. Modalities for use of data 4. Collect data and Lead, Cadmium and Mercury 	DOHSS MEMR NEMA SAICM Steering Committee members
Priority 3	<ol style="list-style-type: none"> 1. Enforcement of legislation 2. Gazettement of chemical legislation 3. Implement UNEP GC decision on waste 4. Gazettement of E-waste regulations 5. Operationalization of guidelines on E-Waste 	NEMA NEMA All stakeholders NEMA MEMR
Priority 4	<ol style="list-style-type: none"> 1. Operationalise interministerial coordination mechanism 2. Engagement with Civil Society 3. Engagement with ICIPE 	MEMR iLIMA ICIPE/MEMR
Priority 5	Share NCP with UN organisations <ul style="list-style-type: none"> • UNDP • UNIDO • World Bank • WHO • FAO • UNITAR 	SAICM Project

Time scale will be developed in the SAICM Implementation phase

TABLES: CAPACITY ASSESSMENT WORKSHEETS

1 .1 Integrating Chemicals Management into National Development Priorities

A.1 Integrating Chemicals Management into National Development Priorities				
Categories of <i>related SAICM Work Areas</i>	Level of existing capacities: High / Medium / Low	Summary of Strengths and Gaps	Possible action	Urgency & importance of taking action: High / Medium / Low
1.1 Mechanisms for Integrating Chemicals Management into Development Priorities 1. Assessment of national chemicals management to identify gaps and prioritize actions),	Medium	Strength <ul style="list-style-type: none"> • Work done on Kenya POPs inventory and ODS surveys • Established SAICM Secretariat office but has inadequate capacity • Draft National Chemicals Profile developed • Draft interministerial coordination mechanism developed • SAICM implementation plan not yet developed Gap <ul style="list-style-type: none"> • No National policy for SAICM implementation in place yet • No national chemical database • Limited funding for chemical management of national and county levels 	<ul style="list-style-type: none"> • Strengthen SAICM Secretariat in MEMR • Complete NCP • Complete interministerial coordination mechanism charter • Develop SAICM implementation plan • Develop SAICM policy • Develop national chemical database at MEMR • Increase funding for chemical management from regular budget 	Very high Very high Very high Very high Very high Very high High

2 . Human health protection,	Low	<p>Strength</p> <ul style="list-style-type: none"> • National Health institutions on health in place but have limited capacity to access and use chemical data to forestall poisoning • Limited monitoring of chemical impacts on human health across sectors • Limited capacity for dealing with poisoning and chemical accidents in enterprises and to the public • Limited chemical awareness for workers and the vulnerable public 	<ul style="list-style-type: none"> • Build capacity of national institutions to access and use chemical data generated • Develop and harmonise methods for chemical risk assessment • Build capacity for monitoring of chemical impacts on human health • Build capacity for dealing with poisoning and chemical accidents • Conduct training on chemical awareness 	<p>High</p> <p>High</p> <p>Very high</p> <p>High</p> <p>High</p> <p>High</p>
3 Children and Chemical safety,	Low	<p>Strength</p> <ul style="list-style-type: none"> • Limited national awareness programs on children's chemical safety <p>Gaps</p> <ul style="list-style-type: none"> • There are no national legislation prohibiting child labour but enforcement is weak • There is no national assessment report on children's environmental health • No mechanisms for promoting collaborative national and international research on chemical 	<ul style="list-style-type: none"> • Enforce national legislation prohibiting child labour • Develop guidance materials for assessment of children's environment health • Develop awareness programs on children's chemical safety • Develop mechanism for promoting collaboration with international research on chemical at the national level. 	<p>Medium</p> <p>High</p> <p>High</p> <p>Medium</p>

8 Social and economic considerations,	Medium	<p>Strength</p> <ul style="list-style-type: none"> National institutions to address social and economic aspects of chemicals exist but have limited capacity Kenya Vision 2030 addresses social, economic and political pillars but not specific on chemicals management The NEMA addresses health and environment factors under PRSPs, but concrete projects on chemicals to be developed by individual authorities. <p>Gaps</p> <ul style="list-style-type: none"> Limited private-public sector partnership No framework for NGO-public sector on sound management of chemical 	<ul style="list-style-type: none"> Building national capacity to address social and economic aspects of chemicals Widen the scope of chemical management in implementation of Vision 2030 Include projects on chemical management under PRSP activities Strengthen a framework for public-private sector partnership in chemical management Strengthen a framework for NOG-public sector partnership in chemical management 	<p>High</p> <p>High</p> <p>High</p> <p>High</p>
20 Promotion of industry participation and responsibility by industry,	Medium	<p>Strengths</p> <ul style="list-style-type: none"> KNPCPC advices industry on cleaner production and efficient industrial production processes but has limited capacity to penetrate small and medium sised enterprises(SMEs) Voluntary code of conduct for agrochemical industry DOSH in place has limited capacity to cover the entire country Discharge standards in place Wide support from Federation of Kenya Employee(FKE) 	<ul style="list-style-type: none"> Strengthen capacity of KNPCPC Widen the scope of voluntary code of conduct to capture other chemicals Strengthen capacity of DOHSS Support to industry associations ,FKE,KMA and AAK 	<p>Very High</p> <p>High</p> <p>High</p>
34 Trade and environment,	Medium	<p>Strength</p> <ul style="list-style-type: none"> Limited mutual support between trade and environment policies and institutions; Limited understanding of environment and trade interlinkages among the policy makers. 	<ul style="list-style-type: none"> Mainstream environment in trade policies Build capacity to address interlinkages between trade and environment including domestication and implementation of MEAs 	<p>High</p> <p>High</p>
35 Civil society and public-interest NGO participation	Medium	<p>Strength</p> <ul style="list-style-type: none"> The civil society and NGOs and members of steering committee on SAICM, but on adhoc basis 	<p>Mainstream involvement of Civil societies and NGO in implementation of national SAICM activities</p>	<p>Very high</p>

2: Programmatic National Framework for Sound Chemicals Management

A.2 A Sound Institutional and Programmatic National Framework				
Categories of related SAICM Work Areas	Level of existing capacities: High / Medium / Low	Summary of Strengths and Gaps	Possible action	Urgency & importance of taking action: High / Medium / Low
<p>2.1 Establishing an Inter-institutional Coordination Mechanism</p> <p>20.Promotion of industry participation and responsibility)</p> <p>21. Information management and dissemination.</p> <p>22. Life cycle</p> <p>25.Stakeholder participation,</p> <p>26.Implementation of integrated programmes for the sound management of chemicals,</p> <p>27. International agreements,</p> <p>28.Social and economic considerations,</p> <p>29 Legal, policy and institutional aspects.</p>	Low	<p>Strength</p> <ul style="list-style-type: none"> Formal industries have accepted cleaner production, ISO 1400, EIA <p>Gap</p> <ul style="list-style-type: none"> Informal and SMEs have not accepted the above 	<ul style="list-style-type: none"> Project to target Informal and SMEs covering institutional building Draft the Interministerial Coordination mechanism (the draft is being reviewed by ministries), Develop a network with other sectors, Enhance the operations of the chemicals subcommittee of KAM Propmote the chemicals section of the Ministry of Trade 	<ul style="list-style-type: none"> Extremely high To promote synergy and effectiveness Network of chemical users is enhanced and information contained in EIA and EA documents is put to good use.

<p>2.2 Information Exchange Mechanisms 15. Risk Assessment, Management And Communication, 18. Research, Monitoring And Data, 21. Information management and dissemination, 23. Pollutant Release and Transfer Register, 24. Education and training, 25. Stakeholder participation, 26. Implementation of integrated programmes, 27. International agreements, 31. Stock-taking on progress, 35. NGO participation</p>	<p>Low</p>	<p>Strengths</p> <ul style="list-style-type: none"> • Existing networks eg CIEN, CIEN, but low implementation • Only for pesticides and non for industrial chemicals, petroleum products. research, Monitoring and data KIRDI, KARI, • Monitoring done for water quality and pollution control but data held by institutions and not shared • international agreements-up to the focal points and DNA, below that, not well shared • stock-taking on progress-national chemical profiling in the performance contract (strength) • NGO participation-chemical NGOs weak and have little capacity <p>Gap</p> <ul style="list-style-type: none"> • stakeholder participation is ad hoc • implementation of integrated programmes-None existent • Modality for sharing data • Period over which data should be confidential is not defined 	<ul style="list-style-type: none"> • Train and sensitize stakeholders on CIEN, • Formation of a oversight -committee for approval of information uploading • Establish a register of Chemical NGOs and SMEs, • Strengthen NGOs eg iLIMA , • Develop information management and dissemination systems by supporting its website • Develop PRTR for all urban centres and factories • Strengthen stakeholder participation in information sharing • Develop implementation of integrated programmes in selected institutions • Mainstream stock-taking on progress in the national monitoring and review processes on chemical lifecycle • Programme chemicals management on E-promis. 	<ul style="list-style-type: none"> • Medium ,networks existing but low implementation-in progress
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<p>2.3 Setting National Priorities</p> <p>1. Assessment of national chemicals management to identify gaps and prioritize actions, 26. Implementation of integrated national programmes), 31 .Stock-taking on progress,</p>	<p>Medium</p>	<p>Strength</p> <p>SAICM QSP in place (implementation of integrated national programmes-None on chemicals</p>	<p>Develop integrated chemical management programs through financing mechanisms such as GEF</p>	<p>Extremely high -The new constitution -Vision 2030 -high lack of planning. funds cannot be accesses and due to lack of integration of programmes, there is possibility of conflicts</p>
<p>2.4 Programme and Project Planning</p> <p>1. Assessment of national chemicals management to identify gaps and prioritize actions, 26. Implementation of integrated national programmes, 31. Stock-taking on progress</p>	<p>Low</p>	<p>Strengths</p> <ul style="list-style-type: none"> • Development of SANA, • Strategic plans and specific action plans eg Nairobi river project • Assessment of national chemicals management to identify gaps and prioritize actions-they are not integrated Gaps 	<p>Need to up scale top scale projects to other towns and counties</p>	<p>Extremely high - lack of planning. funds cannot be accesses and due to lack of integration of programmes, there is possibility of conflicts eg possible DDT use</p>
<p>2.5 Monitoring and Evaluation</p> <p>26. .Implementation of integrated national programmes), 31. Stock-taking on progress)</p>	<p>Low</p>	<ul style="list-style-type: none"> • Ministry of Planning and Vision 2030 has established a department on monitoring and evaluation o programmes • stock-taking in progress -E promis reporting system, existence of trained personnel. Gap • No M&E systems for chemicals Institutions do not provide sufficient resources for M&E units 	<ul style="list-style-type: none"> • Implementation of integrated national programmes- as there is no integrated programmes. 	<p>High -need to know the status as provided by the national obligations and international agreements</p>
<p>2.6 Establishing Effective Financing Mechanisms</p>	<p>Medium</p>	<p>Strength</p> <ul style="list-style-type: none"> • GoK has made policy for PPP on solid waste management and e-waste eg HP on 	<ul style="list-style-type: none"> • Capturing chemical programs in MTEF process 	<ul style="list-style-type: none"> • Medium • Policy of PPP in place. Ministries need to take

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<p>20. Promotion of industry participation and responsibility,</p> <p>26. Implementation of integrated national programmes,</p> <p>27. International agreements,</p> <p>28. Social and economic considerations),</p> <p>30 (liability and compensation)</p>		<p>e-waste implementation of integrated national programmes</p> <ul style="list-style-type: none"> Promotion of industry participation and responsibility- substantial process for accessing multilateral funds ozone and GEF, QSP funds and GTZ, Sida, <p>Gaps</p> <ul style="list-style-type: none"> -not mainstreamed in the national budget to provide to co-finance and counter funds. -not established international agreements- not fully utilized social and economic considerations- system not established liability and compensation-ineffective monitoring and implementation 	<ul style="list-style-type: none"> Building capacity to enable access to international funds Develop systems for social and economic considerations Put systems for social and economic considerations Enhance systems for liability and compensation 	<p>up the PPP initiative</p> <ul style="list-style-type: none"> Need to Building capacity to enable access to international funds
<p>2.7 Promoting Participation of Regional Authorities</p> <p>20. Promotion of industry participation and responsibility,</p> <p>25. Stakeholder participation,</p> <p>26.implementation of integrated national programmes,</p> <p>35.(NGO participation)</p>	<p>Medium</p>	<p>Strength</p> <ul style="list-style-type: none"> existence regional environment officers and committees stakeholder participation-public participation during the EIA processes implementation of integrated national programmes- <p>Gaps</p> <ul style="list-style-type: none"> No integration programmes participation-medium participation of NGOs 	<p>Strengthen NGO participation</p> <ul style="list-style-type: none"> Promotion of industry participation and responsibility 	<p>Medium</p> <p>Existing institutions and participation of other stakeholders</p>

A.3 Legislation and Enforcement				
Categories (and related SAICM Work Areas)	Level of existing capacities: High / Medium / Low	Summary of Strengths and Gaps	Possible action	Urgency & importance of taking action: High / Medium / Low
3.1 Legislation, Regulations, Policies, and Enforcement Capacities – General				
1. Assessment of national chemicals management to identify gaps and prioritize actions	Medium	Strengths <ul style="list-style-type: none"> • EMCA • PCP Act • NCP • Draft Chemical Regulations Gaps <ul style="list-style-type: none"> • Limited enforcement capacity for NEMA & PCPB 	<ul style="list-style-type: none"> • Need for more trained inspectors & prosecutors • Monitoring and data collection • Improvements in the judiciary 	High So that capacity can be built at the right institutions to enhance standards
26 (implementation of integrated national programmes)	Low	Strengths <ul style="list-style-type: none"> • National Implementation Programmes (NIP) for Stockholm & Rotterdam Conventions in existence Gaps <ul style="list-style-type: none"> • Limited capacity to implement 	<ul style="list-style-type: none"> • Integrated approach to implementation of the NIPs • Strategic Plans 	High To minimise overlaps and duplication

27. International agreements	Medium	<p>Strengths</p> <ul style="list-style-type: none"> • Kenya is a party to all Chemical-related International Conventions • Draft Chemical Regulations exist <p>Gaps</p> <ul style="list-style-type: none"> • Partial domestication of the conventions in existence 	<ul style="list-style-type: none"> • Domestication of the conventions • Accessing funds for implementation 	Medium To promote compliance with MEAs
29 Legal, policy and institutional aspects	Medium	<p>Strengths – Existence of institutions such as NEMA, PCPB, DOSSH, KEBS that deal with aspects of chemicals.</p> <p>Gaps</p> <ul style="list-style-type: none"> • Inadequate enforcement of existing legislation 	<ul style="list-style-type: none"> • Amendment of existing legislations to address new international regime • Strengthening inspectorates 	<ul style="list-style-type: none"> • Medium To promote capacity building and to ensure that chemicals stakeholders are aware of the risks
3.2 Pesticides Legislation and Policies				
6. Highly toxic pesticides risk management and reduction,	Medium	<p>Strengths Good progress made in ensuring compliance with the EMCA and Pest Control Products Act</p> <p>Gaps</p> <ul style="list-style-type: none"> • PCP Act is outdated • Conflicting/Overlapping mandates • No Policy on pesticides 	<ul style="list-style-type: none"> • Develop a policy on pesticides to address highly toxic pesticides • Revision of the PCP Act to include class I and II pesticides 	Medium
7 . Pesticides programmes,	Low	<p>Strengths PCPB and AAK have strong inspectorate, training and advocacy programmes</p>	<ul style="list-style-type: none"> • Incorporate new POPs in the PCPB List of Banned and restricted Pesticides 	Medium

<p>8. Reduced health and environmental risks of pesticides,</p>	<p>Medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> • OSHA (2007) • PCP Act • Poisoning Centre <p>Gaps</p> <ul style="list-style-type: none"> • Monitoring of poisoning 	<ul style="list-style-type: none"> • Implement Joint Plans of Action under the Libreville Declaration • Implement SANA 	<p>High</p>
<p>12. Sound agricultural practices</p>	<p>medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> • Guidelines on small scale on-farm disposal of PCP waste. <p>Gaps</p> <ul style="list-style-type: none"> • Monitoring of poisoning is not systematic 	<p>Focus on chemicals currently under international regulations</p>	<p>High</p>
<p>13 . POPs,</p>	<p>Medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> • Many NGO supporting • NIP in place • Draft regulations on waste include pesticides • Already many POPs banned or listed but legal and compulsory action 	<p>Implement NIP Update NIP to include newly listed POPS</p>	<p>High</p>
<p>28. Social-eco considerations, 34 . Trade and environment.</p>	<p>Low</p>	<p>Strengths</p> <ul style="list-style-type: none"> • Already Treasury addresses issues of pollution positively. Technologies for environmental protection are zero rated in the Financial Bill • Ministry of Trade conscious of implications to trade by not complying with international legal regime on chemicals <p>Gaps No initiatives taken</p>	<p>Initiate Programs</p>	<p>High</p>

3.3 Policies for Pollution Prevention and Cleaner Production				
9 Cleaner production	Low	<p>Strengths</p> <ul style="list-style-type: none"> Establishment of Kenya National Cleaner Production Centre has ensured over 100 enterprises adopting NCP and every year there is a CP award There are policies that support CP <p>Gaps</p> <ul style="list-style-type: none"> Lack of clear adoption guidelines 	<ul style="list-style-type: none"> Expand current programs of CP to include stakeholders in chemicals in more CP programmes Involve UNIDO in institutionalising CP in areas where chemicals are in use. 	High
13 POPs,	Low	<p>Strengths</p> <p>NIP completed has identified sources of dioxins and furans that would benefit from introduction of Bat and BEP guidelines</p> <p>Gaps</p> <p>Not implemented</p>	Review use of chemicals sector BAT/BEP guidelines in	High
14. Mercury and other chemicals of global concern,	Low	<p>Strengths</p> <p>A few studies done</p> <p>Gaps</p> <p>CP not applied to areas where mercury is in use</p>	Develop partnership Project on artisanal mining	
16. Waste management,	Medium	<p>Many studies done</p> <p>Several ongoing programs and projects which can be strengthened</p>	Increase financing	High

20. Promotion Of Industry Participation And Responsibility,	medium	Strengths Good policies in place Kenya National Cleaner Production doing well	Promote voluntary and compulsory initiatives	High
23. Life cycle,	Low	Gap Concept not well understood	Initiate awareness on Life Cycle	High
28. Socio-economic considerations,	Low	Gap Lack of awareness	Initiate awareness	High
34. Trade and environment	Low	Gap Concept not well understood	Initiate awareness	High

A.4 Participation of the Private Sector and Civil Society in Chemicals Management				
Categories(<i>and related SAICM Work Areas</i>)	Level of existing capacities: High / Medium / Low	Summary of Strengths and Gaps	Possible action	Urgency & importance of taking action: High / Medium / Low
4.1 Stakeholder Participation 20. Promotion of industry participation and responsibility 25. Stakeholder participation , 35.NGO participation	Medium	Strengths <ul style="list-style-type: none"> The civil society and private sector already involved in SAICM implementation process Inter-ministerial coordination mechanisms being developed involving the civil society and private sector Gaps <ul style="list-style-type: none"> No collaborative mechanism already in place on sharing technology and research information Number of NGOs participating are still few 	<ul style="list-style-type: none"> Initiate collaborative mechanism to address technology information sharing and research among all stakeholders Encourage more NGO's to participate Involve private sector 	High <ul style="list-style-type: none"> Civil society and private sector can drive the process better
4.2 Voluntary Initiatives in the Private Sector 20. Promotion of industry participation and responsibility	Medium	Strengths <ul style="list-style-type: none"> Voluntary initiatives in place e.g. energy efficiency awards Private sector was part of formation of the FAO code of conduct and implementation through the Agro Chemicals Association of Kenya There is strong corporate social responsibility support from the industry in advancing sound environmental management in Kenya The capacity for outreach is existing Gaps <ul style="list-style-type: none"> Absence of coordination among the industries participation and responsibility Duplication of activities 	<ul style="list-style-type: none"> The CSR initiatives need to be enhanced by way of channelling part of CSR funds towards chemical related risks responses and education and awareness initiatives Encourage more sectors to participate in the voluntary initiatives 	High <ul style="list-style-type: none"> With more information CSR and the private sector can take more responsibility

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		<ul style="list-style-type: none"> • Number of industries and private sector participating in the voluntary initiatives are still few • CSR initiatives in place but not specific chemical related risks mitigations • A mechanism exist for provision of information related to chemicals from the private through the ISO certification evaluation however this need to be enhanced 		
4.3 Capacities of Civil Society 25. Stakeholder participation, 35. NGO participation, 36 Capacity building to support national actions	Low	Strengths <ul style="list-style-type: none"> • Existing technical expertise a few of the CSOs • Existing training initiatives developing CSOs capacity Gaps <ul style="list-style-type: none"> • Inadequate financial resources to support NGOs and stakeholders participation and capacity building • Supported by a SAICM QSP project 	<ul style="list-style-type: none"> • Mobilization of critical number of NGOs and industries to participate in the SAICM process • Seek adequate financial resources for the civil society • Develop more project concepts for the civil society • Promote a stakeholder forum of SAICM stakeholders 	High <ul style="list-style-type: none"> •

Worksheet for identification of important and urgent chemicals issues

B.1 Information Generation							
Stakeholder Input	Government		NGO		Private Sector		Priority Rating for Chemicals Management
Categories related SAICM Work Areas	Priority High / Medium / Low	Reason for Judgment	Priority High / Medium / Low	Reason for Judgment	Priority High / Medium / Low	Reason for Judgment	Potential Priority for Development Planning
1.1 Chemical Risk Assessment (incl. Hazard Identification and Exposure Assessment) 5. GHS,	Very high	<ul style="list-style-type: none"> To ensure harmonised identification and safe handling of chemicals No comprehensive management system for hazard information in most institutions. No standardised MSDS and labels for chemicals 	High	Low public awareness on chemical management <ul style="list-style-type: none"> Civil Society have a better reach of the public 	High	For uniform enforcement all enterprises both MSE, SME and informal sector should get same treatment.	High MEMR to start a training programme on GHS <ul style="list-style-type: none"> Develop a project of GHS
18. Research monitoring and data	Very high	<ul style="list-style-type: none"> Limited data on chemicals in environment sector Limited human and technical research capacity Weak data management system 	Very high	Limited accessibility to research data for the NGO's is non-existent. NGO regarded with suspicion by research entities.	High	No input from government when enterprises do research. They shoulder all the risks. e.g. agrochemicals	High To address safer non chemical alternatives and to introduce them cost effectively.
19. Hazard data generation and availability	Medium	<ul style="list-style-type: none"> SOEs reports do not capture hazard data No national database 	Medium	Have no capability at all to generate data but can partner e.g.in Dandora	High	Need data from government institutions from research and monitoring.	High protocol for sharing data is needed among cluster of private sector and public institutions

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2. Human health protection	Very high	<ul style="list-style-type: none"> • Too many accidents go un- investigated • Reports of cancer cases 	High	Poor people have no protection. They need reduction of vulnerability	High	To reduce insurance frauds, watchmen compensation and sick off.	High. High potential of risk reduction possibilities.
3. Children and chemical safety	Very high	<ul style="list-style-type: none"> • High child deaths due to food/water contamination 	High	No sensitization programme at grass root levels.	Low	Government institutions have mandate to develop regulations.	Programmes targeting children at the educational institutions
15. Risk assessment	High	<ul style="list-style-type: none"> • Need to collate risk information with impacts to human health and environment. 	Medium	Need to assess sound impacts through access to vulnerable groups.	Low	Too many assessment activities for the private sector erode confidence.	High Need for harmonisation of use of collected data and information
23. PRTR	High	<ul style="list-style-type: none"> • No data is available of the use of the few PRTR 	Low	Have no capacity to manage PRTR.	Low	PRTR can be covered in audits for a cluster of enterprises.	Harmonise EIA/environmental audits with PRTR at all counties
1.2. Research and Laboratory Capacities 18 research monitoring and data	Very High	<ul style="list-style-type: none"> • Much investment in risk research being undertaken at key institutions. (KEMRI, KEFRI, ICIPE, KIRDI) 	Low	Have no capacity to do so extensively because of policies but need to access results.	Medium	Targeted research and monitoring is done for agrochemicals and petrochemicals and ODSs.	Use international programmes financing to upgrade analytical capacities at the laboratories of water, air and material.
19 hazard data generation and availability	High	<ul style="list-style-type: none"> • Data gathered is not organised for policy making. 	Low	NGO's have no capacity to collect hazard data.	Medium	No incentive to share data with public sector.	Policy on chemical data needed to ensure hazards prevention capacity is shared in partnership with private sector.

<p>2.3 Highly toxic chemicals and chemical of global/regional/national concern</p> <p>6. Highly toxic pesticides risk management and reduction 11. Lead in gasoline 13. PBTs, POPs 14. Mercury, and other chemicals of global concern, etc. 27. International agreements</p>	High	<ul style="list-style-type: none"> No programmes /institutions to deal with highly toxic chemicals and chemical of global/regional/national concern. Kenya has stopped use of lead in gasoline because of Dakar commitment. In compliance with international committee 	High	Human poisoning, suicides and death caused by mismanagement of the chemicals	High	<p>Requirements to change to less toxicity products.</p> <p>Find non chemical alternatives to toxic ones.</p>	<p>High Aim at WHO class III pesticides.</p> <p>Support initiatives by private sector to address chemicals risk reduction</p>
<p>2.4 Safe Handling, Use, Storage, and Transportation of Pesticides</p> <p>6. Highly toxic pesticides risk management and reduction, 7. Pesticides programmes, 8. Reduced health and environmental risks of pesticides 12. Sound agricultural practices 22. Life cycle 26. Integrated national programmes 27. International agreements 28. Socio-eco considerations</p>	High	<ul style="list-style-type: none"> Full implementation of regulation on pesticides regulation of transportation of pesticides only because EMCA requires Draft GHS project and co-finance of full project with UNITAR as partner. 	High	<p>Support risk reduction activities for the small scale farmer, retailer distribution and sprayers.</p> <p>Need to invest on personal protective equipment at all risky places in the informal sector.</p>	High	<p>Invested in compliance to many regulations to comply with diverse inspections, audits and reports. They need to be harmonised and streamlined by inspectors</p> <ul style="list-style-type: none"> Accidents lead to loss of life and cargo. Insurance premium Sector guidelines 	Harmonise guidelines for safe handling, use, storage and transportation.
<p>2.5 Safe Use, Storage, and Transportation of Industrial Chemicals.</p> <p>4. Occupational health and safety 5. GHS 9. Cleaner production 13. POPs</p>	High	<ul style="list-style-type: none"> Regulation for handling toxic chemicals (need to speed up the process of development of regulation on toxic chemicals). Facilities for inspection. 	High	Ensuring this sector is addressed especially for paints, cosmetics, petrochemicals, and industries such as tanneries by factories and consumer	Medium	Invested industries, with cleaner production, ISO 14000 EMS, COYA programs on safe production of health and risk reduction measures.	High. High incidence of accidents such as fires, explosions is proving too expensive for all concerned.

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<p>14. Mercury and other chemicals of global concerns, 15. Risk assessment management, communication 16. Waste Management 20. Promotion of industry participation and responsibility 22. Life cycle 23. PRTR 24. Education and Training 26. Integrated national programmes 27. International agreements</p>		<ul style="list-style-type: none"> • Emergency preparedness • Regular inspection • Investment on formal training. • Program of ICM • Implementing MEAs 		<p>organisations.</p> <p>Is supporting training though in ad hoc manner.</p>		<p>In-house training compliance with government advise.</p>	
<p>2.6 Chemical Safety in the Workplace</p> <p>2. Human health protection 4. Occupational health and safety 5. GHS, 14. Mercury, and other chemicals of global concerns 15. Risk assessment management, communication 20. Promotion of industry participation and responsibility 21. information management and dissemination 24. Education and training</p>	<p>Medium</p> <p>High</p> <p>Medium</p> <p>High</p> <p>High</p> <p>High</p>	<ul style="list-style-type: none"> • OSHA in place. Need to keep up on enforcement • Strengthening enforcement on risk assessment, management, communication and awareness. • Ensuring effective regulation on promotion of industry participation and responsibility in reducing chemical risks. • facilitate enforcement of information management and dissemination on MSDS • OSHA requires education and training on safety of chemicals but coverage and enforcement low 	<p>High</p>	<p>Casual workers most affected. Ensuring redress.</p> <p>Most poor people affected in mining, agriculture and industries because they cannot manage chemicals.</p> <p>Ensure redress.</p> <p>Information on worker exposure to minimise exposure.</p> <p>Support stream risk and health assessments activities for informal sectors.</p> <p>Programs in human health and safety programmes</p>	<p>High</p>	<p>Industry incentives to reduce risk. .</p> <p>Implementing EIAs, EA and fire and risk surveys</p> <p>Partnership with support from local authority to address fire, accidents and accident response.</p>	<p>High. More support needed.</p> <p>Make by laws on safety at work more practical. Increase use of personal protective equipment.</p> <p>Communicate risks</p> <p>Formation of safety committees</p> <p>Implementation of SHA</p>

<p>2.7 Cleaner Production 2. Human health protection 3. Children and chemical safety 9. Cleaner production 13.(POPs, 14. Mercury and other chemicals of global concern), 16. Waste management 20. Promotion of industry participation and responsibility 22. Life cycle, 28. Socio-economic considerations, 34. Trade and environment)</p>	Medium	<ul style="list-style-type: none"> • Training done but low on capacity of absorption and no national policy on cleaner production. Strengthen capacity building especially for SMEs through environmental economic instruments 	Low	Few entry points of chemicals. No role.	High	<p>Many industries involved implementing cleaner production.</p> <p>Supporting CP and COYA awards and benefiting from cost savings.</p>	<p>High. Incentives for Cleaner Production.</p> <p>Develop policy on cleaner production.</p>
<p>2.8 Waste Management 6. Highly toxic pesticides risk management and reduction 7. Pesticides programmes 8. Reduced health and environmental risks of pesticides, 9. Cleaner production, 13. POPs, 14. Mercury, and other chemicals of global concern, 16. Waste management, 22. Life cycle, 23. PRTR, 24. education and training 26. Implementation of integrated national programmes 27. International agreement, 28. Socio-economic considerations 33. Prevention of illegal traffic in toxic and dangerous goods.</p>	High	<ul style="list-style-type: none"> • Strengthen capacity building for key stakeholders to comply with the legislation. • Waste management infrastructure for municipalities • Promoting integrated solid waste management. • Develop draft on e-waste. • Develop policy on plastic waste • Enforcing Basel convention. • Waste to energy programs. 	High	<p>Many CBOs involved in waste management.</p> <ul style="list-style-type: none"> • Recycling and reuse of containers • Creating awareness and organised groups to be trained. • Supporting livelihood projects on waste. • Greenbelt training promoting on open burning of waste. • Ilima on Mercury program 	High	<p>Absorbing waste management technologies is a challenge.</p> <ul style="list-style-type: none"> • Building compliant incinerators. • Supporting to waste use programs. • Cooperating with UNIDO on waste to energy programs. 	<p>High. Increased promotion of waste management guidelines of NEMA, BAT/BEP guidelines. Integrated solid waste management guidelines.</p> <ul style="list-style-type: none"> • Operationalise BAT/BEP guidelines • Operationalise e-waste guidelines • Cooperate with UNIDO on waste/ to energy programs. • Institute waste tracking.

1.1.1 B.4 Chemical Emergency Prevention and Control							
Stakeholder Input	Government		Stakeholder Group __[Civil Society]__		Stakeholder Group __[Private sector]__		Priority Rating for Chemicals Management
Categories (and related SAICM Work Areas)	Priority High / Medium / Low	Reason for Judgment	Priority High / Medium / Low	Reason for Judgment	Priority High / Medium / Low	Reason for Judgment	Potential Priority for Development Planning
4.1 Chemical Emergency Planning							
15 Risk assessment, management and communication	High	A proactive response policy other than reactive approach	High	Inadequate risk prepared tools within the CSOs hence the need for capacity building (networking, sharing of resources)	Medium	Health and risk surveys necessary for company policy, action plan for emergency preparedness.	Policies to reduce reactive response and encourage pro-activeness for all stakeholders.
17 Formulation of prevention and response to mitigate environmental and health impacts of emergencies involving chemicals),	Low	Because there exists legislations such as EMCA and DOSHS	High	Nonexistent as of now to a large number of Kenyans	Medium	There are procedures existing in terms of Total Quality Management Programs.	<ul style="list-style-type: none"> • Fire • Transport • Explosions • Accidents
20 Promotion of industry participation and responsibility in sound chemicals management	High	Guidance because industry are critical stakeholders on SAICM implementation because they produce and use chemicals	High	CSOs can sensitize the workers through skill shares	High	The industry is promoting industry code of practices which includes best practice (identification of hotspots and potential hazard & hazard areas/labelling)	High Promotion of CSRs and involvement of all stakeholders
25 Stakeholder participations	High	Police/Army responses which need for maximization of resources of all forms	High	Community and crowd control	High	Synergistic responses which need for maximization of resources of all stakeholders.	High

35 Civil society and NGO participation)	High	Government to invite CSO so as to synergise responses needed for maximization of resources of all forms since CSOs are critical stakeholders on SAICM based on their expertise	High	<ul style="list-style-type: none"> • CSOs to cooperate and provide for community outreach • Many CSOs involved in 3Rs • Government Policy starting and should have experiences 	High	Endeavour to use CSO to reduce costs and liabilities though skill shares	High Public, partnership project policy adopted.
4.2 Chemical Emergency Response (incl. Treatment of Poisoned Persons	High	<ul style="list-style-type: none"> • No response infrastructure 	High	CSO can be trained to offer rescue services.	High	<ul style="list-style-type: none"> • Industry to train and offer logistical support e.g. extinguishers. 	High
2. Human health protection,	High	Has responsibility to protect human health and environment, which is included in the bill of rights,	High	Its a social responsibility give human protection	High	A corporate social responsibility to protect its workers from chemicals	Initiate high awareness and education programmes Build capacity of the informal sector
3. Children and chemical safety	High	Sensitive because women and children the most vulnerable populations due to their physiological nature	High	Provide awareness and education on chemical safety measures on children and women	High	To reduce liability and enhance CSR participation in minimising exposure that children and women are exposed to.	Initiate awareness and education programmes for women and youth groups.
4. Occupational health and safety,	High	Provide PPE	High	Learn how to use PPE safety drills/programmes	High	To reduce liabilities through risk reduction. Compliance with legislations Provide equipment and appropriately trained personnel	Ensure protection of workers from hazardous chemicals by enforcing OSHA provisions.

5. GHS	High	Ensure hazardous/toxic chemicals labelled.	High	Education and awareness activities among chemical end users in communities	High	Comply with material Datasheet labelling.	Embrace GHS Start a project on GHS project
4.3 Chemical Emergency Follow-up (incl. Remediation of Contaminated Sites and Rehabilitation/Surveillance of Poisoned Persons)	High	Document and review fires in informal sector. Rehabilitation of contaminated dumpsite	High	Many people involved in waste recovery but have no protection	High	To promote the Bali Declaration on health in waste management	Study the EIA and follow-up on its recommendation.
10. Remediation of contaminated sites	High	Document follow up and develop action plan.	High	To identify and whistle blow on the existing contaminated sites to ensure those affected are treated.	High	Aim to clean up the sites contaminated for compliance with existing legislations and for posterity	<ul style="list-style-type: none"> • Institute containment measures • Rehabilitate Dandora, Nakuru and Kisumu sites
30. Liability and compensation	Medium	Need to identify cases for compensation first and investigate the cases	High	Advocacy for PPP Study the Basel Protocol on liability and compensation	Medium	To observe the legal frameworks on liabilities and compensations	<ul style="list-style-type: none"> • Cases to be treated under existing legal frameworks • Link health, safety and environment assessments
31. Stock taking on progress	High	Monitoring and evaluation	High	M & E	High	M & E	<ul style="list-style-type: none"> • Develop tools for M&E