



REPUBLIC OF SEYCHELLES

A Strategic Approach to the Management of Chemicals and the Implementation of SAICM in Seychelles

PART 2: NATIONAL CAPACITY ASSESSMENT PAPER



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This CA paper for chemicals management in Seychelles further underlines the commitment of the Government of Seychelles to play an active role in the implementation of the Strategic Approach (SA) nationally. As with the National Profile paper, the CA paper serves as a living document and will be susceptible to change and regular updating in line with the Seychelles chemicals status in its social and economic growth.

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I. INTRODUCTION

A) BACKGROUND TO SAICM INITIATIVE

The August – September 2002 World Summit on Sustainable Development (WSSD) held in Johannesburg, saw a renewed commitment from Governments, Heads of States and major groups to advance and build upon the action plan that constituted Agenda 21. Agenda 21 had been formally adopted by the United Nations Conference on Environment and Development (UNCED) in the 1992 Earth Summit in Rio, a decade earlier. The 2002 summit saw, in addition to government representatives, active participation from businesses and industries, children and youth, farmers, indigenous people, local authorities, non-governmental organizations, scientific and technological communities, women and workers and trade unions. These represented the Major Groups identified in Agenda 21.

Deriving from chapter 19 and 20 of this Agenda, the 2002 WSSD saw the establishment of new targets and objectives in relation to global management of chemicals and chemicals-related wastes. It aimed to achieve, by 2020, that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment, using transparent science-based risk assessment procedures and science-based risk management procedures, taking into account the precautionary approach, as set out in principle 15 of the Rio Declaration. The plan also aimed at supporting developing countries in strengthening their capacity for the sound management of chemicals and hazardous wastes by providing technical and financial assistance.

In support to the achievements of the goal agreed at the 2002 WSSD, the first session of the Inter-Ministerial Conference on Chemicals Management (ICCM-1) gathered Governments, inter-governmental and non-governmental organizations in Dubai, United Arab Emirates, from 4 to 6 February 2006. ICCM-1 adopted the high-level Dubai Declaration on International Chemicals Management and the Overarching Policy Strategy for chemicals management. The Conference also recommended the use and further development of an enacted Global Plan of Action (GPA) as a working tool and guidance document in implementing the set strategies. These three documents gave birth to the Strategic Approach to International Chemicals Management (SAICM).

SAICM thus constitutes a policy framework to foster the sound management of chemicals globally via its implementation at national level by countries. The implementation of SAICM by countries is facilitated by the identification 36 main work areas under which some 273 activities are classified which summarizes the SAICM GPA (Table I-1 and Annex 3 respectively).

Listed under 5 categories (risk reduction, knowledge and information, governance, capacity building and technical cooperation and illegal traffic), the main objectives of SAICM in its implementation at the national level is to build upon existing chemicals management initiatives in various sectors as well as to strengthen coordination and coherence among various government and stakeholder initiatives. This includes government to non-government groups as well as inter-government and inter-non-government coordination. SAICM thus tends to initiate, encourage and enhance dialogue between the various groups involved with chemicals management at the national level. SAICM also looks to mainstream the activities of the GPA into national development planning (e.g. National Sustainable Development Strategies, UN Development Assistance Frameworks, Poverty Reduction Strategies, etc).

In order to achieve these objectives, the SAICM Overarching Policy Strategy (OPS) states that: “To sustain an integrated approach to managing chemicals, each Government should establish arrangements for implementing the Strategic Approach on an inter-ministerial or inter-institutional basis so that all concerned national departmental and stakeholder interests are represented and all relevant substantive areas are addressed” (SAICM OPS, paragraph 23).

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Table I-1: SAICM GPA working groups

The Implementation of the Strategic Approach (SA) on a national basis has been designed to begin with an enabling phase to build necessary capacity, as appropriate. The capacity-building phase takes into account an active participation of relevant stakeholders to form a national Strategic Approach implementation plan, taking into consideration, as appropriate, existing elements such as legislation, national profiles, action plans, stakeholder initiatives and gaps, priorities, needs and circumstances.

Financial arrangements for the implementation of the SA include primarily the mobilization of additional national and international financial resources, via the Quick Start Programme (QSP) as envisaged in paragraph 19 of the SAICM Overarching Policy Strategy, on financial considerations, to accelerate the strengthening of capabilities and capacities for the implementation of the SA objectives. The decision to establish the Quick Start Program Trust Fund (QSPTF) for the implementation of SAICM objectives was attained in resolution I/4 of ICCM-1, building upon the Bali Strategic Plan for Technology Support and Capacity building. The QSPTF contain a voluntary, time-limited trust fund, administered by UNEP and may include multilateral, bilateral and other forms of cooperation, with an objective to support initial enabling capacity building and implementation activities in developing countries, least developed countries, SIDS and countries with economies in transition. Thus, the QSPTF serves as a catalyst to launch such countries into the implementation phase of the SA by allowing for countries to draw out their national chemicals status by the updating or drafting of national chemicals profiles as well as highlighting their capacity needs and issue of priority through the subsequent assessment of the national capacity for chemicals management.

B) SEYCHELLES INVOLVEMENT IN SAICM

In order to facilitate development of a national implementation plan through the QSPTF, the ICCM adopted, as one of three strategic priorities of the QSP, the *“development or updating of national chemical profiles and the identification of capacity needs for sound chemicals management”* (ICCM Resolution I/4, Appendix 1). As with all SIDS already involved in the SAICM initiative, the successful initiation of the SA in Seychelles through the QSP required a high-level commitment of the Seychelles Government, through its appropriate Ministry. The decision for Seychelles to embark on the SAICM initiative was taken in the light of the country’s need for an upgraded and more coordinated approach, through its stakeholders, to manage chemicals nationally.

As a country which is on the fast track of economic and social advancements, the adoption of an integrated, multi-stakeholder approach to the management of chemicals in Seychelles is of utmost importance, seeing the wide range of stakeholders involved in chemicals management nationally, in their entire life cycle. The involvement of Seychelles in SAICM has also been enacted in the recognition of a distinct gap in the issues of dialogues between governments to non-government groups when it comes to dealing with chemicals. With the involvement of Seychelles in SAICM, it is perceived that matters of governance, such as the involvement of chemicals management into national development plans such as the Seychelles Town and Country Planning Act and the Environmental Management Plan of Seychelles (EMPS) would be more prominent.

Signature of Memorandum of Agreement

In June 2010, the Seychelles Government, through the Department of Environment, signed a Memorandum of Agreement (MoA) with UNITAR for grant support for the Implementation of the SA Nationally through the QSPTF. The MoA pledges financial and technical resources to the national SAICM secretariat through UNITAR, being the SAICM executing Agency, for the *“Development of an Integrated National Programme for the Sound Management of Chemicals and SAICM Implementation in Seychelles”*.

Upon signature of the MoA, the Seychelles National SAICM Secretariat was set up along with the establishment of the national coordinating team, the latter forming the Steering Committee (SC) for the overseeing of the implementation of the SA nationally. The Seychelles SAICM SC entails key personnel from the following institutions:

- Department of Environment (DoE)
- Division of Risk and Disaster Management (DRDM)
- Seychelles Petroleum Company (SEPEC)
- Division of Public Education and Community Outreach
- Seychelles Farmers’ Association (SeyFA)
- Seychelles Fire and Rescue Services
- Public Health Services
- DoE legal branch
- Employment Department
- Seychelles Land Transport Agency (SLTA)
- University of Seychelles (UNISEY)
- Public Utilities Corporation (PUC)
- Seychelles Agricultural Agency (SAA)
- Seychelles Bureau of Standards (SBS)

- Occupational Health Services
- Seychelles Customs services

The MoA, which was revised for signature, constituted *inter-alia* the Terms of Reference (ToR) for the project steering committee, proposing the work plan for the Integrated National Program for the Implementation of SAICM in Seychelles and initiation of the national chemical profile. The MoA also entails the constitution of the SAICM National Secretariat, which comprises of a National Coordinator, National Consultant, Financial Official and an Independent Monitoring and Evaluation (M&E) Official.

As outlined in the MoA between the two parties, the successful implementation of SAICM nationally was to be undertaken in stages, through the adherence to an agreed work plan. The MoA thus takes into account the formulation and setting in place of a series of steps for that purpose. The series of activities entails meeting with stakeholders, workshops and presentations that forms part of the entire process.

National Steering Committee Meetings

July 2010 thus saw the first national SAICM SC meeting taking place in Seychelles; therein saw the approval of the SAICM national secretariat and SC membership constitution. It was agreed by all that as the first SA implementation was to be more or less environmental-based, drawing from the 2002 WSSD action plan, the national secretariat and SC would see a stronger influence of personnel of an environment and environment-related background. However, the SC and the national secretariat also saw good representatives of other key institutions and sectors such as health and industrial sectors.

The first SC meeting also saw the establishment of a first and comprehensive list of institutions and key stakeholders/partners to be liaised with during the entire SA implementation project. The list of stakeholders formed the network of key personnel through which the bulk of information would be drawn out, especially for the drafting of the National Profile (NP) and the CA. The comprehensive list of key partners would be to ensure that the implementation of the SA in Seychelles becomes a country-driven procedure by Seychelles for Seychelles, which calls for commitments from the highest level. It is well perceived that the implementation of SAICM nationally would shed more light on the chemicals status at policy level and thus influence the passing of certain legislative bills and by-laws by the Seychelles National Assembly for better management of chemicals throughout the various stages of their life cycle.

It was then decided that the SC was to be the main engine to drive the implementation of the SA in Seychelles to its succession. Thus, the SC was required to meet regularly to discuss the progression of the project at each significant milestone in implementation. November 2010 saw the second steering committee meeting taking place, with the main item on the agenda being the presentation of the findings from selected Lead Stakeholders (LS) from the 14 chapters of the SAICM NP guidance document. This formed the very first Seychelles National Chemicals Profile in drafting.

The third SC meeting was held in January 2011, wherein there was the endorsement of the final Seychelles National Profile Paper. The NP comprises of an assemblage of information and data from the various sources nationally aiming to provide a portrait of the Seychelles Chemicals status. The profile would henceforth become a living document to be updated regularly, in line with the Seychelles' economic and social development. The NP document also served as the base source for the drawing of information for the drafting of the CA, which constitutes this document.

While the formulation of the CA was in process, the National secretariat arranged a fourth SC meeting to start discussions on the findings of the CA. The guidance document, furnished by UNITAR for the CA process, has been designed such that the assessment of national chemicals management to identify gaps and prioritize actions would be greatly facilitated. The guidance document comprises of a series of worksheets for the identification of issues of national importance and priority in regards to national chemicals management, both in the area of governance and chemicals management on a technical level.

The fourth SC meeting saw discussions on the possible formation of an Inter Ministerial Coordination Mechanism (IMCM). An IMCM has been proposed to assume a role of strengthening of national capabilities and capacities for management of chemicals as per the proposal from Paragraph 19.4(e) of Agenda 19 of the World Summit on Sustainable Development (WSSD), 2002. The IMCM also serves as a direct response to the SAICM's Overarching Policy Strategy, which expresses the need for countries to have more effective governance structures to help make the Strategic Approach a lasting success. Thus, the establishment of the IMCM is targeted at enhancing cooperation on the sound management of chemicals between Governments, the private sector and civil society at the national, regional and global levels through the taking of the leading role in the implementation of the SA nationally.

Workshops

As one of the milestone activities of the implementation of the SAICM initiative in Seychelles, a 2-day planning and inception workshop was held in August 2010 with all stakeholders, including the Project Steering Committee, international and bi-lateral organisations (e.g. WHO, FAO) and UNITAR, the latter being the facilitator. This introductory workshop was targeted at raising awareness of the project to the decision-makers as well as to discuss and finalize the ToR to be used for the SAICM project and work plan for the same. Thus the workshop served as a platform for open dialogues on chemicals-related issues such as components of the existing institutional framework, including both State bodies and Non-Governmental Organizations (NGOs); the legal framework and existing policies for chemicals management in Seychelles; the types of inspection and monitoring services available and the range of risk factors and risk assessment mechanisms in place, among other items on the agenda.

As the Overarching Policy Strategy of SAICM indicates that implementation of SAICM could begin with an enabling phase to build the necessary capacity to develop a National Action Plan of SAICM implementation, the inception workshop also served as the platform through which the various key initial components of the implementation of the SA in Seychelles were highlighted. Thus these include the drafting of a new or revision of an existing NP, the CA process, the formation of an IMCM; the latter being the platform to be used for furthering the implementation of the SAICM GPA activities in Seychelles. All the involved government authorities/departments/agencies concerned with chemicals management, as well as the non-governmental organizations, submitted their views on issues of their responsibility for the preparation of the Seychelles NP and CA. The forum saw the furnishing of training materials, presentations and resources documents that would later be used for the formulation of the NP and CA reports.

The undertaking of the Inception workshop, the provision of training material and the establishment of the inter-stakeholder network are among the first milestones of the project's calendar of activities.

December 2010 saw another workshop with the main stakeholders, wherein the lead stakeholders were required to present the findings of their data collection process, which formed the basis of the NP. The workshop saw the attendance of the stakeholders who were present for the inception workshop as well as the SAICM National Secretariat and Steering Committee members. The NP presentation workshop was

carried out as per an agreed agenda. The lead stakeholders and their key partners thus presented the findings of their relevant chapters. The presentation also saw very good commentary and constructive criticism from the other stakeholders present to facilitate revision of the findings, prior to the finalization and endorsement of the NP document by UNITAR.

C) PREPARATION OF THE SEYCHELLES NATIONAL CHEMICALS PROFILE

The responsibility for preparing the NP for Seychelles was taken up by the Seychelles SAICM national secretariat, having its head office at the Seychelles Department of Environment Head Office. The Seychelles national SAICM secretariat entails personnel either already attached with the Seychelles Department of Environment or having past working experiences and expertise in the environment and health field. Responsibilities for the overseeing of the implementation of this activity were facilitated by the Seychelles SAICM Steering Committee, with selected Lead Stakeholders (LS) assigned to work on the various chapters of the NP. The LS were selected through consultation of with the SC, based on their field of expertise and their role in national chemicals management. It was proposed and agreed that for an across-the-board assimilation of data for the NP, non-governmental stakeholders and private industries would have equal say in the formation of the NP. Table I-2 provides a list of assigned LS and stakeholder groups for the various chapters of the Seychelles NP.

NP Chapters / Sections	Proposed Lead Stakeholder	Proposed stakeholder group
Chapter 1: National Background Information	Public Health	Customs, Agriculture, LWMA SEPEC
Chapter 2: Chemical Production, Import, Export, Storage, Transport and Use	Public Health	Customs, Agriculture, LWMA SEPEC
Chapter 3: Priority Concerns Related to Chemicals at All Stages in Their Life Cycle	(All stakeholder groups)	(All stakeholder groups)
Chapter 4: Legal Instruments and Non-Regulatory Mechanisms for Life Cycle Management of Chemicals	DoE (legal branch)	Employment Dept., SLTA, PUC, Occupational Health
Chapter 5: Ministries, Agencies and Other Institutions Managing Chemicals and Related Waste	DoE (legal branch)	Employment Dept., SLTA, PUC, Occupational Health
Chapter 6: Relevant Activities of Industry, Public Interest Groups, Professional Bodies and the Research Sector	DoE (legal branch)	Employment Dept., SLTA, PUC, Occupational Health
Chapter 7: Inter-ministerial Commissions and Co-ordinating Mechanisms	DRDM	Seychelles Fire and Rescue Services, SeyPol , SBS, Seychelles PA
Chapter 8: Information Management Capacity, Data Access and Use	Public Health	Customs, Agriculture, LWMA SEPEC
Chapter 9: Technical Infrastructure	DRDM	Seychelles Fire and Rescue Services, SeyPol , SBS, Seychelles PA
Chapter 10: Chemical Emergency	DRDM	Seychelles Fire and Rescue

Preparedness, Response and Follow-up		Services, SeyPol , SBS, Seychelles PA
Chapter 11: Awareness/Understanding of Workers and the Public; Training and Education of Target Groups	DoE (education and awareness branch)	LUNGOS, UNISEY, SeyFA, NATCOF
Chapter 12: International Linkages	DoE (education and awareness branch)	LUNGOS, UNISEY, SeyFA, NATCOF
Chapter 13: Resources Available and Needed for Chemicals Management	DoE (education and awareness branch)	LUNGOS, UNISEY, SeyFA, NATCOF
Chapter 14: Conclusions and Recommendations	(All stakeholder groups)	(All stakeholder groups)

Table I-2: SAICM GPA working groups

The assessment was carried out in the framework of the document entitled “Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals”. This includes the 14 chapters of chemicals management issues entailed in this documents as well as information on the type/depth of data requiring assembling for the formation of the country’s national chemicals profile paper.

The NP, being the first draft for Seychelles, has been formulated with the intention for it to be a living document, with regular updating in line with the country’s development trend and economic transitions. It has been proposed that the NP be updated every 3 years to reflect the country’s real-time chemicals status and for a more realistic plan towards the strengthening of the Seychelles national chemicals management institutions, plans, programmes and activities to further the implement the SA nationally.

D) CAPACITY ASSESSMENT AND PRIORITY SETTING

As called for by the ICCM and in relation to the SAICM QSP, an important enabling activity for national SAICM implementation is the development of a capacity assessment (CA) (including identification of priorities) as an essential step towards preparing a SAICM implementation plan. This takes into account that countries start from different baseline situations and need to focus on activities that address their national needs and priorities. It also recognises that no single country will be able to implement the many possible actions outlined in the SAICM documents at once and would need to focus on addressing the most pressing.

In addition to acting as a springboard to priority-setting and to formulation of implementation plans, the aim of a SAICM CA process is also to:

- Allow countries to better understand SAICM's core documents including 36 Work Areas and relevant activities
- Put the UNITAR methodology to the test
- Enable proper definition of work plan for preparing assessment
- Identify roles of stakeholders in the SAICM process

The compilation of the national CA in Seychelles, which is the main component of this document, was carried out in line with work areas 1 and 26 and activities 1, 165, 207, 208 and 236 of the SAICM GPA's work areas, which entail the assessment of the national structure and technical capacity for the management of chemicals. The formulation of a sound national CA was facilitated through a series of consultation with all relevant stakeholders, particularly the key stakeholders who were active in the National Profile stage of the SAICM initiative.

The CA document makes particular reference to chapter 3 of the Seychelles NP paper, which outlines the nature of the main setbacks in the country associated with chemicals at all stages in their life cycle, from importation or manufacture through transportation, storage, use and disposal or recycling. The idea is to identify pertinent problems related to chemicals management in Seychelles and to provide a diagnostic of the priority issues within the country. This is further aimed at identifying areas whereby top priority might be given to allocate and concentrate resources for action.

The drafting of the national CA for sound chemicals management in Seychelles thus provides a valuable tool for the prioritization of issues relating to chemicals management at the national level. As per the guidance of UNITAR through its document entitled "Developing a Capacity Assessment for the Sound Management of Chemicals and National SAICM Implementation" a series of worksheets was proposed onto which the assessment would be recorded. The assessment and worksheets were sectioned into two main components, being a governance assessment and the identification of urgent and important chemicals management issues, as detailed further:

Worksheet 1: Lead Agencies and Stakeholders for Possible Work Areas and Associated Activities

The SAICM GPA lists possible work areas and their associated activities, actors, targets and timeframes, indicators of progress, and implementation aspects that may be undertaken voluntarily by stakeholders in order to pursue the commitments and objectives expressed in the Dubai Declaration on International Chemicals Management and the Overarching Policy Strategy. This worksheet thus makes provisions for the identification of lead and participating agencies/stakeholders within the context of the work areas.

Worksheet 2: Governance Framework Assessment

This worksheet addresses the governance-related components of SAICM. References to the relevant SAICM work areas are presented under each category. In regards to governance assessment, the worksheet provides 5 different areas of consideration (or categories) through which the results of the CA are to be recorded. These areas are summarized as follows:-

- Integrating chemicals management into national development priorities;
- Sound institutional and programmatic national framework;
- legislation and enforcement;
- participation of the private sector and civil society in chemicals management
- International cooperation related to chemicals management.

As per the methodology of the CA provided by UNITAR, each category of worksheet 2 of the CA process is required to be and thus have been further detailed into their respective priority status in regards to the assessment. Details include:

- Category and their related GOA activity(ies)
- The level of existing capacity (rated as either high, medium or low)
- Summary of strengths and gaps
- Possible action to be taken
- Priority of taking action (rated as either high, medium or low)

Worksheet 3: Identification of Urgent and Important Chemical Management Issues

This worksheet addresses the chemicals management issues-related components of SAICM. In regards to chemicals management issues, the areas of consideration for assessment are as follows:-

- chemicals information generation;
- risk management;
- information exchange, education and training;
- and chemical emergency prevention control

As per the methodology of the CA provided by UNITAR, each category of worksheet 3 of the CA process is required to be and thus have been further detailed into their respective priority status in regards to the assessment. Therein, each stakeholder group (government, industry, NGOs, etc.) determines its most important and urgent chemicals management issues. The details of their issues of importance are concluded by consensus opinions of each group party. The worksheet is also sectioned to allow the various groups to provide reasons for their opinions and judgment.

- Summary of existing gaps or problems
- Possible action
- Level of priority
- The level of existing capacity
- The urgency and importance of taking action (High, Medium or Low)

Worksheet 4: Capacity Assessment of Important and Urgent Chemicals Management Issues

Based on the outcomes of Worksheets 2 and 3, a small number of the most important and urgent chemicals management issues are selected —i.e. the issues that all stakeholders consider a priority—and detailed in worksheet 4. This worksheet is intended to indicate which activities and actions are of highest priority for nationally. The worksheet aims to

- Allow for the Preparation of a capacity assessment for important and urgent issues identified in the previous worksheets
- Assess existing capacities and/or gaps and list possible actions and actors as a basis for identifying SAICM implementation activities
- Urgency of taking action to address a given capacity gap

The completed worksheet also leads to identification of activities and actions suitable for implementation through partnerships projects.

The completed worksheets 1-4 are attached in Annex 1

II. EXECUTIVE SUMMARY

RATIONALE

Sound management of chemicals is recognised as essential to achieve sustainable development, including eradication of poverty and disease, the improvement of public health and the environment and the elevation and maintenance of the standard of living in countries at all levels of development. Involvement of all relevant sectors and stakeholders, including at the local, national, regional and global levels are seen as key to achieving the SAICM objectives, while respecting human rights and fundamental freedoms, understanding and respecting ecosystem integrity and promoting environmental governance and democracy.

Therefore, assessing and diagnosing the existing infrastructure for the sound management of chemicals is an important step towards building national capacity in a systematic way, and is also an important element of preparing for SAICM implementation. The ICCM encourages countries to update their National Profiles (or, if one does not exist, to develop a National Profile) with SAICM in mind in order to provide baseline information about the existing chemicals management infrastructure and activities.

Following the preparation of the Seychelles National Profile, this report outlines the country's national capacity to manage chemicals both on a governance and technical point of view. This capacity assessment exercise is aimed at meeting the SAICM objective at national level primarily to:

- build upon existing chemicals management initiatives in all sectors,
- enhance coherence among various government and stakeholder initiatives,
- link the proposed activities to national development planning

OVERVIEW OF FINDINGS – GOVERNANCE ASSESSMENT

Assessing the country's national capacity for the management of chemicals on a governance point of view has revealed certain setbacks that need attention. The first and foremost issue is the fact that chemicals management is nationally fragmented and there is a clear lack of leadership when it comes to coordinating management issues nationally. Hence, there is very little influence for technical institutes to abide to certain rules and regulations. The situation is worsened by the fact the legislation governing chemicals management is also fragmented and outdated. It is perceived that once these two issues are addressed, Seychelles capacity to govern the management of chemicals would take a significant leap forward. Among other issues and their priority ratings for attention are the following:

- Integration of chemicals management into national development plans = Medium
- Presence of an inter-ministerial coordinating mechanism = High
- Information exchange = High
- Programme and project planning = Medium
- Monitoring and evaluation = Medium/High
- Presence of financing mechanism = Low

- promoting participation of regional authorities = Medium
- Pesticides legislation = Medium/Low
- Policies for pollution prevention and cleaner production = Low
- Stakeholder participation = High
- Voluntary initiatives within the private sector = High
- Capacities of civil society = medium
- International cooperation = Low
- Studying and resolving chemicals management issues of transboundary dimensions = Low

OVERVIEW OF FINDINGS – PRIORITY CHEMICALS MANAGEMENT ASSESSMENT

Within the line of chemicals management, the assessment has revealed a number of issues pertaining to national chemical management at various stages of their life cycle. One of the most pertinent issues is the fact that there is a distinct gap between government and other stakeholders when it comes to information exchange and data processing. It is revealed that there are very few platforms onto which the private technical institutes such as laboratories and industries dealing with chemicals can voice their opinions and technical experiences on such issues. As a result, some of the more technical issues are not properly addressed in Seychelles, e.g. treatment and disposal of chemical waste, establishment of an information exchange mechanism and adherence of private sector in the set national regulations and legislations.

Certain laboratory infrastructures within the government are limited in facilities and human resources. As a result, they do not have the capacity to carry out complex chemical analysis required for more rigorous environmental assessments which are essential for accurate decisions and plans for the effective management of chemicals and their risks.

PROPOSALS FOR PARTNERSHIP PROJECTS

Partnership projects between international and regional bodies, Government and relevant stakeholder groups have been identified to improve chemical management issues based on the recognized level of priority of attention nationally. The principal objective of the proposed partnership project, as envisaged, is to strengthen governance as well as tackle the most pertinent technical issues pertaining to chemicals management nationally. The top-priority project and their level of ranking are as follows

1. Adopt, establish and set up a new chemicals management body or inter-sectoral committee to oversee all chemicals management issues nationally, in the light of the importance of implementation of the SA in Seychelles.
2. Revise, assemble and update existing legislation for chemicals management in Seychelles; a task requiring expertise from all stakeholders as well as technical assistance from regional/international partners.

3. Set up an information exchange mechanism for the proper assembling, processing and sharing of chemicals-related data for reference and use. The mechanism is proposed to be managed by the newly-set up inter-sectoral committee.
4. Implement the GHS in Seychelles and promote the system to all sectors. Ensure the proper following-up by the committee task force
5. Adopt a site for proper hazardous waste management, which include treatment and processing prior to disposal. Proposed to be managed by LWMA

1.0 SUMMARY ASSESSMENT: NATIONAL GOVERNANCE FRAMEWORK

1.1 INTEGRATING CHEMICALS MANAGEMENT INTO DEVELOPMENT PRIORITIES

The level of existing capacity for the integration of chemicals management into national priorities, the overall rating from the government-based stakeholders is regarded as medium. It is believed that although such mechanisms exist in Seychelles, the main issues arise from a lack of dialogues/coordinated and integrated approach to mainstream the issues pertaining to chemicals management into national development plans. The main national development plans of Seychelles entail the Town and Country Planning Act and the Environmental Management Plan of Seychelles (EMPS). Both of these documents are regarded as outdated needing proper revision.

There is also the issue of a lack of trained personnel to identify and take up the issues of chemicals management on these platforms. Trained personnel in the form of enforcement is also lacking to a certain extent. As a result, there is a gap between planning and implementation of chemicals issues into national development plans.

It has to be said however that Seychelles has achieved some successes in the areas of tackling chemicals management issues at national level. A more recent case is the complete phasing-out of lead from gasoline, which was discussed in the last EMPS platform. As from the beginning of 2011, Seychelles is a lead-free country in regards to petroleum products.

A few possible actions have been identified in order to further polish the issue of mainstreaming of chemicals management into national development plans. The rating for these actions is quoted as high: It has been proposed that a completely new legislation be formulated to take into account the merging of the scattered and separate legislations which deal with chemicals. This new legislation shall cater for all issues of chemicals management at all stages in their life cycle. The revision of such a major piece of legislation for chemicals management can only be taken up by a new committee /body dealing only with chemicals management and the implementation of the SA in Seychelles. This is where the new IMCM comes in.

It has also been proposed that the process of capacity-building be geared up and be more prominent, especially in the field of enforcement. The trained personnel need to be empowered with the newly-formed legislations and be allowed to impose the new legislations at all levels. Finally, there is the need for a proper information-exchange mechanism, which would facilitate communication among the various groups within government and also between government and the private sector. This information exchange mechanism would greatly enhance dialogue between the various parties.

1.2 ESTABLISHING AN INTER-INSTITUTIONAL COORDINATION MECHANISM

The presence of an inter-institutional coordination mechanism in Seychelles is of medium rating. With the establishment of a SAICM national secretariat and the development of the NP and CA documents, it is regarded that Seychelles has already made some steps in the right direction towards the establishment of such a mechanism. There are also certain platforms that deal with the current chemicals issues such as the Pesticides Board, although they are not necessarily active.

The gaps are in the form of a lack of coordination when dealing with chemicals in their entire life cycle. This lack is apparent within ministries as well as government ministries and the private sector.

The need for the establishment of an Inter-ministerial Coordinating Mechanism (IMCM) here is of high priority. Therefore the possible actions all point towards the formation of such a structure.

1.3 INFORMATION EXCHANGE MECHANISMS

The level of capacity for the formation of an information exchange mechanism in Seychelles, especially for dealing with chemicals-related issues is regarded as low. There is an agency in existence to safe keep national data (NSB), but there are certain doubts as to whether chemicals data are within the roles of the NSB.

The strengths however, lies in the fact that all of Ministries of the Seychelles Government have access to web information and are well-equipped with IT facilities. There are also good training opportunities for managers and staff to use such facilities for exchange of information.

However, the gaps in this instance lies in the fact that there are no actual running national chemicals database. There are pockets of data scattered within various ministries and the private sector. These usually provide information on chemicals at only specific stages in their life cycle. For example, there are available (but restricted) data on the tonnage of chemicals-related waste that enters the country waste management system. As is the case with many other Small Island Developing States (SIDS) there is a lack of funds and technical resources for the mounting and continuous running of a proper chemicals database.

The possible actions identified for the rectification of national issues related to the formation of an information exchange mechanism are rated as high. All actions point towards the creation of a national chemical database for information sharing and decision making. This shall come with training of personnel to the management of such a database. In addition, there is a need to improve chemical information sharing between governmental and private sectors, which shall serve as the feed of data within the new system.

1.4 SETTING NATIONAL PRIORITIES

The existing capacity for the setting of national priorities for chemicals management is regarded as low in rating. This is the case although the NP documents and CA have been formulated. There are two main identified reasons for this low rating. The first is a lack of stakeholder involvement within the recent drafting of these two documents. Although stakeholder turnout was generally very good, the point of argument is the fact that certain stakeholders were somewhat non-cooperative to a certain extent.

It is thus perceived and proposed that with the formation of the IMCM and the information exchange mechanism, the required data for priority-setting would be made more readily available such that the priority-setting process could be greatly facilitated.

1.5 PROGRAMME AND PROJECT PLANNING

There is a good level of commitment within the government to carry out programs and project planning. This is seen through the various international policy framework signed and ratified by the Seychelles government. In regards to programme / project planning, Seychelles boasts adequate skilled and

experienced personnel. The downside is that Seychelles currently lacks a proper chemicals management system and the case is such that chemicals are being managed in piecemeal by various institutions. Should there be an enactment of a proper chemical management system in place, there is still a need to fork out for additional human resource or train existing personnel for that purpose.

It is thus proposed that a comprehensive legislative framework for chemical to be put in place for action, which shall serve as the springboard for the formation of a better coordination system between stakeholders for an integrated approach to chemicals management. The legislation should look to build upon existing ones as well as bringing all the bits and pieces together. The solution to human resources issues is the provision of adequate training for staff to enforce and upkeep the proposals of the new legislation.

1.6 MONITORING AND EVALUATION

It is decided that a medium rating should be given to the capacity of Seychelles in relation to monitoring and evaluation as there are currently some monitoring and evaluation taking place by government departments and boards (e.g. the Pesticides Board). In regards to commitment of the concerned parties to monitoring/evaluation, there is a very good level in Seychelles. This is particularly attributed to the fact that there is a good awareness of the fragile environment of Seychelles and the detrimental effects of lack of monitoring can have on the country's environment.

The technical aspect of evaluation/monitoring is the main setback of Seychelles in that aspect. This is due directly to a lack of facilities and equipments for proper evaluation. There have been numerous incidents in the recent past where the lack of monitoring of chemicals movement in Seychelles is directly attributed to lack of technical facilities. This plus the few trained individuals in the field of monitoring further compounds the issue.

As with the issue of programme and project planning, the solution to a better evaluation is governed by a sound and complete set of legislation, which would further guide the country into acquiring the suitable technical resources, whether they are human or physical resources, for a better and closer monitoring and evaluation process. Everything else shall follow the legislation.

1.7 ESTABLISHING EFFECTIVE FINANCING MECHANISMS

The Seychelles capacity for the establishment of effective financial mechanisms for chemicals management is probably one of Seychelles strongest points. This is due to the country's very prominent financial sector, a sector that the Seychelles Government has put a lot of emphasis upon in the recent years. This is applicable for all areas of management and not just chemicals management. In terms of chemicals management, there is the additional presence of environment levy and fines, which has been used in a number of incidents recently. There is also the Environment Trust Fund, which acts as a type of financial mechanism for all environment-related issues, including chemicals management. The Environment Trust Fund is further strengthened by donor organizations, which are always ready to assist in the preservation of the Seychelles Environment.

However, the rating in this instance is medium, as there is little financial backing directly from government budget to fund chemicals management programme. It is also very obvious that the Environment Trust Fund

has not funded many chemicals management related projects in the past. This is again due to the non-existence of a proper programme in place.

In the light of the above, the solution is also obvious in the fact that the Government should look to exclusively allocate a budget for national chemicals management. With this being enacted, and the tapping into the Environment Trust Fund, there would be a definite step forward in the establishment of effective financing mechanisms for chemicals management.

On another note, there is still the process of accessing global and regional funds for chemicals management. In this context, Seychelles has been quite active, as is proven with the SAICM project. However, some of the procedures for accessing such funds can be sometimes tedious, especially when it comes to procurement procedures. In spite of this, the country is actively pursuing this source of fund. With the establishment of a sounder chemicals management program, it is without doubt that the forking out of international funds would be made easier.

1.8 PROMOTING PARTICIPATION OF REGIONAL AUTHORITIES

Seychelles has been partially successful in the process of involvement of regional authorities for chemicals management. This is especially in the field of chemicals-related waste management. However there is a sense of a lack of synergy within the region, which is further made worse by a lack of widespread knowledge of activities or mechanism in place for sound chemical management within the region.

It is suffice to say that the SAICM initiative could be a very good starting point for sharing of knowledge, programmes, data and technical resources within the region, based on the findings of the CA process by countries within the region. In any way, there is a need for Encouragement of concerted effort from both governmental and private sector to promote regional participation of relevant stakeholders within chemicals management programmes.

1.9 LEGISLATION, REGULATIONS, POLICIES AND ENFORCEMENT CAPACITIES

As mentioned in the previous discussions, there is available legislation that addresses the various aspects of chemicals management. However, the issue remains with the adequacy, applicability and soundness of the legislation. In some instances, legislation is only specific to certain groups or categories of chemicals. In other cases, there are overlaps in the various pieces of legislation.

Generally speaking, legislation does not cover chemicals management at all stages of their life-cycle. There is a definite need to review the by-laws and policies that deal with chemicals. The grouping of all pieces of legislation together would be a tedious affair, but is nevertheless imperative. Then there is the aspect of enforcement of legislation. As mentioned before, there is good sense of commitment, but the downside is the lack of technical resources, both human and physical.

It is proposed that the revision of legislation, the training of personnel and the acquisition of technical resources be carried out simultaneously if possible, lest there be no follow-ups to these three processes.

1.10 PESTICIDES LEGISLATION AND POLICIES

Seychelles, through its Pesticides Board has made some significant steps in the right direction in regards to the management of this group of chemical. Although the Board started strongly, there is a sense of slacking of commitment. The main issue of commitment lies in the fact that all members are already very committed with other Ministries and Departments and are not always available.

In addition to the above the governing legislation of the Board is now outdated and in need of revision.

There is thus a need to review and update the Pesticides Board legislation and also to boost this platform with more committed members. A possible solution would be to include more representatives of private sector, which is another strategy to enhance dialogue between the two sectors.

1.11 POLICIES FOR POLLUTION PREVENTION AND CLEANER PRODUCTION

Seychelles is arguably one of the most heard voices coming from the SIDS globally, advocating for cleaner production and effects of climate change on the environment of SIDS. This is proven in Seychelles early ratification of the United Nation Framework Convention on Climate Change (UNFCCC)'s Kyoto Protocol, which derived from the 1992 Rio Summit. The Seychelles current President is very widely regarded worldwide for his active involvement and initiatives on behalf of all SIDS in the fight for cleaner production. The President and Vice-Chancellor of the University of Seychelles (UNISEY) is another very active advocate for Seychelles globally in regards to the issues of pollution reduction and cleaner production.

In addition to the above, there has been no shortage of private sector involvement in striving for pollution prevention mechanism for Seychelles. NGO's such as Sustainability for Seychelles (S4S), have only recently been established, but are already involved in projects that seek alternate sources of energy apart from the burning of fossils fuels, such as tapping of methane from landfill, solar energy, wind turbines etc.

Although Seychelles' active involvement in the global scene in these instances, it is somewhat surprising to note that there still lacks a legislation for the adoption of cleaner production other than international commitment to certain obligation under signed protocols/conventions.

It is proposed that there be however, more promotion of benefits of environmentally friendly systems and rewards such as incentives from the government to NGOs and groups/individuals for their efforts. There is again the issue of a lack of proper legislation to guide into the use of cleaner production methods and pollution preventions schemes, which needs to be put in force.

1.12 STAKEHOLDER PARTICIPATION

In regards to stakeholder participation, the policy for the integration of the private sector in national chemicals management programs does exist. However, the issue here is mainly a lack of motivation from the private sector to partake in these programs. As a result, the level of dialogue between these two sectors is far below the level considered adequate.

With the introduction of a proper chemicals management body or mechanism with periodic meetings for the engagement of greater active participation from all sectors, the issue of dialogue would greatly improve.

1.13 VOLUNTARY INITIATIVES WITHIN THE PRIVATE SECTOR

The Seychelles capacity for initiation of voluntary actions on chemicals management by the private sector is considered to be of medium rating. There is a good sense of engagement of the private sector and initiatives on a voluntary basis in the context of chemicals management, especially in the field of agriculture. This is despite the apparent lack of inter-sectoral dialogue, as mentioned previously.

Initiatives from the private sector could however be enhanced if the government would “meet the private sector halfway” in their voluntary initiatives in chemicals management. This could be in the form of incentives and awards. The government could also make provisions to create mechanisms for private sector to voluntarily contribute to capacity building especially for training of workers involved in chemical. However, the latter would only be made possible by the enhancement of dialogue between the various sectors in Seychelles. It is to be noted however, that the private sector is already providing courses and training to government staff in various fields, some of them indirectly connected to chemicals management.

1.14 CAPACITIES OF CIVIL SOCIETY

The Seychelles’ main civil society organizations are generally well-organized administratively. However, there seems to be uncertainties of the roles of civil society in regards to chemicals management issues. Additionally, there are few NGOs currently involved directly in chemicals management.

It is perceived that the government can step in to further boost the participation of civil societies in chemicals management. Initiatives such as educational programs for the sensitization of the general population on the use and control of chemical in the social sector can be implemented. As stated previously, NGOs are offering training to government-based personnel. However, this is not necessarily the case vice-versa. In this light, it is perceived that government could strengthen capacity of Civil Societies in chemical management by providing training opportunities to NGOs.

1.15 INTERNATIONAL COOPERATION IN IMPLEMENTING CHEMICALS MANAGEMENT RELATED MEA’S

As stated previously, Seychelles has been quite active on the global and regional scene when it comes to the signature of MEAs. However, although the trend is now in the process of changing, not many signed MEA’s are related to chemicals management. There is also the issue of lack of national capacity to effectively follow up on sign MEAs to see their implementation. In many cases, the lack of capacity is seen by failure to abide to the requirements of the signed MEAs.

It is proposed and expected that the newly-proposed IMCM could see that the country improves on coordination of activities related to signed MEAs so that the country does not lose out on opportunities for capacity building in chemical related issues.

1.16 STUDYING AND RESOLVING CHEMICALS MANAGEMENT ISSUES OF TRANSBOUNDARY DIMENSIONS

As with all SIDS whereby there are no physical land boundaries, Seychelles deals only sparingly with chemicals management issues of transboundary dimensions. However, national and international agreements do exist with Seychelles and other countries (both regionally and internationally) for the proper transportation of chemicals.

The downside to the dealing with transboundary chemical issues within Seychelles is mainly arising from a lack of technical capacity and knowledge in chemicals related issues, especially those of transboundary dimensions. There is a lack of synergy within the sectors of Seychelles as well as among the regional countries for that purpose. The solution comes with training and building of capacity to be able to identify and harmonize all chemicals management issues

2.0 SUMMARY ASSESSMENT: CHEMICALS MANAGEMENT ISSUES AND PRIORITIES

The national capacity assessment for chemicals management issues and priorities were carried out by considering and detailing assessment of capacities for selected chemicals issues and priorities. A total of 5 main areas of interest were thus identified. The areas below have been developed based on the main objectives included in SAICM, Programme Area E of Chapter 19 of Agenda 21 (“strengthening of national capabilities and capacities for management of chemicals”) and the activities listed in the SAICM *Global Plan of Action* (GPA). They are as follows:

- Information generation
- Risk management for chemical safety
- Information exchange, education and training
- Chemical emergency prevention and control

Under each area, a number of categories were identified and the rating of priority for consideration was undertaken by two different stakeholder groups, being “industry” and “NGO’s/businesses”. The average or consensus rating was then considered for adoption for the purpose of this assessment.

2.1 INFORMATION GENERATION

Information is vital to a successful chemicals management programme. Ideally, the information should be comprehensive, validated and up-to-date. For the purposes of 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.

Related to the area of information generation, two main categories were considered for Seychelles national capacity assessment. They are (1) Chemical Risk Assessment (including Hazard Identification & Exposure Assessment) and (2) Research and Laboratory Capacities.

2.1.1 Chemical Risk Assessment

The consensus priority for chemicals risk assessment has been rated at “high” by both stakeholder groups. It is generally agreed that there is a lack of awareness or ignorance of the risks that comes with chemicals management/handling by workers and in the workplace. This is seen through by a lack of research and monitoring being done. For example, there are very few institutions in Seychelles that actually records the number and type of chemicals-related accidents that happen in their workplace. As a result of this, there is no system in place to gather and deduce existing data from industries and private institutions.

There is thus a high priority to develop a system to gather and interpret data from industries by Government. There is also a high priority for workers to be sensitised of the risks that improper handling of chemicals can bring about on their health and their immediate environment.

2.1.2 Research and Laboratory Capacities

Medium rating has been averaged out for priority of consideration for the capacity gap for the category of research and laboratory capacities. This is attributed to the fact that most organisations that deal with chemicals have their own laboratory which is used to ensure that their products meet international standards (e.g. ISO). There is also adequate and in some cases, good level of expertise, albeit few in number.

The downside however is that there is a lack of laboratory facilities or technical expertise within the NGO and private businesses stakeholder group. As a result, this group tends to depend on other research institutions for data on chemicals. For example, NATCOF lacks such facilities and expertise in order to obtain first-hand information on the quality of domestic products in order to brief customers. Information that they utilize is acquired from either public opinion or data from other laboratories.

2.2 RISK MANAGEMENT FOR CHEMICALS SAFETY

The reduction of risks related to chemical exposure can encompass 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 bioaccumulative products, implementing safety procedures for the handling of dangerous chemicals and reducing the generation of hazardous waste. Examples of risk reduction issues to be examined in the context of SAICM include safe handling and use of pesticides, workplace safety, and promotion of safer alternatives.

Thus under the area of risk management, a total of eight categories have been assessed as to their capacity gaps and strengths for Seychelles national capacity assessment. They are (1) Adequate legislation, (2) Promotion of safer alternatives, (3) Highly-toxic chemicals of global/regional/international concern, (4) Safe handling, use, storage, and transportation of pesticides, (5) Safe use, storage, and transportation of industrial chemicals, (6) Chemical safety in the workplace, (7) Cleaner production, (8) Waste management.

2.2.1 Adequate legislation

An average rating of “high” has been rightly given for consideration of the capacity gap for adequate legislation in the Seychelles chemicals management. As stated in the governance assessment, legal policies and by-laws drafted by the Seychelles government in this context are few, outdated, fragmented and do not address the complete life cycle of chemicals and chemicals-related wastes. In addition, there are overlaps in the implementation of chemical legislations between ministries and agencies and sometimes there are certain uncertainty and confusion on the various roles of the agencies *vis-a-vis* national chemicals management. There is also the issue of enforcement of the various laws, which has in the past proven to be ineffective, either as a result of the lack of clarity in the clauses or as a result of lack of expertise for enforcement.

There is however good collaboration exists between the public and private sectors to implement the various policies and programmes. With the introduction of the SAICM initiative on the scene, this collaboration looks promising to strengthening.

2.2.2 Promotion of safer alternatives

As with the adequacy of legislation, the capacity gap for promotion of safer alternatives in the field of chemicals management is rated nationally at “high”. There is a definite lack of incentives and reward from the government when it comes to the promotion of safer alternatives from the private sector and stakeholder groups. However, this trend is set to change now, as Seychelles is on the front-line of fighting against the effects of climate change and is becoming more and more aware of the impacts of climate change on SIDS such as Seychelles. The SAICM capacity assessment should look to further enable government to tap more into the provision of certain incentives and awards to private organizations who look to seek cleaner alternatives. There is also a definite scarcity of awareness programmes for safer alternatives especially those targeted at domestic level.

2.2.3 Highly-toxic chemicals of global/regional/international concern

There is an agreed high priority to address the national capacity gaps when dealing with highly toxic chemicals or those of international concern. In regards to internal policies to deal with such chemicals, these are available and are updated and they reflect international standards and standards set up by local laws/legislation. However, the capacity gaps to deal with such chemicals lies in the fact that there are no proper facilities to treat, manage and treat and dispose of hazardous chemicals-related waste. There is also an issue of monitoring and control when it comes to selling and usage of such chemicals, especially for domestic use. As stated previously, there an additional lack awareness on the effects caused by toxic and/or hazardous chemicals in businesses, communities, and households. Finally, there is a lack of adequate legislation and mechanism to control the importation of certain toxic chemicals.

2.2.4 Safe Handling, Use, Storage, and Transportation of pesticides

Owing to the presence of the Seychelles’ Pesticides Board, the need for addressing local capacity issues for the safe handling, use, storage and transportation of pesticides is rated at “medium” priority. The SAA is also currently carrying out environmental monitoring (soil, water sources) in agricultural regions for possible contamination by use of pesticides.

The downside to this issue is in the storage and use of pesticides locally. There are currently no proper handling and storage facilities for pesticides in Seychelles as all containers are stored in a poorly-ventilated enclosure. Handling of the same is even worse as the personnel are not properly geared up with safety equipments such as gloves, mask etc. There is still a gap in the knowledge and level of awareness of end-users of pesticides locally as there are cases of careless usage. The Act the governs the Pesticides Board is also outdated and does not cover all pesticides entering the country as well as does not make adequate provisions for addressing handling and usage methods.

2.2.5 Safe use, storage, and transportation of industrial chemicals

Given the fragile eco-system of the Seychelles and given the fact that Seychelles’ economy is very dependent on the state of its natural environment, the level of priority for the safe use, storage and transportation of industrial chemicals is rated “high” nationally. The plus side is the fact that industries and institutions such as SEPEC, SeyBREW and IOT have very good storage facilities. The setback is that such facilities are quite poor in other industries

The fragmentation of the Seychelles legislation on chemicals management is such that there are no standards, guidelines or policies that govern handling and transportation of industrial chemicals. Finally, as with most other chemicals group, the general public need to be educated on the dangers involved when dealing with industrial chemicals.

2.2.6 Chemical safety in the workplace

There is a definite need to upgrade the level of chemical safety in the workplace. Most public organizations (except a few such as SEPEC and SeyBREW) do not have a proper chemicals accident emergency and contingency plan in place. There is a significant lack of awareness and ignorance on the hazards of chemicals use in the workplace. As a result, there have been some very serious incidents involving chemicals misuse or mishandling in the workplace, which have led to hospitalization of many people.

In order to address this, the first and foremost strategy is to enact a new legislation to include chemical safety in the workplace. The new legislation should take into account international standards of chemicals classifications and usage such as MSDS and GHS. This should be in place such that workers can easily have access to them.

2.2.7 Cleaner production

There is a very high priority across the board and within all stakeholder groups to look into seeking of cleaner production when it comes to chemicals management. As a result, Seychelles have been very active in the field of cleaner production on the global scene.

Seychelles as a SIDS does not produce many chemicals substances. However, the usage of certain types of chemicals leads to the production of certain by-products that can sometimes be more hazardous than the original product. It is for this reason that the country has undertaken some considerable step towards cleaner production of late. For example, the fuel pumps in Seychelles do not furnish any more leaded gasoline and there are bans on importation of certain articles that contain CFC's, the latter in line with the Montreal Protocol.

The replacement of fossil fuel with alternate energy sources is at the top of Seychelles' priority list for cleaner production. For this reason, the government has supported and put in place agencies such as the Seychelles Energy Commission, Sustainability for Seychelles (S4S) among others.

The only setback, as stated before, is as a result of a lack of recognition from government to the private sector as and when there are initiatives that are put in place for cleaner production.

2.2.8 Waste management

The management of chemicals-related and hazardous wastes in Seychelles remains one of the issues needing the most attention. Throughout the entire SAICM process until now, there has been the highlighting of the fact that Seychelles lack a proper hazardous waste management facility. Up until very recently, many very hazardous wastes have been dumped into the landfill, which is not acceptable. There are stores in the public health centres full of clinical reagents and other chemicals awaiting disposal. This is an issue that must be considered in the priority-setting phase.

The Seychelles main waste management agency (LWMA) is somewhat lacking in expertise to handle chemicals-related wastes. As a result, there are absolutely no data or records on the type and amount of such waste being produced and needing treatment.

2.3 INFORMATION EXCHANGE, EDUCATION AND TRAINING

Widespread cooperation among all relevant government authorities, industry, workers, non-governmental organisations and the public is fundamental to sound national chemicals management. This in turn, calls for a widespread awareness of the potential risks associated with the use of chemicals and chemical accidents, and an understanding of the ways in which chemicals can be handled safely. Examples of education and awareness raising issues to be assessed include information dissemination and training.

Three different categories have been put under the spotlight to be assessed in regards to their capacity strengths/gaps under the theme of information exchange, education and training of the Seychelles national capacity assessment. They are (1) Information exchange, (2) Education/awareness raising, (3) Training.

2.3.1 Information exchange

Information exchange is given a medium priority rating by both stakeholder groups who took part in this capacity assessment exercise. As has been expressed previously, there are certain gaps in the collection, processing and disseminating of information among stakeholders and sectors of Seychelles. Firstly, there is inadequate risk assessment management being carried out, which leads to the scarcity of available data on the possible risks of using or handling of certain chemicals.

There are adequate institutions in Seychelles for the gathering storing of data, such as NSB, NATCOF, etc. These institutions however, do not deal with chemicals-related data. In any case, most of the little amount of data being assembled are not systematically gathered or stored for proper analysis. As a result, information exchange is significantly affected.

With the setting up and establishment of a new branch within the Department of Environment as proposed in this exercise, the issue of data collection, process, storage and dissemination will be concentrated under one body and will thus greatly improve the process of information exchange at all levels in Seychelles.

2.3.2 Education/awareness raising

There is a medium to high priority attached to the process of promotion of public knowledge and information about chemicals and their impacts on health and environment, as rated in this exercise. There are a number of bodies that deal with public sensitization / awareness-raising programmes. However, these programs are limited in number and somehow are not powerful enough to get through to the general public.

In this light, it is proposed that the existing structures need to be strengthened and any new and proposed structure to be formalized. The existing and proposed structure must be equipped with more technicians in the field of chemicals management such that they are able to properly educate the public on the hazards that are associated with chemicals usage. The frequency and means of passing information to the public must be consolidated and must be regularized for more efficiency.

2.3.3 Training

Training in the field of chemicals management is given medium to high priority in Seychelles and training is required in many aspects of chemicals management such as policy making, data processing, enforcement & other specific issues of chemical management. Specialized and technical training is also of high priority in Seychelles especially in the field of hazardous waste disposal and chemical risk assessment/management.

The setback is that there is no local training agency available to train personnel in chemical management. In addition, there is a lack of physical training facilities. The newly-set up UNISEY is not yet tapping in the field of chemicals management. As a result, most people dealing with chemicals are not properly trained. The result is improper chemicals management across the board. There are certain groups of chemicals for which there are absolutely no trained personnel in Seychelles capable of dealing with them.

In the midst of all these, some organizations, especially private ones do provide training for their employees as well as employees from other organizations. However, these training do not necessarily cover the required width and depth of chemical management. For example, the Department of Environment has been providing training to LWMA for waste management, especially in the field of hazardous waste management. These training however, are not specialized as they only cover the issue of abiding to certain norms and regulations in place.

2.4 CHEMICAL EMERGENCY PREVENTION AND CONTROL

Chemical accidents and incidents can negatively impact human health and the environment, as well as result in a loss of income for enterprises that experience such accidents. 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 can include chemicals accidents and poisoning prevention, treatment and control.

The categories considered for this assessment are (1) Chemical emergency planning, (2) Chemical Emergency Response (incl. Treatment of Poisoned Persons), (3) Chemical Emergency Follow-up (incl. Remediation of Contaminated Sites and Rehabilitation/Surveillance of Poisoned Persons).

2.4.1 Chemical emergency planning

There is an identified high priority related to the development of a comprehensive plan for chemical emergencies nationally. Issues such as response, treatment and follow-up all need to be taken into consideration when drafting the new plan. The new plan must promote a multi-stakeholder approach to the management of chemical emergencies.

Additionally, government agencies as well as private sector should carry out more emergency drills to test the existing plan as well as the new proposed plan. Other issues such as evacuation plan, budget allocation and rating for level of hazard must also be included in this new plan.

2.4.2 Chemical emergency Response

Additionally, there is an identified high priority related to the development of a comprehensive chemical emergency response plan. Within the private sector, few industries (e.g. SeyBREW, IOT and SEPEC) have their own response plan in place in case of a chemical release or spill. However, this is not necessarily the case within the public sector. The DRDM, being the sole coordinating body that deals with national chemical emergency response are poorly equipped both in physical and human resources.

2.4.3 Chemical emergency follow-up

There are a number of agencies nationally that deals with all types of emergency follow-ups, including chemical emergencies. This is the case despite the fact that some organizations have their own standardized format for collecting information about chemical incidents which include investigative inspection, gathering of information and eyewitness interviews and source identification, but these needs to be further strengthened.

As with the other issues of chemical emergencies, there is a lack of human resources in all of the agencies for proper follow-up after chemical emergencies.

3.0 OPPORTUNITIES FOR PARTNERSHIP PROJECTS

With the identification of priorities for chemicals management issues, a list of possible national priorities for action and opportunities for partnership projects is thus highlighted. The capacity assessment of important and urgent chemicals management issues gives an overall indication of activities and actions which are of highest priority.

In the identification of areas for partnership project, it is to be noted that this CA makes strong recommendations for the putting in place of a chemical management committee or body. This recommendation is in line with activity 166 of the SAICM's GPA list of activities making proposal for the formalization of an Inter-ministerial Coordinating Mechanism (IMCM), which comprises of personnel from various government departments and the private sector. The new body could be a new branch within the Seychelles Department of Environment (DoE) or could be a separate body such as the Seychelles Planning Authority or the EMPS committee, whereby various sectors are represented.

With the identification of other partnership projects, it is thus assumed that the recommendation for the IMCM or new national chemicals management committee/body shall be considered, adopted and put in place prior to the consideration of any of the other partnership projects, as the new body would serve as the engine to drive the projects to successful implementation.

3.1 UPDATING OF EXISTING LEGISLATIONS ON CHEMICALS MANAGEMENT

The very first mandate of the newly set up national chemicals management body, which could be implemented as a project proposal, is to gather, harmonize and update the scattered pieces of legislation that are currently guiding the chemicals management process of Seychelles. In regards to this proposal, there is a substantial amount of work to be undertaken. However, the situation is such that any of the other project proposals highlighted further can only be successfully derived from a sound piece of legislation for their implementation.

Works to update the national chemicals legislation include amending and updating of existing laws and regulations in line with international conventions e.g. new list of POPs, enactment of a Chemicals Bill for the empowering of the new body itself and for Cabinet approval and updating of legislation to cover the entire life-cycle of a particular chemical or group of chemicals.

Under this proposal, other activities are proposed, such as the training of personnel for the effective updating and enforcement of legislation and the setting up of a national monitoring mechanism (task force), empowered by this legislation and for the overseeing of the implementation of this legislation.

3.2 ESTABLISH AN INSTITUTIONAL FRAMEWORK FOR THE COLLECTION & MANAGEMENT OF TECHNICAL DATA.

The current situation is such that there are limited and scattered technical data for chemicals management. The proposal here is for the newly-set up committee for national chemicals management to establish a chemicals data bank. The data shall be for chemicals at all stages on their life cycle. For that purpose, the new committee shall make use of available resources such as data from LWMA, customs and the Pesticides

board. The accuracy and usability of the data shall be based on the composition of the new committee, which calls for sound representative from various sectors.

With regards to the dissemination of such data for use and reference, this project proposes a multi-stakeholder information exchange network between selected and key stakeholders, such as SEPEC, CUSTOMS, LWMA, DRDM etc. These key stakeholders shall have as their responsibility the mandate to update the data from their own institutions and according to the type of chemicals data that they deal with. This shall ensure that data is accurate and up-to-date for use. The committee, by agreement of all (or most) members, shall decide as to which type of audience shall have access to what type and depth of data.

3.3 IMPLEMENTATION OF GHS FOR CLASSIFICATION AND LABELLING OF CHEMICALS

There is a recognized need for the implementation of GHS in Seychelles. There is however uncertainty as to which institution is to take up the leading role into its successful implementation in Seychelles. It is thus proposed that the new chemicals management body/committee puts in place a new legislation putting emphasis on identification and labelling of chemicals on products, by means of the GHS. This is in line with activity proposal 3.1 for the assembling and updating of all national chemicals management legislations. The task force of the new committee, as should be stipulated in the committee's policy, shall ensure that institutions implement the GHS for the type of chemicals that they deal with e.g. SLTA for transportation by road.

3.4 DESIGNATION OF SITE FOR TREATMENT OF CHEMICALS-RELATED AND HAZARDOUS WASTES

Through this proposal, it is recommended that a joint project between government and private sector, especially industries be established for the designation of a site for the processing of chemicals-related and hazardous wastes in Seychelles. As the LWMA is the main agency for waste management in Seychelles, it is recommended that this agency be given the mandate to oversee the management of the new site and facilities. As stated in 3.1, the newly-set up committee with new legislation, is to make provisions through the same for private-sector contribution to the allocating of funds for the management of the new site/facility. Through the new legislation, the LWMA is to be empowered to make use of funds from the private industries through a levy or environmental fee method (polluter-pay-principle), which would be pumped into the LWMA's annual budget through the government's Ministry of Finance for that purpose.

ANNEXES

ANNEX 1 – COMPLETED WORKSHEETS FOR CAPACITY ASSESSMENT

Worksheet 1: Lead Agencies and Stakeholders for Possible Work Areas and Associated Activities

WORK AREAS	ACTIVITIES	LEAD AGENCY / STAKEHOLDER	OTHER PARTICIPATING AGENCIES/STAKEHOLDERS
1. Assessment of national chemicals management to identify gaps and prioritize actions	1, 165, 207	A Newly-set up branch / unit within the Department of Environment	All agencies involved in chemical management (Department of Environment, Public Utilities Corporation (PUC), Seychelles Bureau of Standards (SBS), Ministry of Health, Seychelles Agriculture Agency (SAA); NGOs Priority given to: <ul style="list-style-type: none"> • Ministry of Health • Seychelles Bureau of Standard • Chamber of Commerce • NGOs
2. Human health protection	2-6	Ministry of Health	All agencies involved in chemical management (Department of Environment, Public Utilities Corporation, Seychelles Bureau of Standards, Ministry of Health, Seychelles Agriculture Agency), NGOs Priority given to: <ul style="list-style-type: none"> • Department of Environment • NGOs • Employment Department • Seychelles Agriculture Agency • Workers Unions • World Health Organization
3. Children and chemical safety	7-10, 150-153, 245-246	Ministry of Health	Liaison Unit of Non-Governmental Organizations of Seychelles (LUNGOS), National Council for Children (NCC), Department of Education, Department of Employment Priority given to: <ul style="list-style-type: none"> • Department of Education • Employment Department • NGOs, • National Council for Children • Private Sectors (Industries)

4. Occupational health and safety	11–21, 138–149, 255	Ministry of Health	<ul style="list-style-type: none"> • Employment Department • Workers Unions • Department of Environment • Private Sectors (Industries) • International Labour Organization • All Agencies • Workers Union • Private Sector
5. Implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)	22, 99–101, 168, 248, 250	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Ministry of Industry • Ministry of Agriculture • Seychelles Bureau of Standards • Ministry of Health • Employment Department • Workers Unions • Department of Environment • Private Sectors (Industries) • International Labour Organization
6. Highly toxic pesticides risk management and reduction	23–30, 114–117	Seychelles Agricultural Agency	<ul style="list-style-type: none"> • Seychelles Farmers Association (SFA) • Ministry of Health • Non Government Environment Organization • Department of Community Development • Pesticide Board • Ministry of Industry • Customs Department • Department of Environment • WHO/FAO
7. Pesticide programmes	31	Pesticides Board	<ul style="list-style-type: none"> • Ministry of Industry • Ministry of Health • Department of Environment • Seychelles Agriculture Agency • Ministry Of Health • Land Transport Agency • Seychelles Bureau of Standard • Private Sector (Industries) • Employment Department • Seychelles Agricultural Agency

			<ul style="list-style-type: none"> • Farmers Training School
8. Reduced health and environmental risks of pesticides	32–42	Pesticides Board	<ul style="list-style-type: none"> • Ministry of Health • Ministry of Industry • Department of Environment • Seychelles Agriculture Agency • Ministry of Health • Employment Department, • Workers Unions • Department of Environment • Private Sectors (Industries)
9. Cleaner production	43–46, 118, 238–242	Department of Industry	<ul style="list-style-type: none"> • Environment Department • Energy Commission • Seychelles Bureau of Standard • Ministry of Health • Private Sectors (Industries) • Department of Environment • Chamber of Commerce • Seychelles Agricultural Agency • Seychelles Farmers Association • Small Enterprise Promotion Agency (SENPA) • Seychelles Bureau of Standards • Private Industries
10. Remediation of contaminated sites	47–48, 243	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Seychelles Agricultural Agency • Department of Environment • Ministry of Health • Société de Traitement et d'Assainissement Régional (STAR) Seychelles • Police, • Seychelles Bureau of Standard • Ministry of Foreign Affairs
11. Lead in gasoline	49, 156, 244	Seychelles Petroleum Company (SEPEC)	<ul style="list-style-type: none"> • Seychelles Bureau of Standard • Department of Environment • Ministry of Health • Industries
12. Sound agricultural practices	50–53, 158–160	Seychelles Agricultural Agency	<ul style="list-style-type: none"> • Employment Department • Department of Environment

			<ul style="list-style-type: none"> • Private Sectors (Industries) • NGOs, • FAO • Department of Environment • Seychelles Farmers Association • Ministry of Health
13. Persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs)	54–56	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Seychelles Agricultural Agency • Testing Labs • Ministry of Health • Ministry of Industry • Workers Union • Pesticide Board • Seychelles Bureau of Standard • Private Labs • Public Utilities Corporation
14. Mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level	57–60, 157	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • National Consumer Forum • Association of Consumer Right • Seychelles Bureau of Standards • Ministry of Health • Private Labs • Public Utilities Corporation • Seychelles Agricultural Agency • Testing Lab • NGOs
15. Risk assessment, management and communication	61–67, 127–137, 247	Division of Risk and Disaster Management	<ul style="list-style-type: none"> • Ministry of Health • Seychelles Civil Aviation Authority • Seychelles Agriculture Agency • Seychelles Farmers Association • Public Utilities Corporation • Seychelles Bureau of Standards • Non-Government Environmental Organizations • Department of Environment • Media • Department of Employment • Employment Department • Fire & Rescue Agency

			<ul style="list-style-type: none"> • Seychelles Port Authority • NGOs
16. Waste management (and minimization)	68–73, 161–162, 258–262, 272–273	Landscape and Waste Management Agency	<ul style="list-style-type: none"> • Department of Environment • Société de Traitement et d'Assainissement Régional (STAR) Seychelles • Seychelles Planning Authority • Private Companies and Contractors • NGOs • Ministry of Health • Private Sector (Industries)
17. Formulation of prevention and response measures to mitigate environmental and health impacts of emergencies involving chemicals	74–79, 237	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Seychelles Port Authority • Department of Risk and Disaster Management • Ministry of Foreign Affairs • Ministry of Health • Seychelles Maritime Safety Association (SMSA). • Ministry of Foreign Affairs • Seychelles Coast Guard • Fire & Rescue Agency
18. Research, monitoring and data	80–87	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Laboratories • Ministry of Health • Private Sector (Industries) • Seychelles Agriculture Agency • FAO • University of Seychelles (Research) • NGOs • Department of Information Communication Technology (DICT)
19. Hazard data generation and availability	88–97	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Ministry of Health • Department of Environment • National Statistic Bureau • Industry Department • Media • DICT • Seychelles Agricultural Agency
20. Promotion of industry participation and responsibility	98, 189–192	Department of Industry	<ul style="list-style-type: none"> • Workers Union • Employment Department • Small Enterprise Promotion Agency • Seychelles Chamber of Commerce and Industry (SCCI) • Department of Environment

			<ul style="list-style-type: none"> • Seychelles agriculture agency • Private Sector • FAO
21. Information management and dissemination	102–113, 256	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Ministry Of Health • Private Sector (Industry) • Seychelles Agriculture Agency • FAO • National Statistic Bureau • NGOs • Department of Information Communication Technology (DICT) • All Labs
22. Life cycle	119–123	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • All Labs • Ministry Of Health • Private Sector (Industry) • Seychelles Agriculture Agency/FAO • Education Department • Ministry of Foreign Affairs • NGOs • NATCOF
23. Pollutant release and transfer register (PRTRs) _ creation of national and international registers	124–126, 177–180	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Ministry of Health • Seychelles Agricultural Agency • Customs • Ministry of Health/WHO • Seychelles Agriculture Agency/FAO • Ministry of Foreign Affairs • Regional Organizations • Seychelles Bureau of Standard
24. Education and training (public awareness)	154–155	Ministry of Education	<ul style="list-style-type: none"> • Liaison Unit of Non-Governmental Organizations of Seychelles • NGO's • Department of Environment • Employment Department • Seychelles Broadcasting Cooperation • University of Seychelles • Other Educational Institutions • Ministry of Health/WHO • Seychelles Agriculture Agency/FAO

			<ul style="list-style-type: none"> • NGOs • NATCOF • Seychelles Bureau of Standard
25. Stakeholder participation	163–164	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Community based organizations • Ministry of Health • Seychelles Agricultural Agency • Custom Division • NGO's • Department of Risk and Disaster Management • Ministry of Health • Seychelles Bureau of Standards • Ministry Of Health • Attorney General Office • Private Sector (Industry) • Seychelles Agriculture Agency/FAO • NGOs • Workers Unions
26. Implementation of integrated national programmes for the sound management of chemicals at the national level in a flexible manner	166–167	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • All Stakeholders • Department of Environment • Seychelles Bureau of Standards Ministry of Environment • Ministry of Health • Seychelles Agricultural Agency • Custom Division • Ministry of Foreign Affairs • Regional Organization • Employment Department • Ministry of Health/WHO • Seychelles Agriculture Agency /FAO
27. International agreements	169–176	Ministry of Foreign Affairs	<ul style="list-style-type: none"> • Regional Organizations • Employment Department/ILO • Ministry of Health/WHO • Seychelles Agriculture Agency /FAO • Defense Department • Department of Environment • New Agency with DoE • Focal Agencies for International Conventions
28. Social and economic	181–188, 257	Ministry of Finance	<ul style="list-style-type: none"> • Liaison Unit of Non-Governmental Organizations of

considerations			<p>Seychelles</p> <ul style="list-style-type: none"> • Ministry of Social Development • Department of Community development • Department of Environment • Ministry of Foreign Affairs • Division of Risk and Disaster Management • Employment Department • Seychelles Agriculture Agency /FAO • Private Sector (Industries)
29. Legal, policy and institutional aspects	193–198	Branch of Department of Environment (Legal)	<ul style="list-style-type: none"> • Ministry of Health • New Agency within DoE • Employment Department • Attorney General’s Office • Ministry of Health • Seychelles Agriculture Agency • NGOs
30. Liability and compensation	199	Employment Tribunal	<ul style="list-style-type: none"> • Attorney General’s Office • Parliament • Employment Department • Attorney General Office • Ministry of Health • Seychelles Agriculture Agency • NGOs
31. Stock-taking on progress	200–201	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Ministry of Education • Department of Environment • Ministry of Industry • Ministry of Health • Environmental Department • Regional Organization • Employment Department/ILO • Ministry of Health/WHO • Seychelles Agriculture Agency /FAO • NGOs • All SAICM stakeholders
32. Protected areas	202–203, 253–254	Seychelles National Parks Authority (SNPA)	<ul style="list-style-type: none"> • Ministry of Education • Department of Environment • Non-Government environment organization

			<ul style="list-style-type: none"> • Small Enterprise Promotion Agency • Department of Environment • Seychelles Bureau of Standard • Ministry of Health • Seychelles Agriculture Agency • NGOs (Conservation Society)
33. Prevention of illegal traffic in toxic and dangerous goods	204, 263–271	Department of Home Affairs	<ul style="list-style-type: none"> • Seychelles Port Authority • Seychelles Civil Aviation Authority • Department of Environment • Attorney General’s Office • Customs • Police • Ministry of Health • Attorney General Office • Regional Organizations • Ministry of Foreign Affairs (Convention Secretariat) • Industries Department of Industries • Department of Defense
34. Trade and environment	205, 251–252	Department of Industry	<ul style="list-style-type: none"> • Department of Environment • Small Enterprise Promotion Agency • Finance Department • Customs • World Trade Organization • Industries (Private Sector) • NGOs
35. Civil society and public interest non-governmental organization (NGO) participation	206	Liaison Unit of Non-Governmental Organizations of Seychelles (LUNGOS)	<ul style="list-style-type: none"> • Department of Environment • SEYFA • Workers Unions
36. Capacity-building to support national actions	208–236	A Newly-set up branch / unit within the Department of Environment	<ul style="list-style-type: none"> • Department of Environment • University of Seychelles • National Human Resource Development Council • Department of Environment • Regional SAICM Secretariat & Partners • Private Sponsors

Worksheet 2: Governance Framework Assessment

A.1 Integrating Chemicals Management into National Development Priorities				
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
<p>1.1 Mechanisms for Integrating Chemicals Management into Development Priorities</p> <p>1 (assessment of national chemicals management to identify gaps and prioritize actions), 2 (human health protection), 3 (children and chemical safety), 28 (social and economic considerations), 20 (promotion of industry participation and responsibility), 34 (trade and environment), 35 (civil society and public-interest NGO participation)</p>	Medium	<p>Strengths</p> <ul style="list-style-type: none"> - Framework exists (EMPS), but is not necessarily functioning efficiently <p>Gaps</p> <ul style="list-style-type: none"> - Lack of integrated approach with existing programme between different organisations (inadequate communication). - Outdated legislation. - Lack of enforcement of existing legislation. - Inadequate trained personnel in all aspect of chemical. - No continuity in chemical programme following turnover of personnel - No viable chemical database available 	<ul style="list-style-type: none"> - Promote an integrated chemical legislation to cater for the complete chemical lifecycle. - Build capacity on enforcement of legislation - Designate an authority/agency to manage complete chemical lifecycle (e.g. new IMCM). - Empower the personnel dealing with chemical with the necessary knowledge for efficiency in delivering of their duties. - Develop a mechanism for the collection and safekeeping of data on chemical for follow-up and decision making. i.e. an information exchange mechanism 	High

A.2 A Sound Institutional and Programmatic National Framework

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
<p>2.1 Establishing an Inter-institutional Coordination Mechanism</p> <p>20 (promotion of industry participation and responsibility), 21 (information management and dissemination), 22 (life cycle), 25 (stakeholder participation), 26 (implementation of integrated programmes for the sound management of chemicals), 27 (international agreements), 28 (social and economic considerations), 29 (legal, policy and institutional aspects)</p>	Medium	<p>Strengths</p> <ul style="list-style-type: none"> - Established SAICM Secretariat office - Developed National Chemicals Profile - An existing Pesticides Board <p>Gaps</p> <ul style="list-style-type: none"> - There is a lack of well-coordinated effort with respect to dealing with chemicals in their entire lifecycle. - Policy such as import permit exists but is not properly enforced. - Lack of cooperation among relevant Ministries 	<ul style="list-style-type: none"> - Create one reference body i.e. an agency/authority to deal with chemicals – IMCM - Have a committee with both governmental and private sector for consultation on chemical issues--IMCM 	High
<p>2.2 Information Exchange Mechanisms</p> <p>15 (risk assessment, management and communication), 18 (research, monitoring and data), 21 (information management and dissemination), 23 (PRTR), 24 (education and training), 25 (stakeholder participation),</p>	Low	<p>Strengths</p> <ul style="list-style-type: none"> - Agency exists to safe keep national data (NSB) - Ministries and organisations have access to web information 	<ul style="list-style-type: none"> - Create national chemical database for information sharing and decision making. - Training and education in the whole chemical lifecycle. 	High

<p>26 (implementation of integrated programmes), 27 (international agreements), 31 (stock-taking on progress), 35 (NGO participation)</p>		<ul style="list-style-type: none"> - Training institutions and international arrangements exist for training possibilities <p>Gaps</p> <ul style="list-style-type: none"> - The national database does not collect and safe keep information on chemicals - There is no formal educational structure nationally for training in chemical - Lack of funds to finance training and research in chemical issues - Lack of an integrated and proactive approach to the management of chemical in their entire lifecycle. 	<ul style="list-style-type: none"> - Facilitate online access to database for chemicals and their management. - Improve chemical information sharing between governmental and private sectors - Empower either NSB or new agency for the promotion of an information exchange mechanism 	
<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>Low</p>	<p>Strengths</p> <ul style="list-style-type: none"> - National Chemical Profile has been drafted - Works on the capacity assessment report is underway <p>Gaps</p> <ul style="list-style-type: none"> - Require greater participation from relevant agencies and Private sector - Stakeholders and private sector support is lacking. - Insufficient local research is available to inform the policy making process and thus setting of national priorities. 	<ul style="list-style-type: none"> - Establish coordinating mechanism to set priorities. - Encourage greater research into local environmental issues - Enforce and implement existing policies as baseline to set priorities 	<p>Medium</p>
<p>2.4 Programme and Project Planning</p> <p>1 (assessment of national chemicals management to identify gaps and</p>	<p>Medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> - Government commitment 	<ul style="list-style-type: none"> - Enforce existing system already in place - Implement better coordination between 	<p>Medium</p>

<p>prioritize actions), 26 (implementation of integrated national programmes), 31 (stock-taking on progress)</p>		<p>- Skilled personnel are available</p> <p>Gaps</p> <ul style="list-style-type: none"> - No proper chemical management system in place and the existing bits and pieces are not properly coordinated - Shortage of human resources to execute chemicals programmes 	<p>stakeholders for an integrated approach to existing plan/system</p> <ul style="list-style-type: none"> - A comprehensive legislative framework for chemical must be put in place for action - Provide adequate staff to enforce and sustain chemical programme and project 	
<p>2.5 Monitoring and Evaluation</p> <p>26 (implementation of integrated national programmes), 31 (stock-taking on progress)</p>	<p>Medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> - Some monitoring and evaluation are done by the Pesticides Board and governmental Department <p>Gaps</p> <ul style="list-style-type: none"> - Insufficient human expertise and resources for effective monitoring and evaluation - Lack facilities and adequate equipment for on-site and laboratory monitoring - No comprehensive chemical regulations for reference 	<ul style="list-style-type: none"> - Implement comprehensive national chemicals programme that would encompass all aspects of sound chemical management. This could be achieved with an authority/agency taking up chemical issues. - Have a comprehensive chemicals regulation or revise existing regulations - Train personnel in all aspect of sound chemicals management - Upgrade capacity of existing monitoring establishment to be able to test for broader range of chemicals 	<p>High</p>

<p>2.6 Establishing Effective Financing Mechanisms</p> <p>20 (Promotion of industry participation and responsibility), 26 (implementation of integrated national programmes), 27 (international agreements), 28 (social and economic considerations), 30 (liability and compensation)</p>	<p>Medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> - Environment Levy existed - Polluters are liable to be fined under the EPA - Affiliations with some donors organisation <p>Gaps</p> <ul style="list-style-type: none"> - Not much financial backing from government budget to fund chemicals management programme - Reluctant or lack of awareness of the procedures to access global and regional funds 	<ul style="list-style-type: none"> - Effective budget for chemical management programme in the national budget - Use environmental levy for its stated purpose - Use all available opportunities to boost capacity building in chemicals management especially through international project grant donors 	<p>Medium</p>
<p>2.7 Promoting Participation of Regional Authorities</p> <p>20 (Promotion of industry participation and responsibility), 25 (stakeholder participation), 26 (implementation of integrated national programmes), 35 (NGO participation)</p>	<p>Medium</p>	<p>Strengths</p> <ul style="list-style-type: none"> - Some cooperation does exist especially in the disposal of waste oil and scrap metal within the region <p>Gaps</p> <ul style="list-style-type: none"> - There is no widespread knowledge of activities or mechanism in place for sound chemical management for the regional - Lack of synergy at regional level 	<p>Encourage concerted effort from both governmental and private sector to promote regional participation of relevant stakeholders in chemical management</p>	<p>Medium</p>

A.3 Legislation and Enforcement				
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
<p>3.1 Legislation, Regulations, Policies, and Enforcement Capacities – General</p> <p>1 (assessment of national chemicals management to identify gaps and prioritize actions), 26 (implementation of integrated national programmes), 27 (international agreements), 29 (legal, policy and institutional aspects)</p>	Medium	<p>Strengths</p> <ul style="list-style-type: none"> - Legislation is available but it is specific to only certain categories of chemical. <p>Gaps</p> <ul style="list-style-type: none"> - There is overlapping of legislation. - There is an absence of legislation to govern some aspect of chemicals lifecycle - Manpower issues – limited technical and human resources for enforcement - Existing legislations need to be reviewed 	<ul style="list-style-type: none"> - Develop a comprehensive chemical law that would take into account all stages of chemical lifecycle. - Training of enforcement officers in chemicals management - Review and update existing legislation 	High
<p>3.2 Pesticides Legislation and Policies</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), 13 (POPs), 28 (social-eco considerations), 34 (trade and env.)</p>	Medium	<p>Strengths</p> <ul style="list-style-type: none"> - Existing Pesticides Board <p>Gaps</p> <ul style="list-style-type: none"> - Pesticides Act outdated - Insufficient human resources available for the implementation of activities related to pesticides - There is little monitoring of users. 	<ul style="list-style-type: none"> - Review and update Pesticide Act - Boost Pesticides Board 	high
<p>3.3 Policies for Pollution Prevention and Cleaner Production</p> <p>9 (cleaner production), 13 (POPs), 14 (Mercury and other chemicals of global concern), 16 (waste management), 20</p>	Medium	<p>Strength</p> <ul style="list-style-type: none"> - Government advocates for the adoption of cleaner production alternatives 	<ul style="list-style-type: none"> - Promote benefits of environmentally friendly systems as an incentive. - Have laws governing and advocating for the adoption of cleaner production methods 	Medium

<p>(promotion of industry participation and responsibility), 22 (life cycle), 28 (socio-economic considerations), 34 (trade and environment)</p>		<p>Gaps</p> <ul style="list-style-type: none"> - No legislation for the adoption of cleaner production other than international commitment to certain obligation under signed protocols/conventions - There is a lack of incentives for using other safer techniques 	<ul style="list-style-type: none"> - Develop incentives for people to improve techniques and use environmentally friendly chemicals. - Build capacity in human resource to improve monitoring and identify problems. 	
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A.4 Participation of the Private Sector and Civil Society in Chemicals Management

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
4.1 Stakeholder Participation 20 (promotion of industry participation and responsibility), 25 (stakeholder participation), 35 (NGO participation)	Medium	Strengths - Government policy provides opportunities for stakeholder participation Gaps - There is limited participation/involvement from the private sector	- There should be a chemicals management committee involving government and private sector - Periodic meetings could be used to engage greater active participation	Medium
4.2 Voluntary Initiatives in the Private Sector 20 (promotion of industry participation and responsibility)	Medium	Strengths - There have been a number of government and private sector driven initiatives especially in agriculture and pest control Gaps - No much motivation to encourage such initiative in private sector	- The establishing of better government commitment to initiatives by the private sector - create mechanisms for private sector to voluntarily contribute to capacity building especially for training of workers involved in chemical	High
4.3 Capacities of Civil Society 25 (stakeholder participation), 35 (NGO participation), 36 (capacity building to support national actions)	Medium	Strength - Adequately-organised civil society organization Gaps - Lack of adequate knowledge in chemical issues - There are not many NGOs involved in chemicals management activities	- Create awareness of chemical related issues in the general population in order to have an impact on the use and control of chemical - strengthen capacity of Civil Societies in chemical management by providing training opportunities to NGOs.	High

		- Limited financial support allocated chemical issues.	
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A.5 International Cooperation Related to 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
5.1 International Cooperation in Implementing Chemicals Management Related MEAs 5 (GHS), 13 (POPs), 14 (mercury and other chemicals of global concern), 27 (international agreements), 36 (capacity building to support national actions)	Medium	Strengths - Signatory to many international conventions Gaps - There is limited capacity to implement MEAs effectively - Signed on to MEAs without capacity to do what is required to maintain them	- Better coordinate activities related to signed MEAs so that the country does not lose out on opportunities for capacity building in chemical related issues – could be taken up by IMCM	High
5.2 Studying and Resolving Chemicals Management Issues that have Transboundary Dimension 36 (capacity building to support national actions)	Low	Strengths - There are national and international agreements for transportation of chemicals. Gaps - There is a lack of technical capacity and knowledge in chemicals related issues - No proactive approach by both government and private sector - Limited capacity to conduct study and resolved chemicals management issues	- Train and offer technical assistance to resolve chemicals management issues - Build capacity to be able to identify and harmonize chemicals management issues	High

Worksheet 3: Identification of Important Chemical Management Issues

B.1 Information Generation					
Stakeholder Input Categories (and related SAICM Work Areas)	Stakeholder Group Industry (SEPEC, PUC, SeyBREW, IOT, Chelle Medical and PENLAC).		Stakeholder Group NGOs/Business (LUNGOS, SCAA, SIF, Tourism Establishments, Hairdressers, Beauticians, Gardeners, Pest Control Handlers, NATCOF, Manufacturers of chemical products, and Construction Companies)		Priority Rating for Chemicals Management
	Priority High / Medium / Low	Reason(s) for Judgement	Priority High / Medium / Low	Reason(s) for Judgement	Potential Priority for Development Planning
1.1 Chemical Risk Assessment (incl. Hazard Identification & Exposure Assessment) 5 (GHS), 18 (research monitoring and data), 19 (hazard data generation and availability), 2 (human health protection), 3 (children and chemical safety), 15 (risk assessment), 18 (research monitoring and data), 23 (PRTR)	High	Workers need to be more aware of the risks and how these impacts on their health	High	Limited training of users regarding risk assessment	High priority to develop a system to gather and interpret data by Government.
		There is a lack of research and monitoring being undertaken		Poor public awareness on dangers through direct use/contact with chemicals also in residues accumulated in food products	High priority by consensus for Industries and Business/NGOs.
		There is no system in place to gather and deduce existing data from industries		Lack of chemical data, information and records	High
		Risk assessments are conducted in the workplaces. SeyBREW, SEPEC and IOT also conduct risk reduction due to their affiliation with other international organizations		Lack of proper chemical monitoring system	
				There is a lack of research and monitoring being undertaken	
				No available data	

<p>1.2 Research and Laboratory Capacities</p> <p>18 (research monitoring and data), 19 (hazard data generation and availability)</p>	<p>Medium</p>	<p>Most organisations have their own laboratory which is used to ensure that their products meet international standards (e.g. ISO).</p> <p>High level of expertise.</p>	<p>Medium</p>	<p>No laboratory. They make use of available data from other research institutions.</p>	<p>Medium priority by consensus</p>

B.2 Risk Management for Chemical Safety

Stakeholder Input	Stakeholder Group Industry (SEPEC, PUC, SeyBREW, IOT, Chelle Medical and PENLAC).		Stakeholder Group NGOs/Business (LUNGOS, SCAA, SIF, Tourism Establishments, Hairdressers, Beauticians, Gardeners, Pest Control Handlers and Construction Companies).		Priority Rating for Chemicals Management
Categories <i>(and related SAICM Work Areas)</i>	Priority High / Medium / Low	Reason(s) for Judgement	Priority High / Medium / Low	Reason(s) for Judgement	Potential Priority for Development Planning
2.1 Adequate Legislation 29 (legal, policy and institutional aspects), 22 (life cycle), 30 (liability and compensation)	High	Legal instruments drafted by government are few, outdated, fragmented and do not address the complete life cycle management of chemicals and related wastes, but good collaboration exists between the public and private sectors to implement the various policies and programmes There are overlaps in the implementation of chemical legislations between ministries and agencies Enforcement remains a challenge	High	Legal instruments drafted by government are few, outdated, fragmented and do not address the complete life cycle management of chemicals and related wastes, but good collaboration exists between the public and private sectors to implement the various policies and programmes. There are overlaps in the implementation of chemical legislations between ministries and agencies Enforcement remains a challenge	High priority by consensus. High priority
2.2 Promote Safer Alternatives 6 (highly toxic pesticides risk management and reduction), 7 (pesticides programmes),	High	Very few industries (e.g. SEPEC) have well established safety procedures in place. Structure exists, but not updated to meet current trends and development needs	High	There are no methods to promulgate safety or preventive measures in the workplace	High priority by consensus

<p>8 (reduced health and environmental risks of pesticides), 12 (sound agricultural practices), 13 (PBTs, POPs), 14 (mercury, and other chemicals of global concern, etc.), 28 (social-eco considerations), 34 (trade and env.)</p>		<p>Insufficient awareness programmes.</p>			
<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>	<p>High</p>	<p>Internal policies are available within. These reflect international standards and standards set up by local laws/legislation.</p> <p>No proper facilities to treat, manage and dispose of hazardous waste</p>	<p>High</p>	<p>Need to manage the ways in which chemicals are used & sold Lack awareness on the effects caused by toxic and/or hazardous chemicals in businesses, communities, and households</p> <p>There is a lack of adequate legislation and mechanism to control the importation, distribution and use of certain toxic chemicals.</p> <p>No proper facilities to treat, manage and dispose of hazardous waste</p>	<p>High priority by consensus</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>	Medium	<p>Carry out environmental monitoring (soil, water sources) in agricultural regions</p>	Medium	<p>Institutions using pesticides are not aware of its effects on the environment</p>	Medium priority by Government
		<p>These issues are mentioned in the Act, but the Act is outdated (1996).</p>		<p>No proper handling and Storage facilities</p> <p>Carry out environmental monitoring (soil, water sources) in agricultural regions</p>	Medium priority
<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), 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),</p>	High	<p>The SEPEC, SeyBREW and IOT have very good and adequate storage facilities. Such facilities are quite poor in other industries</p>	High	<p>The general public needs to be educated on the dangers involved on household chemicals</p>	High priority for Government and NGOs
		<p>No standard and recommended practice for handling and transportation guidelines or policy</p> <p>Existing laws are not implemented</p> <p>Most importers do not have proper storage facilities</p>		<p>No standard and recommended practice for handling and transportation guidelines or policy</p> <p>Most importers do not have proper storage facilities</p>	High priority

<p>24 (education and Training), 26 (integrated national programmes), 27 (international agreements)</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>New legislation to include chemical safety in the workplace</p> <p>Protocols and enforcement need to be increased</p> <p>Most of the organizations need to put greater emphasis on contingency plans</p>	<p>High</p>	<p>New legislation to include chemical safety in the workplace</p> <p>Protocols and enforcement need to be increased</p> <p>. MSDS should be in place so that workers can easily have access to them</p> <p>No chemical contingency plans available</p>	<p>Medium priority for Industry.</p> <p>High priority for NGO and private organizations.</p> <hr/> <p>Medium priority</p>
<p>2.7 Cleaner Production</p> <p>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</p>	<p>High</p>	<p>Need to be assessed</p>	<p>High</p>	<p>Need to be assessed</p>	<p>High priority by consensus</p> <hr/> <p>Medium priority</p>

<p>industry participation and responsibility), 22 (life cycle), 28 (socio-economic considerations), 34 (trade and environment)</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>	<p>High</p>	<p>No hazardous waste management facility Lack of information related to waste generation</p>	<p>High</p>	<p>No hazardous waste management facility Lack of information related to waste generation</p>	<p>High priority by consensus. High priority</p>

B.3 Information Exchange, Education and Training

Stakeholder Input	Stakeholder Group Industry (SEPEC, PUC, SeyBREW, IOT, Chelle Medical and PENLAC).		Stakeholder Group NGOs/Business (LUNGOS, SCAA, SIF, Tourism Establishments, Hairdressers, Beauticians, Gardeners, Pest Control Handlers and Construction Companies)		Priority Rating for Chemicals Management
Categories <i>(and related SAICM Work Areas)</i>	Priority High / Medium / Low	Reason for Judgement	Priority High / Medium / Low	Reason for Judgement	Potential Priority for Development Planning
3.1 Information Exchange 15 (risk assessment, management and communication), 18 (research, monitoring and data), 19 (hazard data generation and availability), 20 (promotion of industry participation and responsibility), 21 (information management and dissemination), 23 (PRTR), 24 (education and Training), 25 (stakeholder participation), 26 (integrated national programmes), 27 (international agreements), 31 (stock-taking on progress), 33 (prevention of illegal traffic), 35 (NGO participation)	Medium	Inadequate risk assessment management Most of the data are not systematically gathered or stored for proper analysis	Medium	Most of the data are not systematically gathered or stored for proper analysis	Medium priority by consensus Medium priority

<p>3.2 Education/Awareness Raising</p> <p>15 (risk assessment, management and communication), 21 (information management and dissemination), 23 (PRTR), 24 (education and training), 25 (stakeholder participation), 35 (civil society and NGO participation)</p>	<p>Medium</p>	<p>Public knowledge & information about chemicals & their impact should be promoted.</p> <p>Structure needs to be formalized and strengthened</p>	<p>High</p>	<p>Limited number of public sensitization / awareness-raising programmes</p> <p>Lack of education/awareness on the effects caused by chemical hazards & use in business, communities & households.</p>	<p>Medium priority for Industry.</p> <p>High priority for NGO and businesses.</p> <hr/> <p>Medium priority</p>
<p>3.3 Training</p> <p>4 (occupation health and safety), 6 (highly toxic pesticides risk management and reduction), 8 (reduced health and environmental risks of pesticides), 15 (risk assessment, management and communication), 21 (information management and dissemination), 24 (education and training)</p>	<p>Medium</p>	<p>Training required in policy making, data processing, enforcement & other specific issues of chemical management</p> <p>Training required in Hazardous waste disposal</p> <p>There is no local training agency to train workers in chemical management e.g. types of chemical, how to handle etc.</p> <p>Some organizations provide training for their employees as well as employees from other organizations</p>	<p>High</p>	<p>Most people dealing with chemicals are not properly trained.</p> <p>No structure in place to train business and certified business before handling chemical for commercial purpose.</p> <p>There is no local training agency to train workers in chemical management e.g. types of chemical, how to handle etc.</p>	<p>High priority for Government.</p> <p>Medium priority for NGO and businesses</p> <hr/> <p>Medium priority</p>

B.4 Chemical Emergency Prevention and Control

Stakeholder Input	Stakeholder Group Industry (SEPEC, PUC, SeyBREW, IOT, Chelle Medical and PENLAC).		Stakeholder Group NGOs/Business (LUNGOS, SCAA, SIF, Tourism Establishments, Hairdressers, Beauticians, Gardeners, Pest Control Handlers and Construction Companies)		Priority Rating for Chemicals Management
Categories <i>(and related SAICM Work Areas)</i>	Priority High / Medium / Low	Reason for Judgement	Priority High / Medium / Low	Reason for Judgement	Potential Priority for Development Planning
4.1 Chemical Emergency Planning 15 (risk assessment, management and communication), 17 (formulation of prevention and response to mitigate environmental and health impacts of emergencies involving chemicals), 20 (promotion of industry participation and responsibility), 25 (stakeholder participation), 35 (civil society and NGO participation)	High	Need to develop a chemical response plan Few industries (e.g. SeyBREW, IOT and SEPEC) have their own response plan in place in case of a chemical release or spill Communities are not involved Lack of chemical emergency plan Need to identify all institutions that deal with chemical, type, quantity, storage conditions, disposal No chemical emergency contingency plan	High	Lack of chemical emergency plan Need to identify all institutions that deal with chemical, type, quantity, storage conditions, disposal No chemical emergency contingency plan	High priority by consensus High priority

<p>4.2 Chemical Emergency Response (incl. Treatment of Poisoned Persons)</p> <p>2 (human health protection), 3 (children and chemical safety), 4 (occupational health and safety), 5 (GHS)</p>	High	<p>Lack of chemical Emergency Response. Lack of technical expertise to deal with chemical response.</p> <p>Capacity building required in health sector and response to emergency in general.</p> <p>No decontaminated facility.</p> <p>Need to develop a chemical emergency response. The use of MSDS should be encouraged as a chemical response procedure; they contain fire fighting measures and first aid measures.</p> <p>Some organizations have equipment to deal with chemical emergencies.</p>	High	<p>Lack of chemical Emergency Response. Lack of technical expertise to deal with chemical response.</p> <p>Capacity building required in health sector and response to emergency in general.</p> <p>No decontaminated facility.</p> <p>Need to develop a chemical emergency response. The use of MSDS should be encouraged as a chemical response procedure; they contain fire fighting measures and first aid measures.</p> <p>Some organizations have equipment to deal with chemical emergencies</p>	High priority by consensus.
		High priority			
<p>4.3 Chemical Emergency Follow-up (incl. Remediation of Contaminated Sites and Rehabilitation/Surveillance of Poisoned Persons)</p> <p>10 (remediation of contaminated sites), 30 (liability and compensation), 31 (stock taking on progress)</p>	Medium	<p>Some organizations have their own standardized format for collecting information about chemical incidents which include investigative inspection, gathering of information and eyewitness interviews and source identification, but these needs to be further strengthened</p> <p>Some organizations have structures for incident/accident investigation (IOT & SeyBREW)</p>	High	<p>There is a lack of proper equipment and training</p>	Medium priority for industries and High priority for NGOs and businesses
		Medium priority			

Worksheet 4: Capacity Assessment of Important and Urgent Chemicals Management Issues

Priority Chemicals Management Issues	Capacity Strengths and Gaps	Possible Actions	Concerned Actors	Urgency & Importance of Taking Action
Technical Data	Limited technical data available	Establish an institutional framework for the collection & management of data. Training of personnel for the harmonization method of data collection.	Newly-set up authority (IMCM or new branch within DoE) All agencies involved in chemicals management.	High
	Existing data is inaccessible	Setting up of a centralized/accessible system whereby anyone concern can get easy access to information on chemicals.	NSB Seychelles Bureau of Standards. Pesticides Board, New authority	High
Classification & Labelling	Not being done on a national basis	Implementation of GHS for classification & labelling of chemicals.	All stakeholders (Attorney General, Department of Environment, Ministry of Health, Licensing Authority).	High
	Lack of classification & labelling at the workplace.	New legislation putting emphasis on identification of chemicals on products.	All stakeholders	High
	International standards or regulations are not implemented.	National laws should be updated according to international standards.	Government.	High
	Lack of awareness of international standards (namely small businesses).	Access to internet to people working with chemicals and labelling.	SENPA and SIB.	High
Identification of Areas of chemicals concentration & contaminated sites	Information exists but need to be compiled & distributed to relevant agencies.	Adopt current international standards. Public Awareness of contaminated sites.	All Stakeholders.	High

	Lack of proper monitoring system.	New agency should set up new guidelines and policies	Government.	High
	Lack of equipment and trained personnel.	Reinforce monitoring capacity in key Institutions.	Department of Environment Ministry of Health Seychelles Bureau of Standards. Department of Employment	Medium
	Lack of standards (EQO).	Establish EQO		
Chemicals Disposal	Lack of proper classification of waste before disposal.	Public awareness in classification of different types of waste before disposal.	Government Community, NGOs	Medium
	Lack of a hazardous waste disposal site.	Designate a site for treatment & disposal. Revamp new policy to have a "Polluter-pay-principle".	Land Waste Management Agency Department of Environment Societe (STAR) Land Transport Agency Police	High
	No proper identification/labelling of waste before been disposed.	Full implementation of international standards and recommended practice for handling and management of hazardous wastes.	Government. Department of Environment	High
	Existing agencies are not equipped with facilities to managed or store hazardous wastes.	Set up policy and guidelines on how to manage and transport hazardous wastes.	All agencies involved in chemical management. All Stakeholders	Medium
Education/Awareness Programs	Limited number of trained educators.	Increase the number & scope of educational programs.	New Authority Department of Risk and Disaster Management Department of	High

			Employment Health Promotion	
	Limited coverage of usage of household chemicals.	Have regular awareness programmes on the effects of misuse of household chemicals.	Department of Environment Media	Medium
	Poor sensitization in the labour sector.	Adoption of Safety Manual.	New Agency	Medium
Response to chemical emergencies	System not formalized.	Establish a National Response Plan for chemical emergencies. Set up a HAZMAT response team.	Department of Risk and Disaster Management SFRSA Other first responder agencies.	High
	No simulation programmes for chemical emergencies.	Training for personnel in required organization.	Department of Risk and Disaster Management SFRSA Other first responder agencies.	High
Institutional and administrative arrangements	Lack of a central body that regulates the handling and management on a national basis	Set up a new body/authority. Develop and implement a national framework. Establish a sound surveillance system for chemicals management.	Government. Ministry of Environment, Natural Resources and Transport.	High
Legislation	Inadequate legislation	Gather and harmonize scattered pieces of legislation Amend and update existing laws and regulations in line with international conventions. Enactment of a Chemical bill Address the complete life cycle of chemicals.	Attorney General's Office. All stakeholders	High

	Implementation of legislation	Strengthen synergy between civil and private sectors. Set up national monitoring and evaluation mechanisms. Train personnel for more effective enforcement of legislation	New Agency. All stakeholders	High
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ANNEX 2 – LIST OF SAICM GPA ACTIVITIES

ACTIVITIES UNDER CATEGORY 1: RISK REDUCTION

1. Develop national profiles and implement action plans for sound management of chemicals.
2. Fill gaps in abilities to access, interpret and apply knowledge.
3. Develop and use new and harmonized methods for risk assessment.
4. Develop better methods and criteria for determining the impact of chemicals on human health (and thereby on the economy and sustainable development), for setting priorities for action, for the detection of chemicals and for monitoring the progress of SAICM.
5. Build capacities of countries to deal with poisonings and chemical incidents.
6. Include a range of preventive strategies.
7. Develop guidance materials to assist in the preparation of initial national assessments of children's environmental health and the identification of priority concerns; develop and implement action plans to address those priority concerns.
8. Establish needed infrastructure for research that will reduce uncertainty in risk assessment.
9. Develop mechanisms to share and disseminate information that can be used to reduce uncertainty in risk assessment.
10. Eliminate as a priority any child labour that involves hazardous substances.
11. Develop harmonized data elements on occupational health and safety for recording relevant workplace data in company-specific databases.
12. Consider legislation to protect the health of workers and the public, covering the entire spectrum of work situations in which chemicals are handled, including such sectors as agriculture and health.
13. Develop a system of health and environmental impact assessment in chemicals handling and incorporate it in occupational safety and health programmes.
14. Develop, enhance, update and implement ILO safe work standards, ILO guidelines on occupational safety and health management system (ILO-OSH 2001) and other non-binding guidelines and codes of practice, including those particular to indigenous and tribal populations.
15. Develop national occupational safety and health policies containing specific text on chemicals management, with a clear emphasis on preventive measures, requiring that workplace risk assessments and hazard prevention measures be carried out based on the recognized hierarchy of prevention and control measures
16. Establish integrated programmes for all public health and safety practitioners and professionals, with an emphasis on identification, assessment and control of occupational chemical risk factors in all workplaces (such as industrial, rural, business and services).
17. Promote exchange of information on successful experiences and projects related to chemical occupational safety and health.
18. Develop and disseminate chemical safety data sheets to assist enterprises in protecting their workers.
19. Avoid worker exposure through technical measures where possible; provide appropriate protective equipment; improve the acceptance of wearing protective equipment and stimulate further research on protective equipment to be used under hot and humid conditions.
20. Protect workers from chemicals causing asbestosis, other asbestos-related diseases and occupational cancers, those chemicals included in the Rotterdam Convention because of their occupational risks and other hazardous chemicals based on their occupational health risks.
21. Develop guidance on a harmonized approach to the setting of occupational exposure limits.
22. Establish roles and responsibilities of employers, employees, chemical suppliers and Governments in the implementation of GHS.
23. Encourage full implementation of the FAO International Code of Conduct on the Distribution and Use of Pesticides.
24. Give appropriate priority to pest and pesticide management in national sustainable development strategies and poverty reduction papers to enable access to relevant technical and financial assistance, including appropriate technology.
25. Base national decisions on highly toxic pesticides on an evaluation of their intrinsic hazards and anticipated local exposure to them.
26. Prioritize the procurement of least hazardous pest control measures and use best practices to avoid excessive or inappropriate supplies of chemicals.
27. Promote development and use of reduced-risk pesticides and substitution for highly toxic pesticides as well as effective and non-chemical alternative means of pest control.

28. Distinguish programmes that have achieved cost effective, significant and sustainable risk reductions from those which have not and incorporate evaluation mechanisms and measures of progress in future programmes.
29. Promote integrated pest and integrated vector management.
30. Encourage industry to extend product stewardship and to withdraw voluntarily highly toxic pesticides which are hazardous and cannot be used safely under prevalent conditions.
31. Establish pesticide management programmes to regulate the availability, distribution and use of pesticides and, where appropriate, consider the FAO Code of Conduct on the Distribution and Use of Pesticides.
32. Implement a pesticide registration and control system which controls risks from the initial point of production/formulation to the disposal of obsolete products or containers.
33. Review pesticides available on the market to ensure their use in accordance with approved licenses.
34. Establish health surveillance programmes.
35. Establish poisoning information and control centres and systems for data collection and analysis.
36. Provide extension and advisory services and farmer organizations with information on integrated pest management strategies and methods.
37. Ensure proper storage conditions for pesticides at the point of sale, in warehouses and on farms.
38. Establish a programme to monitor pesticide residues in food and the environment.
39. Make less toxic pesticides available for sale and use.
40. License and sell pesticide products in containers that are ready to use, unattractive for re-use, inaccessible to children and labeled with clear, unambiguous directions that are understandable for local users.
41. Ensure that agricultural workers are appropriately trained in safe application methods and that personal protections are sufficient to allow the safe use of products.
42. Promote the availability and use of personal protective equipment.
43. Encourage sustainable production and use and promote the transfer, implementation and adoption of pollution prevention policies and cleaner production technologies, in particular best available techniques and best environmental practices (BAT/BEP).
44. Promote the development and use of products and processes that pose lesser risks.
45. Incorporate the concept of pollution prevention in policies, programmes and activities on chemicals management.
46. Support the further development and adoption of FAO and WHO specifications on pesticides.
47. Identify contaminated sites and hotspots and develop and implement contaminated site remediation plans to reduce risks to the public and to the environment.
48. Ensure the remediation of contaminated sites, including those caused by accidents.
49. Eliminate lead in gasoline.
50. Develop schemes for integrated pest management.
51. Provide training in alternative and ecological agricultural practices, including non-chemical alternatives.
52. Promote access to lower-risk or safer pesticides.
53. Undertake development of pest- and disease-resistant crop varieties.
54. Promote the use of safe and effective alternatives, including non-chemical alternatives to organic chemicals that are highly toxic, persistent and bioaccumulative.
55. Prioritize for assessment and related studies groups of chemicals posing an unreasonable and otherwise unmanageable risk for human health and the environment, which might include: persistent bioaccumulative and toxic substances, (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous system; and persistent organic pollutants (POPs).
56. Articulate an integrated approach to chemicals management taking into account multilateral environmental agreements and strategies that target a broad spectrum of chemicals.
57. Promote reduction of the risks posed to human health and the environment, especially by lead, mercury and cadmium, by sound environmental management, including a thorough review of relevant studies such as the UNEP global assessment of mercury and its compounds.
58. Consider the need for further action on mercury, considering a full range of options, including the possibility of a legally binding instrument, partnerships and other actions (based on UNEP Governing Council decision 23/9).
59. Take immediate action to reduce the risk to human health and the environment posed on a global scale by mercury in products and production processes (based on UNEP Governing Council decision 23/9).
60. Consider the review of scientific information, focusing especially on long-range environmental transport, to inform future discussions on the need for global action in relation to lead and cadmium, to be presented to the Governing Council at its twenty-fourth session in 2007 (based on UNEP Governing Council decision 23/9).
61. When assessing risk to the general population, consider whether certain segments of the population (i.e., children, pregnant women) have differential susceptibility or exposure.

62. Implement warning systems with regard to the risks posed by the production, use or disposal of chemicals.
63. Apply science-based approaches, including those from among existing tools from IOMC organizations on, inter alia, test guidelines, good laboratory practices, mutual acceptance of data, new chemicals, existing chemicals, tools and strategies for testing and assessment.
64. Encourage the development of simplified and standardized tools for integrating science into policy and decision-making relating to chemicals, particularly guidance on risk assessment and risk management methodologies.
65. Establish knowledge on risk assessment procedures, building on existing products such as those generated by OECD, including, inter alia, guidance on the OECD High Production Volume Chemicals hazard assessments, (Quantitative Structure Activity Relationship((Q)SAR) Analysis, review of pesticide hazards and fate studies, emission exposure scenario documents, information exchange and coordination mechanisms.
66. Establish programmes for monitoring chemicals and pesticides to assess exposure.
67. Apply life-cycle management approaches to ensure that chemicals management decisions are consistent with the goals of sustainable development.
68. Facilitate the identification and disposal of obsolete stocks of pesticides and other chemicals (especially PCBs), particularly in developing countries and countries with economies in transition.
69. Establish and implement national action plans with respect to waste minimization and waste disposal, taking into consideration relevant international agreements and by using the cradle-to-cradle and cradle-to-grave approaches.
70. Prevent and minimize hazardous waste generation through the application of best practices, including the use of alternatives that pose less risk.
71. Implement the Basel Convention and waste reduction measures at source and identify other waste issues that require full cradle-to-cradle and cradle-to-grave consideration of the fate of chemicals in production and at the end of the useful life of products in which they are present.
72. Carry out measures that will inform, educate and protect waste handlers and small-scale recyclers from the hazards of handling and recycling chemical waste.
73. Promote waste prevention and minimization by encouraging production of reusable/recyclable consumer goods and biodegradable products and developing the infrastructure required.
74. Develop integrated national and international systems to prevent major industrial accidents and for emergency preparedness and response to all accidents and natural disasters involving chemicals.
75. Encourage the development of an international mechanism for responding to requests from countries affected by chemical accidents.
76. Minimize the occurrence of poisonings and diseases caused by chemicals.
77. Provide for national collection of harmonized data, including categorization by, for example, type of poison, chemical identity, structure, use or function
78. Address gaps in the application of safety procedures relevant to the operation of chemical-intensive facilities, including the environmentally sound management of hazardous substances and products.
79. Design, site and equip chemical facilities to protect against potential sabotage.

ACTIVITIES UNDER CATEGORY 2: KNOWLEDGE AND INFORMATION

80. Develop and establish targeted risk assessment approaches to evaluating exposure and impacts, including socio-economic impacts and chronic and synergistic effects of chemicals on human health and the environment.
81. Evaluate whether different segments of the population (e.g., children, women) have different susceptibility and/or exposure on a chemical-by-chemical basis in order of priority.
82. Develop, validate and share reliable, affordable and practical analytical techniques for monitoring substances for which there is significant concern in environmental media and biological samples. Develop a targeted process to assess and monitor levels of a discrete number of priority contaminants in the environment.
83. Develop scientific knowledge to strengthen and accelerate innovation, research, development, training and education that promote sustainability.
84. Promote research into technologies and alternatives that are less resource intensive and less polluting.
85. Collect data on the use patterns of chemicals for which there is a reasonable basis of concern where necessary to support risk assessment characterization and communication.
86. Design mechanisms to enable investigators from less developed countries to participate in the development of information on risk reduction.
87. Fill gaps in scientific knowledge (e.g., gaps in understanding of endocrine disruptors).
88. Encourage partnerships to promote activities aimed at the collection, compilation and use of additional scientific data.

89. Generate and share information detailing the inherent hazards of all chemicals in commerce, giving priority to hazard information for those chemicals that have the greatest potential for substantial or significant exposures.
90. Establish national priorities for information generation for chemicals that are not produced in high volumes.
91. Encourage the use of IPCS health and safety cards (international chemical safety cards, or ICSCs)
92. Agree to time frames for industry, in cooperation and coordination with other stakeholders, to generate hazard information for high-production volume chemicals not addressed under existing commitments.
93. Promote the establishment of generally applicable guidelines on the respective roles, responsibilities and accountabilities of Governments, producing and importing enterprises and suppliers of chemicals concerning the generation and assessment of hazard information.
94. Further harmonize data formats for hazard information
95. Establish recommendations on tiered approaches to addressing screening information requirements for chemicals that are not produced in high volumes.
96. Identify possible approaches for prioritization for such chemicals that are not necessarily based on production volume but, e.g., build on significant exposures.
97. Ensure that each pesticide is tested by recognized procedures and test methods to enable a full evaluation of its efficacy, behaviour, fate, hazard and risk, with respect to anticipated conditions in regions or countries where it is used.
98. Encourage industry to generate new science-based knowledge, building on existing initiatives.
99. Establish information management systems for hazard information.
100. Prepare safety data sheets and labels.
101. Complete GHS awareness-raising and capacity-building guidance and training materials (including GHS action plan development guidance, national situation analysis guidance and other training tools) and make them available to countries.
102. Establish arrangements for the timely exchange of information on chemicals, including what is necessary to overcome barriers to information exchange (e.g., providing information in local languages).
103. Consider establishing a clearing-house for information on chemical safety to optimize the use of resources.
104. Ensure that all Government officials from developing countries and countries with economies in transition responsible for chemicals management have access to the Internet and training in its use.
105. Eliminate barriers to information exchange for the sound management of chemicals in order to enhance communication among national, sub regional, regional and international stakeholders.
106. Strengthen the exchange of technical information among the academic, industrial, governmental and intergovernmental sectors.
107. Establish procedures to ensure that any hazardous material put into circulation is accompanied, at a minimum, by appropriate and reliable safety data sheets which provide information that is easy to access, read and understand, taking into account GHS.
108. Articles and products containing hazardous substances should all be accompanied by relevant information for users, workplaces and at disposal sites.
109. Improve the information base, including via electronic media such as the Internet and CD ROMs, in particular in developing countries, ensuring that information reaches appropriate target groups to enable their empowerment and ensure their right to know.
110. Include a range of preventive strategies, education and awareness-raising and capacity-building in risk communication.
111. For all chemicals in commerce, appropriate information detailing their inherent hazards should be made available to the public at no charge and generated where needed with essential health, safety and environmental information made available. Other information should be available according to a balance between the public's right to know and the need to protect valid confidential business information and legitimate proprietary interests.
112. Undertake awareness-raising for consumers, in particular by educating them on best practices for chemical use, about the risks that the chemicals they use pose to themselves and their environment and the pathways by which exposures occur.
113. Establish information-exchange mechanisms on contamination in border areas.
114. Improve access to and use of information on pesticides, particularly highly toxic pesticides, and promote alternative safer pest control measures through networks such as academia.
115. Encourage and facilitate exchange of information, technology and expertise within and among countries by both the public and private sectors for risk reduction and mitigation.
116. Facilitate access to research results related to alternative pest control (both chemical and non-chemical) and crop protection measures by pesticide users, those exposed to pesticides and extension services.
117. Evaluate the efficacy of pesticide risk reduction programmes and alternative pest control methods currently implemented and planned by international organizations, Governments, the pesticide, agriculture and trade sectors and other stakeholders.

- 118.Undertake research into innovative means of cleaner production, including those involving waste minimization in all economic sectors.
- 119.Encourage management practices that take into account the full life-cycle approach to sustainable chemicals management, emphasizing front-end pollution prevention approaches.
- 120.Address matters of policy integration in consideration of life-cycle issues.
- 121.Utilize the life-cycle management concept to identify priority gaps in chemicals management regimes and practices and to design actions to address gaps in order to identify opportunities to manage hazardous products, unintentional toxic emissions and hazardous wastes at the most advantageous point in the chemical life cycle.
- 122.Promote products that are either degradable and are returned to nature after use or at end use are recycled as industrial feedstock to produce new products.
- 123.Incorporate life-cycle issues in school curricula.
- 124.Develop a national PRTR/emission inventory design process involving affected and interested parties.
- 125.Use PRTRs tailored to variable national conditions as a source of valuable environmental information for industry, Governments and the public and as mechanisms to stimulate reductions in emissions.
- 126.Develop manuals and implementation guides to explain in a simple form the benefits provided by a registry and the steps necessary to develop one.
- 127.Manufacturers, importers and formulators should assess data and provide adequate and reliable information to users.
- 128.Responsible public authorities should establish general frameworks for risk assessment procedures and controls.
- 129.Carry out hazard evaluations in accordance with the requirements of harmonized health and environmental risk assessments, including internationally recommended methodologies
- 130.Harmonize principles and methods for risk assessment, e.g., methods for vulnerable groups, for specific toxicological endpoints such as carcinogenicity, immunotoxicity, endocrine disruption and ecotoxicology, for new tools.
- 131.Address gaps in the development of new tools for risk assessment, harmonization of risk assessment methods, better methods to estimate the impacts of chemicals on health in real-life situations and the ability to access, interpret and apply knowledge on risks.
- 132.Address gaps in the study of chemical exposure pathways and opportunities for pathway intervention (e.g., in food production).
- 133.Further develop methodologies using transparent science-based risk assessment procedures and science-based risk management procedures, taking into account the precautionary approach.
- 134.Compare assessments of alternative products and practices to ensure that they do not pose larger risks.
- 135.Fill gaps in abilities to access, interpret and apply knowledge (e.g., improve availability of information on the hazards, risks and safe use of chemicals, in forms relevant to end users, and improve use of existing risk assessments).
- 136.Develop common principles for harmonized approaches for performing and reporting health and environmental risk assessments
- 137.Improve understanding of the impact of natural disasters on releases of harmful chemicals and resulting human and wildlife exposures, as well as possible measures to mitigate them.
- 138.Establish a means of developing and updating internationally evaluated sources of information on chemicals in the workplace by intergovernmental organizations, in forms and languages suitable for use by workplace participants.
- 139.Promote research on the development of appropriate protective equipment.
- 140.Make information on workplace chemicals from intergovernmental organizations readily and conveniently available at no charge to employers, employees and Governments.
- 141.Strengthen global information networks in the sharing, exchange and delivery of chemical safety information (e.g. ILO, WHO, INFOCAP).
- 142.Promote the establishment of ILO Safe Work programmes at the national level and the ratification and implementation of ILO conventions 170, 174 and 184.
- 143.Implement an integrated approach to the safe use of chemicals in the workplace by establishing new mechanisms for expanding and updating ILO conventions related to hazardous substances and linking them to various other actions such as those associated with codes, information dissemination, enforcement, technical cooperation, etc.
- 144.Establish approaches and methods for communicating the results of international risk assessments to appropriate workplace participants and stipulate related roles and responsibilities of employers, employees and Governments.
- 145.Promote the establishment of national inspection systems for the protection of employees from the adverse effects of chemicals and encourage dialogue between employers and employees to maximize chemical safety and minimize workplace hazards.
- 146.Strengthen chemical-safety-related information dissemination among social partners and through public media at the national and international levels.
- 147.Stress the importance of workers' right to know in all sectors (formal and informal), i.e., that the information provided to workers should be sufficient for them to protect their safety and health as well as the environment.

148. Eliminate workplace hazards posed by chemicals through simple, practical methods, in particular chemical control banding.
149. Establish the right of employees to refuse to work in hazardous environments if they are not provided with adequate and correct information about hazardous chemicals to which they are exposed in their work environment and about appropriate ways in which to protect themselves.
150. Promote education and training on children's chemical safety.
151. Promote the use of comparable indicators of children's environmental health as part of a national assessment and prioritization process for managing unacceptable risks to children's health.
152. Consider potential enhanced exposures and vulnerabilities of children when setting nationally acceptable levels or criteria related to chemicals.
153. Develop broad strategies specifically directed to the health of children and young families.
154. Incorporate chemical safety and especially understanding of the labelling system of GHS into school and university curricula.
155. Provide appropriate training and sensitization on chemical safety for those exposed to chemicals at each stage from manufacture to disposal (crop growers, industries, enforcement agents, etc.).
156. Undertake research into alternative additives.
157. Undertake research into alternatives for other lead-based products.
158. Undertake research on and implement better agricultural practices, including methods that do not require the application of polluting or harmful chemicals.
159. Establish ecologically sound and integrated strategies for the management of pests and, where appropriate, vectors for communicable diseases.
160. Promote information exchange on alternative and ecological agricultural practices, including on non-chemical alternatives.
161. Implement information, education and communication packages on the sound management of chemicals, targeting key stakeholders including waste handlers and recyclers.
162. Support research on best practices in waste management resulting in increased waste diversion and recovery and reduced chemical hazards for health and the environment.
163. Undertake awareness-raising and preventive measures campaigns in order to promote safe use of chemicals.
164. Work to ensure broad and meaningful participation of stakeholders, including women, at all levels in devising responses to chemicals management challenges and in regulatory and decision-making processes that relate to chemical safety.

ACTIVITIES UNDER CATEGORY 3: GOVERNANCE

165. Have in place multi-sectoral and multi-stakeholder mechanisms to develop national profiles and priority actions.
166. With regard to the implementation of national programmes:
 - Develop comprehensive national profiles;
 - Formalize inter-ministerial and multi-stakeholder coordinating mechanisms on chemicals management issues, including coordination of national Government and multi-stakeholder positions in international meetings;
 - Develop national chemical safety policies outlining strategic goals and milestones towards reaching the Johannesburg Summit 2020 goal;
 - Develop national chemicals safety information exchange systems;
167. Support efforts to implement an integrated approach to the safe use of chemicals at the workplace by establishing effective mechanisms for following up and updating information on international instruments related to hazardous substances.
168. Review national legislation and align it with GHS requirements.
169. Promote ratification and implementation of all relevant international instruments on chemicals and hazardous waste, encouraging and improving partnerships and coordination (e.g., Stockholm Convention, Rotterdam Convention, Basel Convention, ILO conventions and IMO conventions related to chemicals such as the TBT Convention) and ensuring that necessary procedures are put into place.
170. Establish or strengthen coordination, cooperation and partnerships, including coordination among institutions and processes responsible for the implementation of multilateral environmental agreements at the international, national and local levels, in order to address gaps in policies and institutions, exploit potential synergies and improve coherence.

171. Consider approaches to facilitate and strengthen synergies and coordination between chemicals and waste conventions, including by developing common structures.
172. Consider evaluating the possibilities and potential benefits of using the Basel and/or Stockholm Convention ways and means for waste management and disposal of wastes of reclaimed ozone-depleting substances regulated under the Montreal Protocol.
173. Develop pilot projects to pursue implementation of coordination between the national focal points of chemicals-related multilateral environmental agreements (Rotterdam, Stockholm and Basel Conventions and Montreal Protocol) to achieve synergies in their implementation.
174. Address gaps at the domestic level in implementation of existing laws and policy instruments promulgated in the context of national environmental management regimes, including with respect to meeting obligations under international legally binding instruments.
175. Ensure coherence with the proposed Bali Strategic Plan for Technology Support and Capacity-building.
176. Promote, when necessary, the further development of international agreements relating to chemicals.
177. Establish the required framework for creating national PRTRs.
178. Promote a political consensus in favour of public access to national environmental information.
179. Manage information dissemination from PRTRs so that risks are communicated in a timely and accurate fashion without unduly alarming the public
180. Promote harmonization of environmental performance requirements in the context of international trade.
181. Establish the capacity to collect and analyze social and economic data.
182. Consider and apply approaches to the internalization of the costs to human health, society and the environment of the production and use of chemicals, consistent with Principle 16 of the Rio Declaration.
183. Develop methodologies and approaches for integrating chemicals management into social and development strategies.
184. Include capacity-building for the sound management of chemicals as one of the priorities in national poverty reduction strategies and country assistance strategies.
185. Enhance efforts to implement values of corporate social and environmental responsibility.
186. Develop frameworks for promoting private-public partnerships in the sound management of chemicals and wastes.
187. Develop a framework to promote the active involvement of all stakeholders, including non-governmental organizations, managers, workers and trade unions in all enterprises – private, public and civil service (formal and informal sector) – in the sound management of chemicals and wastes.
188. Build the capacities of NGOs, civil society and communities in developing countries so that their responsible and active participation is facilitated. This may include provision of financial support and training in chemical safety agreements and concepts.
189. Encourage use of voluntary initiatives (e.g., Responsible Care and FAO Code of Conduct).
190. Promote corporate social responsibility for the safe production and use of all products, including through the development of approaches that reduce human and environmental risks for all and do not simply transfer risks to those least able to address them
191. Promote innovations and continuous improvement of chemicals management across the product chain.
192. Promote within the industrial sector the adoption of PRTRs and cleaner production methods.
193. Promote a culture of compliance and accountability and effective enforcement and monitoring programmes, including through the development and application of economic instruments.
194. Strengthen policy, law and regulatory frameworks and compliance promotion and enforcement.
195. Establish national multi-stakeholder coordination bodies on chemicals to provide information and increase awareness of their risks.
196. Explore innovative consultation processes, such as mediated discussions, with a view to finding common ground and agreement among affected sectors of society on critical issues that impede efforts to achieve the sound management of chemicals.
197. Incorporate capacity-building strategies and promote activities to enhance each country's legal and institutional framework for implementing chemical safety across all relevant ministries and Government agencies.
198. Encourage countries to harmonize their chemical safety norms.
199. Establish effective implementation and monitoring arrangements.
200. Complete periodic questionnaires to measure implementation of the Bahia Declaration.
201. Develop objective indicators for evaluating the influence of chemicals on human health and the environment.
202. Ensure that pesticides and chemicals issues are considered within environmental impact assessments covering protected areas.
203. Evaluate the dispersion of pollutant releases (air, water and ground) in protected areas.

204. Develop national strategies for prevention, detection and control of illegal traffic, including the strengthening of laws, judicial mechanisms and the capacity of customs administrations and other national authorities to control and prevent illegal shipments of toxic and hazardous chemicals
205. Ensure mutual supportiveness between trade and environment policies.
206. Include civil society representatives in Government committees formulating, carrying out and monitoring SAICM implementation plans.
207. Provide assistance and training for the development of national profiles.

ACTIVITIES UNDER CATEGORY 4: CAPACITY-BUILDING AND TECHNICAL COOPERATION

208. Establish a systematic approach in order to facilitate the provision of advice concerning capacity-building for the sound management of chemicals at the country level to countries that request it. For example:
- Consider establishing a help desk which would provide basic advice to countries and/or refer requests to relevant sources (policy institutions, experts, data banks, information, etc) of expertise, policy guidance, funding and guidelines;
 - Ensure that the process above builds on existing information and tools for capacity building and acts in a complementary way to existing initiatives;
 - Consider establishing monitoring mechanisms as part of the SAICM stocktaking processes to evaluate the usefulness of the process;
 - Implement a pilot project to test and refine the concept prior to global implementation.
209. Strengthen capacities pertaining to infrastructure in developing countries and countries with economies in transition through financial assistance and technology transfer to such countries with a view to addressing the widening gap between developed and developing countries and countries with economies in transition.
210. Promote the development of databases based on scientific assessment and the establishment of centres for the collection and exchange of information at the national, regional and international levels.
211. Promote programmes to develop chemicals-management instruments (national profiles, national implementation plans, national emergency preparedness and response plans).
212. Coordinate assistance programmes at the bilateral and multilateral levels that support capacity-building activities and strategies by developed countries.
213. Develop sustainable capacity-building strategies in developing countries and countries with economies in transition, recognizing the cross-cutting nature of capacity-building for chemical safety.
214. Promote contributions to and use of, e.g., INFOCAP for exchanging information and increasing coordination and cooperation on capacity-building activities for chemical safety.
215. Strengthen capacities in developing countries and countries with economies in transition pertaining to implementation of international conventions concerning chemicals
216. Involve all stakeholders in the elaboration and implementation of comprehensive plans for enhanced capacity-building.
217. Develop competencies and capacities for the national planning of projects relevant to the management of chemicals.
218. Establish programmes for scientific and technical training of personnel, including customs personnel.
219. Establish national or regional laboratory facilities, complete with modern instruments and equipment, including those necessary for testing emissions and operating according to national standards.
220. Establish regional reference laboratories operated in accordance with international standards.
221. Establish or strengthen national infrastructure, including for information management, poison control centres and emergency response capabilities for chemical incidents.
222. Develop resources for national implementation plans and projects.
223. Address capacity needs for regulatory and voluntary approaches to chemicals management.
224. Improve coordination at the national level and strengthen policy integration across sectors, including the development of partnerships with the private sector.
225. Integrate the sound management of chemicals capacity within ministries involved in supporting chemicals production, use and management.
226. Strengthen technical capacity and availability of technology (including technology transfer).
227. Strengthen mechanisms for reporting and consolidating information necessary to produce baseline overviews that will help determine domestic management priorities and gaps (e.g., PRTRs and inventories), taking into account industry reporting initiatives.

228. Develop infrastructure to redress the lack of accreditation bodies and accredited and reference laboratories with capacity to sample environmental and human matrices and foodstuffs.
229. Establish the necessary training and infrastructure for undertaking the necessary testing of chemicals for their management across their life cycle.
230. Develop training programmes in risk assessment and management-related health techniques and communication.
231. Address training needed to develop capacity in legislative approaches, policy formulation, analysis and management.
232. Provide training in the application of relevant liability and compensation mechanisms.
233. Provide training in emergency response.
234. Provide the necessary technical training and financial resources for national Governments to detect and prevent illegal traffic in toxic and dangerous goods and hazardous wastes.
235. Outline specific capacity-building measures for each region.
236. Develop tools to assist industry to provide simplified chemicals information to Government and individual users.
237. Establish and strengthen poison control centres to provide toxicological information and advice; develop relevant clinical and analytical toxicological facilities according to the needs identified and resources available in each country.
238. Provide training in cleaner production techniques.
239. Consider means to control the transboundary movement of dirty technologies.
240. Clearly define needs with respect to training of trainers.
241. Design clear and simple manuals and guides on practical measures to assess production methods and implement improvements.
242. Promote the transfer of technology and knowledge for cleaner production and manufacture of alternatives.
243. Establish infrastructure for analyzing and remediating contaminated sites. Provide training in rehabilitation approaches. Develop capacity to rehabilitate contaminated sites. Develop remediation techniques. Increase international cooperation in the provision of technical and financial assistance to remedy environmental and human health effects of chemicals caused by chemical accidents, mismanagement, military practices and wars.
244. Develop capacity to identify alternatives to lead in gasoline, establish the necessary infrastructure for analyzing gasoline and upgrade the infrastructure needed to introduce unleaded gasoline.
245. Develop mechanisms to facilitate collaborative national and international research and shared technology.
246. Establish needed infrastructure for research into the impact of exposure to chemicals on children and women.
247. Establish accredited testing facilities for chemicals.
248. Establish accredited testing facilities to undertake testing of hazard characteristics of chemicals for classification and verification of label information.
249. Promote training in hazard classification.
250. Make available sufficient financial and technical resources to support national and regional GHS capacity-building projects in developing countries and countries with economies in transition.
251. Provide training on links between trade and environment, including needed negotiating skills.
252. Encourage cooperation between secretariats of multilateral trade and multilateral environmental agreements in development of programmes and materials to enhance mutual understanding of the rules and disciplines in the two areas among Governments, intergovernmental institutions and other stakeholders.
253. Provide training in the concept of protected areas.
254. Undertake capacity-building in identifying and monitoring biological indicators.
255. Promote the necessary training and capacity-building for all people involved directly and indirectly with chemical use and disposal.
256. Develop and enhance the capacity to acquire, generate, store, disseminate and access information, including INFOCAP.
257. Establish the capacity to undertake social and economic impact assessment.
258. Implement capacity-building programmes on waste minimization and increased resource efficiency, including zero waste resource management, waste prevention, substitution and toxic use reduction, to reduce the volume and toxicity of discarded materials.
259. Develop national and local capacities to monitor, assess and mitigate chemical impacts of dumps, landfills and other waste facilities on human health and the environment.
260. Undertake training programmes for preventing the exposure of waste handlers and recyclers, particularly waste scavengers, to hazardous chemicals and waste.
261. Train customs officials to detect illegal transboundary movements of waste.
262. Implement demonstration projects on waste minimization and efficient resource management in different countries with bilateral or multilateral support.

ACTIVITIES UNDER CATEGORY 5: ILLEGAL TRAFFIC

263. Promote with WCO the dissemination and use of customs risk profiles and material safety sheets as official means of identifying probable cases of illegal traffic.
264. Address the matter of resources and operational mechanisms for technical and financial assistance for developing countries and countries with economies in transition, either directly or through a relevant regional organization.
265. Assess the extent and impact of illegal traffic at the international, regional, sub regional, and national levels.
266. Expand the level of coordination and cooperation among all stakeholders.
267. Address how international conventions related to the sound management of chemicals and national laws may be more effectively applied to the transboundary movement of toxic and hazardous chemicals.
268. Promote efforts to prevent illegal international trafficking of toxic and hazardous chemicals and to prevent damage resulting from their transboundary movement and disposal.
269. Promote the adoption by intergovernmental organizations of decisions on the prevention of illegal international traffic in toxic and hazardous products.
270. Train customs, agricultural and health officials to detect illegal toxic hazardous chemicals.
271. Create a global information network, including early warning systems, across international borders, especially at the regional level.
272. Strengthen national strategies for prevention, detection and control of illegal transboundary movements of waste.
273. Promote efforts to prevent illegal traffic of waste.