



THE REPUBLIC OF RWANDA



RWANDA ENVIRONMENT MANAGEMENT AUTHORITY (REMA)

Final Report

Guidelines for Environmental Audit In Rwanda

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FOREWORD

The principal environment management law, the Organic Law No. 04/2005 provides the modalities for protection, conservation and promotion of environment in Rwanda. The requirement for all projects to be subjected to Environmental Impact assessment (EIA) is stated by the Organic Law in article 67. General principles and specific responsibilities for the management of the environment are clearly spelt. The Rwanda Environment Management Authority therefore within its mandate has embarked on the preparation of environmental management regulations and guidelines. These Environmental Audit (EA) guidelines are one such guideline prepared to streamline the Environmental Audit process in Rwanda. ▸

These guidelines serve as an administrative directive to guide Environmental Audits in Rwanda. The guidelines should be used together with any other relevant environmental management instruments developed by REMA

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LIST OF ACRONYMS

CP	Cleaner production
EA	Environmental Audit
EDPRS	Economic Development and Poverty Reduction Strategy
EIA	Environmental Impact Assessment
EHS	Environmental Health & Safety
EIS	Environmental Impact Statement
EMP	Environnemental Management Plan
EMS	Environmental Management System
FAO	Food and Agriculture Organisation
GEF	Global Environment Facility
GoR	Government of Rwanda
ISAR	Institut des Sciences Agronomiques du Rwanda
IRST	Institute for Scientific and Technological Research
KIST	Kigali Institute for Science and Technology
MDGs	Millennium Development Goals
MINIRENA	Ministry of Natural Resources
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government
MINICOM	Ministry of Trade and Industry
MININFRA	Ministry of Infrastructure
MINITERE	Ministry of Lands, Environment, Forestry, Water and Mines (Now ministry of Natural Resources, MINIRENA)
MINECOFIN	Ministry of Finance and Economic Planning

MINIJUST	Ministry of Justice
MIGEPROFE	Ministry in Prime Minister's Office in charge of Gender and Family Promotion
MINISANTE	Ministry of Health
MINEDUC	Ministry of Education
NEMA	National Environment Management Authority
NGOs	Non Governmental Organization
NUR	National University of Rwanda
OHS	Occupational Health & Safety
ORTPN	Rwanda Authority for Tourism and National Parks -Office Rwandais du Tourisme et des Parcs Nationaux
PPE	Personal Protection Equipment
RBS	Rwanda Bureau of Standards
REMA	Rwanda Environment Management Authority
SWAP	Sector Wide Approach
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WB	The World Bank

DEFINITIONS

These definitions apply to terms used in the following guidelines:

Audit conclusion: Professional judgment or opinion expressed by an auditor about the subject matter of the audit, based on and limited to reasoning the auditor has applied to audit findings.

Audit criteria: Policies, practices, procedures or requirements against which the auditor compares collected audit evidence about the subject matter.

Requirements may include but are not limited to standards, guidelines, specified organizational requirements and legislative or regulatory requirements.

Audit Evidence: Verifiable information, records or statements of fact. Audit evidence, which can be qualitative or quantitative, is used by the auditor to determine whether audit criteria are met. Audit evidence is typically based on interviews, examinations of documents, observation of activities and conditions existing results of measurements and tests or other means within the scope of the audit.

Audit Findings: Results of the evaluation of the collected audit evidence compared against the agreed audit criteria.

Auditee: Organization to be audited

Auditor (Environmental): Person qualified to perform environmental audits.

Clients: Organization commissioning the audit. The client may be the auditee, or any other organization which has the regulatory or contractual right to commission an audit.

Developer: Any person who has proposed or has undertaken to implement a project a project in the public or private sector.

Environmental audit: Systematic, documented verification process of objectively obtaining and evaluating audit evidence to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform to audit criteria, and communicating the results of this process to the client.

Lead auditor (Environmental): Person qualified to manage and perform environmental audits. He/She leads the team of auditors.

First Party: An audit by an organization on itself (an internal audit).

Second Party: An audit by one organization, working on its own behalf, on another. This is usually an audit on a supplier by a customer.

Third Party: An audit by an independent organization (The third party) against the appropriate standard.

Organization: Company, corporation, firm, enterprise, institution or association, or part thereof, whether incorporated or not, public or private, that has its own function(s) and administration.

Subject matter: Specified environmental activity, event, condition, management system and/ or information about these matters.

Technical expert: A person who provides specific knowledge or expertise to the audit team, but who does not participate as an auditor.

Environmental management System: That part of the overall management system which includes the organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining an environmental policy.

Environmental management system audit: Systematic, documented verification process of objectively obtaining and evaluating audit evidence to determine whether an organization's environmental management system conforms to the environmental management system audit criteria, and communicating the results of this process to the client.

Environmental management system audit criteria: Policies, practices, procedures or requirements and, if applicable, any additional EMS requirements against which the auditor compares collected audit evidence about the organization's environmental management system.

Degree: Recognized national or international degree, or equivalent qualification, normally obtained after secondary education, through a minimum of three years formal full time or equivalent part time study.

PART I: INTRODUCTION

1. INTRODUCTION

The Republic of Rwanda has environmental challenges that are evident in terms of land and wetlands degradation, water pollution, soil erosion etc. Apart from the high population pressure on natural resources that cause environmental degradation another area of great concerns are large projects like industries, mining and agriculture. The large projects apart from degrading land produce wastes that in many cases pollute the environment. For example wastes from industries that include discharges in gaseous, liquid and solid phases can have harmful impact on resources and human beings.

The Government of Rwanda has demonstrated strong commitments in understanding and addressing the current and future environmental challenges as a means of ensuring sustainable development. The commitments include the development of environmental policy, legal and institutional framework. The Constitution of the Republic of Rwanda promulgated in 2003 clearly states in Article 29 that “*every citizen is entitled to a healthy and satisfying environment*”. The constitution is backed by laws principal among which is the Organic law N° 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda. The Government has also enacted laws and formulated sectoral policies such as those on water and sanitation, land, and agriculture and biodiversity protection to enable environmental protection.

The lead government ministry in charge of the environment is the Ministry of Natural Resources (MINIRENA). The government of Rwanda established the Environmental Management Authority (REMA), under Organic Law No 04/2005 of 08/04/2005 Article 65, to coordinate and oversee all aspects of environmental management for sustainable development. Under the same article of the Organic Law the National Fund for Environment in Rwanda was establish for soliciting and management of financial resources. One of the key functions of REMA is the implementation of Environmental Impact Assessment (EIA) and Environmental Audit (EA). EIA and EA are tools for the prevention and control of environmental impacts of development projects.

The government in recognition of the need to protect the environment from adverse impact of developmental activities requires the conduct of EIA and EA of projects that have significant effect on the environment. In 2006 the *General Guidelines and Procedure for Environment Impact Assessment* was published to streamline the conduct of EIA and appraisal of EIA reports in Rwanda. This *Environmental Audit Guidelines* is to streamline the conduct of Environmental Audit in Rwanda for the improvement in project management to ensure a clean and healthy environment for sustainable development. The *Environmental Audit Guidelines* is intended to serve developers, agencies and individuals involved in the EA process.

1.1 Environmental Audit

Environmental audit is a management tool for evaluation of how well Environmental Management Systems (EMS) are performing with the aim of preventing environmental damage; assessing compliance with regulatory requirements; facilitating control of environmental practices by a company/enterprise or facility management; and placing environmental information in the public domain.

1.1.1 Definition of environmental audit

The definition of EA is found in many national and international documents (e.g. ISO 1996, NEMA 1998, and REMA 2006). Environmental Audit is defined in the General Guidelines and Procedure for Environmental Impact Assessment (EIA) for Rwanda (REMA 2006) as: *“the systematic documentation and periodic and objective evaluation of protection and management of the environment and the conservation and sustainable use of natural resources”*.

The International Organisation for Standardisation (ISO) defines environmental audit as: *“a systematic, documented verification process of objectively obtaining and evaluating audit evidence (verifiable information, records or statements of fact) to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform with audit criteria (policies, practice, procedures or requirements against which the auditor compares collected audit evidence about the subject matter), and communicating the results of this process to the client (organisation commissioning the audit).*

All the definitions have or tend to indicate the following key words:

- i) systematic assessment
- ii) management tool
- iii) objectivity
- iv) documentation, periodic assessment/verification/determination/evaluation,
- v) environmental protection
- vi) environmental risk
- vii) sustainability
- viii) compliance

For the purpose of these EA Guidelines the definition found in the general EIA Guidelines for Rwanda (REMA 2006) will apply

1.1.2 Benefits of environmental audit

Using Environmental Auditing makes it possible to find out whether projects are complying with environmental standards and other statutory requirements. The periodic monitoring allows the determination of the gaps and provides the opportunity to

workout environmental action plans for implementation. Environmental audit can be viewed as a “management tool” internally and 'liaison' externally.

There are far reaching benefits of Environmental audits to projects, the society and the nation at large. The benefits of environmental audit are:

- i) Determining how well the Environmental Management Systems (EMS) of projects is performing, and identifying areas of poor performance.
- ii) Identifying potential cost savings which can be accrued through reduction in wasteful and harmful practices.
- iii) Increasing awareness of environmental requirements, policies and responsibilities.
- iv) Helping in understanding the technical capabilities and attitude of the environmental organization in a Company or Project.
- v) Providing up-to-date environmental database for use for project modification, emergencies etc.
- vi) Unravelling surprises and hidden liabilities due to which regulatory risk and exposure to litigation can be reduced.
- vii) Ensuring independent verification, identifying matters needing attention, and providing timely warning to management on potential future problems.
- viii) Helping to safeguard the environment, and assisting in complying with local, regional and international laws and regulations, with the Company's policy and with environmental standards.

1.2 Objectives of the Environmental Audit Guidelines

The Environmental Audit guidelines is to guide REMA in making decisions related to the process of periodically assessing implemented projects, programs or organization’s activities and services in terms of compliance with relevant statutory and internal requirements, facilitating management control of environmental practices, promoting good environmental management, and maintaining public credibility. The specific objectives of the EA Guidelines are to:

- i) provide guidance on how to manage the Environmental Audit Process including planning of the Environmental Audit, and the steps required to achieve it;
- ii) define the criteria for the scope of Environmental Audits;
- iii) provide the policy, legal and institutional framework for the Environmental Audit process;
- iv) determine roles and responsibilities of all stakeholders in the Environmental Audit process and;
- v) provide a mechanism for the follow up of impact assessment findings during the implementation of mitigation measures.

Environmental audit helps in pollution control, improved production, safety and health and conservation of natural resources and the environment. Its overall objective is to ensure the achievement of sustainable socio-economic development.

1.3 Types of Environmental Audits

a) Environmental management system audit

Environmental management system audits evaluate the effectiveness of environmental management and performance systems based on stated objectives. It also determines whether the systems have been designed and implemented to meet management objectives. Environmental management system audits have been formalized under ISO 14000 procedures.

b) Compliance audit

There are two types of Compliance Audit; Regulatory and Performance. Regulatory Compliance Audit evaluates current operations and controls to determine applicable regulatory requirements, resulting in a statement of the compliance status. Performance Audit determines whether actual environmental management conforms to stated objectives.

c) Site property audit

Site Property Audit determines the environmental risks associated with financing, purchasing and sale, and for insurance purposes.

d) Environmental assessment audit

Environmental assessment audit determines whether the contents of an environmental statement are correct and comprehensive.

Part II: ENVIRONMENTAL AUDIT POLICIES, LEGAL AND INSTITUTIONAL FRAMEWORK

2. POLICIES, LEGAL AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL AUDIT

2.1 International Context of Environmental Assessment

Environmental Audit (EA) operates within the concept of sustainable socio-economic development. EA enables the achievement of commitments to international environmental conventions such as the Ramsar (1971), Vienna (1985), Montreal (1990), Rio (1992), and Stockholm (2002), the Convention on Biological Diversity and its Habitat (1995), the United Nations Framework Convention on Climate Change (1995), the Rotterdam Convention on the establishment of international procedures agreed by states on commercial transactions of agricultural pesticides and other poisonous products(2003),the Convention on Substances that Deplete the Ozone Layer(2003),the Kyoto Protocol to the Framework Convention on Climate (2003),the Bonn Convention on conservation of migratory species of wild ratified (2003),the Washington Agreement on International Trade in endangered species of Wild Flora and Fauna (1980) to all of which, Rwanda is a party.

EA also provides a framework for promotion of efficient decision-making in ensuring compliance to environmental statutory requirements. EA enables implementation of EMS/EMP that ensures environmental safeguards to mitigate significant negative impacts, avoid ecological damage and large-scale irreversible loss of natural resource.

Environmental Audit is an invaluable tool for environmental management of implemented projects to ensure environmental safeguards by employing various environmental management techniques such as Cleaner Production (CP), recycling, reuse and sustainable consumption to ensure resource conservation and prevention of environmental degradation.

2.2 Rwandan Policies and Regulations Relating to Environmental Audits

The Constitution of the Republic of Rwanda (2003) provides for the protection and sustainable management of the environment and encourages rational use of natural resources. The Environment Policy (2003) sets the overall goals for environmental management in Rwanda. The policy emphasises improved management of the environment at both central and local levels consistent with the policy on decentralisation and good governance. The government has ensured that all national policies reflected in Vision 2020 (GoR 2002) take into account environmental protection as a priority (REMA 2007). Environment is treated as a sector and a cross cutting issue in the Economic Development and Poverty Reduction Strategy (EDPRS) document (MINECOFIN, 2007). The environment policy provides for institutional and legal reforms. The implementation

of environmental management strategies employs Sector Wide Approach (SWAP), which brings with it the advantage of synergies among the different development actors.

There are relevant policies, laws, regulations that need to be consulted while carrying Environmental Audit in Rwanda. But the most critical is the Organic Law (No 04/2005 of 08/04/2005) which determines the modalities of protecting, conserving and promoting the environment in Rwanda. The relevant articles to Environmental Audit are:

- i) Article 3: Every person has the duty to protect, conserve and promote environment. The State has a responsibility of protecting, conserving and promoting the environment.
- ii) Article 6: Every person in Rwanda has a fundamental right to live in a healthy and balanced environment. He or she also has the obligation to contribute individually or collectively to the conservation of natural heritage, historical and socio-cultural activities
- iii) Article 7: States the principles for Conservation and rational use of environment and natural resources. (Conservation and rational use of environmental and natural resources.)
- iv) Article 8 : 10 to 60 lists projects and activities that are subject to regulation by the national laws of Rwanda
- v) Articles 49 to 59) provides specific obligations of the State for environmental management
- vi) Articles 60 to 62 provides specific obligations of decentralised entities for environmental management

Statements under specific and general obligations in the Organic law(No 04/2005) implies collective efforts in environment management that calls for a holistic that can be achieved by applying tools like EIA and EA.

2.2.1 Requirements for environmental audit

Specific articles in the (No 04/2005) that provide the tools for environmental management are:

- i) Article 67: *provides for EIA and its conduct.*
- ii) Article 68: provides the content of EIA that also cover monitoring, evaluation and cost estimate for environmental management that is in principal environmental audit though not explicitly mentioned, sections relevant to EA are:

7⁰ “an explanation of the methods that will be used in monitoring and evaluating the state of the environment before, during the activities of the project, in using the installation but particularly after completion of the project” and

8⁰ *“an estimation of the cost of the measures recommended to prevent, reduce or compensate for the negative effects the project may cause on the environment as well as the measures for examining and controlling the status of the environment”.*

- iii) Article 75: provides for Control, Monitoring and Inspection and states: Without prejudice to other provisions, competent persons mentioned in article 74 of this Organic law determined by an order of the Minister having justice in his or her attributions may:

10 enter residences and industrial or agricultural installations, depots, warehouses, stores and retail outlets;

2⁰ *inspect installations, construction, houses, machines, vehicles, devices and products;*

3⁰ *have the right to inspect records relating to the operations of the enterprise;*

4⁰ *have a sample, measure, take and conduct a required research;*

5⁰ *Suspend activities that appear to degrade the environment for a period not exceeding (30) days.*

- iv) Article 79: *Enterprises or operations that excessively pollute environment are subject to inspection by competent experts. The owner of the enterprise or operations meets expenses of such an inspection. The procedure through which such an inspection is conducted is specified by the order of the Minister having environment in his or her attributions. Findings of such an inspection are transmitted to the competent authorities.*
- v) Articles 80 – 94: *lists the prohibited activities that impact negatively on the environment.*
- vi) Articles 95 -115: *elaborates punitive sanctions against activities that adversely impact on the environment.*

These provisions above within the Organic Law (No 04/2005) sets the ground for environmental management in Rwanda and also the requirements for Environmental Audit as an involuntary and mandatory legal requirement in Rwanda. All parties including the client, auditor, auditee and the regulatory authority (REMA) in the implementation of environmental audits, should use the national environmental policies, laws, regulations and standards and other relevant legal documents.

Apart from the Organic law various socio-economic development policies and strategies such as the Rwanda Investment And Exports Strategic Action Plan, 2005-2007” and “Vision 2020” call for a well regulated environment management system that takes into account principles of sustainable development while at the same time contributing to poverty reduction. Agricultural policy (July 2004) recognises the need for the protection

against land, water and soil degradation. Strategic Plan for Agriculture in Rwanda (October 2004) in section 8.2 (345 -347) recognises the need for the protection of environment, water and land. Others such as the sectoral policy on water and sanitation (October 2004), the National Land Policy (February 2004), the National Forestry Policy (February 2004), Sectoral Strategy 2005-2010 (REMA 2004) , National Strategy and Action Plan for the Conservation of Biodiversity in Rwanda (GoR 2003)and the draft law relating to Mining and Quarry Exploitation all recognise the need for environmental protection.

2.3 Institutional Responsibility

The Organic laws provides for the establishment of REMA under article 65, while article 66 provides for the establishment of committees responsible for conservation and protecting the environment at the Provincial, City of Kigali, District, Town, Municipality, Sector and the Cell levels. The organisation, functioning and their responsibilities are determined by Prime Minister's Order.

The Ministry of Natural Resources (MINIRENA) is government lead ministry for environmental management in Rwanda. The mission statement of (MINIRENA) consists of insuring a rational management of lands, taking care of the conservation and protection of the environment in view of a sustainable human development. The Ministry was established to provide services to the population of Rwanda, the public and private sector, and to the different development partners. It is responsible for the formulation of policies and laws aimed at the protection and rational use of environment.

To implement MINIRENA sectoral strategies other Ministries are involved such as the Ministry of Agriculture, and Animal Resources (MINAGRI), the Ministry of, Commerce, and Industry (MINICOM), the Ministry of Infrastructure (MININFRA), Ministry of Local Government, (MINALOC), Ministry of Finance and Economic Planning (MINECOFIN), Ministry of Justice (MINIJUST), Ministry of Gender and Family Promotion (MIGEPROFE), Ministry of Health (MINISANTE), Ministry of Education (MINEDUC) are all involved to ensure sustainable development in line with the efforts of achieving Millennium Development Goals (MINECOFIN, 2007).

Public institutions such as Rwanda Authority for Tourism and National Parks (ORTPN), Rwanda Bureau of Standards (RBS), as well as higher teaching and research institutes such as the National University of Rwanda (NUR), Kigali Institute of Science, Technology (KIST) and the Institute of Management (SFB), Rwanda Institute for Science and Agricultural Research (ISAR), Institute for Scientific and Technological Research (IRST) also are important institutions for environmental management in Rwanda.

There are also both International and Non Governmental Organisations (NGOs) and Parastatal agencies that are involved in environmental management activities in Rwanda. These organisations include among others the Global Environment Facility (GEF), United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), United Nations Food and Agriculture Organisation (FAO), United Nations Children's Fund (UNICEF), United Nations Population Funds (UNFPA) World

Bank (WB), USAID.Rwanda Environment Management Authority (REMA) is responsible for the overall coordination and supervision of environmental management in Rwanda.

2.4 Roles and Responsibilities of Different Stakeholders in Environmental Audit

The EA process involves many stakeholders as indicated below.

i) REMA

Mandated by law, REMA has a responsibility to organise the EA procedure by guiding the EA process, reviewing EA reports based on the terms of reference (ToR) and taking decisions on the EA reports and the audited projects, activities or programs. The Authority is also responsible for monitoring implementation of environmental protection measures recommended by EA reports. In addition REMA's responsibility relevant to EA is to:

- a) take stock and conduct comprehensive environmental audits and investigations, to prepare and publish biannual reports on the state of natural resources in Rwanda.
- b) review and approve environmental audit reports of any field of socio economic activities undertaken by any agency.
- c) ensure monitoring and evaluation of development programs in order to control observance of proper safeguards in the planning and execution of all development projects, including those already in existence, that have or are likely to have significant impact on the environment.
- d) participate in the set up of procedures and safeguards for the prevention of accidents and phenomena which may cause environmental degradation and propose remedial measures where accidents and those phenomena occur.
- e) render advice and technical support, where possible, to entities engaged in natural resource management and environmental protection

ii) Client (auditee or developer)

The developer has direct responsibility for the project and should provide necessary information about the project at all stages of the EA process. Developers hire experts to undertake EA studies on their behalf. Developers have the responsibility to implement the environmental management plan including mitigation measures as proposed in the EA report and carry out periodical environmental monitoring and auditing. Specific responsibilities of the auditee or client include but not limited to –

- determining the need for the audit.
- defining the objectives of the audit.
- determining the scope of the audit together with the lead auditor.
- selecting the auditors/audit firm.
- approving the audit criteria.
- approving the audit plan.
- providing the authority and resources to conduct the audit.

-
- informing employees about the objectives and scope of the audit as necessary.
 - obtaining full cooperation from employees and initiating the EA process.
 - appointing appropriate competent staff including a coordinator to accompany and assist the audit team.
 - providing access to facilities, personnel, relevant information and records as requested by the auditors.
 - cooperating with auditors to permit the audit objectives to be achieved.
 - receiving and reviewing the audit report.

iii) Environmental Audit Experts (Auditors)

EA experts are professionals registered with REMA to undertake Environmental Audits. They help the developer to carry out EA, design mitigation measures, prepare EA report, and design environmental management and monitoring plans. Auditors comprise a lead auditor and auditors that constitute the EA study team each with the following responsibilities:

Lead auditor: his/her responsibilities should cover –

- Determining the scope of the audit in consultation with the client and REMA.
- Getting the relevant background information to meet the objectives of the audits.
- Ensuring that the requirements for the audit are followed as indicated by the EA guidelines.
- Forming the EA study team.
- Directing the EA process activities in accordance with the guidelines on general principles.
- Planning and supervision of the EA process and representing the EA team.
- Reporting to the client and REMA on the EA process activities and conclusions.
- Making recommendations to the client (if agreed upon) in the scope of the EA.

Auditor: his/her responsibilities should cover :

- Following the direction of and supporting the lead auditor in the EA process;
- Carrying out assigned tasks objectively, effectively and efficiently within the EA scope.
- Collecting and analysing sufficient audit evidence to determine findings and reach audit conclusions.
- Preparation of the EA document under the direction of the lead auditor.

iv) Lead Agencies

Lead agencies such as government ministries or departments have the responsibility for management and protection of environmental resources, public health and socio-economic development. Lead agencies have the responsibility to take part in EA of

projects under their sectors. They provide valuable technical information to EA experts during EA studies and are involved in the review process.

v) The Districts

Districts are responsible for planning environmental management activities and the implementation of decentralised activities.

vi) The Public

Environmental Audits are generally considered as private and confidential because many organisations see public scrutiny as intimidating and fear the outcome may affect company image. However the public can be helpful during the audit by highlighting areas that are of priority concern to them. Local communities close to a facility can assist in monitoring compliance. The community can report to REMA any observable or felt impacts of a facility deemed harmful to them and the environment.

vii) International Funding Organisations

All international funding organisations require EIA for their supported projects. They therefore expect the funded projects to follow the EIA recommendations that include an EMS/EMP consisting of monitoring and periodical Environmental Audits.

viii) Academic Institutions

Members of academic institutions are commonly co-opted on EA Technical Committees. They also institutionalise environmental education in their curricula. Courses on Environmental audits can be taught both at undergraduate and post graduate levels.

PART III: GUIDELINES FOR ENVIRONMENTAL AUDIT

3. GUIDELINES FOR ENVIRONMENTAL AUDITING

3.1 General Principles

Environmental auditing is a valuable instrument to verify and help improve environmental performance. The guidelines provide the general principles of environmental auditing that are applicable to all types of environmental audits.

i) Requirements for an environmental audit

An environmental audit should focus on clearly defined and documented subject matter. The party (or parties) responsible for this subject matter should also be clearly identified and documented. The audit should only be undertaken if, after consultation with the client, it is the lead auditor's opinion that:

- a) there is sufficient and appropriate information about the subject matter of the audit;
- b) there are adequate resources to support the audit process; and
- c) there is adequate cooperation from the auditee.

ii) Objectives and scope

Environmental audit should be based on objectives clearly defined by the client. The scope is determined by the lead auditor in consultation with the client and REMA to meet these objectives. The scope describes the extent and boundaries of the audit. The objectives and scope should be communicated to the auditee prior to the auditing.

iii) Objectivity, independence and competence

To ensure the objectivity of the audit process and its findings and any conclusions, the members of the audit team should be independent of the activities they audit. They should be objective, and free from bias and conflict of interest throughout the process. The use of external or internal audit team members is at the discretion of the client. An audit team member chosen from within the organization should not be accountable to those directly responsible for the subject matter being audited.

The audit team members should possess an appropriate combination of knowledge, skills and experience to carry out audit responsibilities. There are merits and demerits in using either internal or external auditors.

The use of internal auditors ensures: better ownership and raise awareness; less strain on resources; good knowledge of the organization; development of some environmental expertise; and less cost for EA.

On the other hand, use of external auditors means: less ownership; need for extra resources; provide independent view; provide additional environmental expertise; and cost more money.

If the organization has the qualified personnel they should conduct the audit with an external auditor providing advice and support. The consultant (external auditor) can help to prepare checklist or manual and help train auditors. The use of employees ensures environmental problems remain within company's sphere. External auditors bring 'fresh eyes' and objectivity.

The ideal thing is for an internal (self –audit) audit but due to the credibility problems which is resolved by an external auditor, it may be advisable to have a combination of the two for balance. Regular self-audit reports and evidence can help to ease the task of external auditors and also is a means of continuous environmental checks to ensure good environmental management within a facility.

iv) Due professional care

In the execution of an environmental audit, auditors should use the care, diligence, skill and judgment expected of any auditor in similar circumstances.

The relationship between the audit team members and the client should be one of confidentiality and discretion. The audit team members should not disclose any information or documents obtained during the audit, and the final report, to any third party, without the consent of the client unless required by law.

v) Systematic Procedures

Environmental audits should be conducted in accordance with these general principles and any other guidelines developed for a particular type of EA. For consistency and reliability, EA should be conducted according to well-defined methodologies and systematic procedures.

vi) Audit Criteria, evidence and findings

It is essential to determine the audit criteria early in the EA process. These criteria at an appropriate level of detail should be agreed between the lead auditor and the client, and then communicated to the auditee. Appropriate information should be collected, analysed, interpreted and documents used as audit evidence in an examination and evaluation process to determine what audit criteria are met.

Audit evidence should be of such quality and quantity that a competent environmental auditors working independently of each other would reach similar audit findings evaluating the same audit evidence against the same audit criteria.

vii) Reliability of audit findings and conclusions

The EA process should be designed to provide the desired level of confidence in the reliability of the audit findings and any conclusions. Audit evidence collected will inevitably be only a sample of the information available, because EA is conducted during a limited period of time and with limited resources. There is therefore an element of uncertainty inherent in all EAs and all users of the EA results should be aware of this uncertainty. The environmental auditor should consider these limitations when planning, carrying out and making audit conclusions.

viii) Reporting

The audit findings should be communicated to the client in a written report. It is important for the auditee to receive a copy of the audit report. Photographs and other visual evidence may be attached.

Audit related information that may be in audit reports, includes, but is not limited to:

- i) the identification of the organization audited and of the client;
- ii) the agreed objectives and scope of the audit;
- iii) the agreed criteria against which the audit was conducted;
- iv) the period covered by the audit and the date(s) the audit was conducted;
- v) the identification of the audit team members;
- vi) the identification of the auditee's representatives participating in the audit;
- vii) a summary of the audit process including any obstacles encountered;
- viii) the audit conclusions;
- ix) a statement of the confidential nature of the contents; and
- x) the distribution list for the audit report.

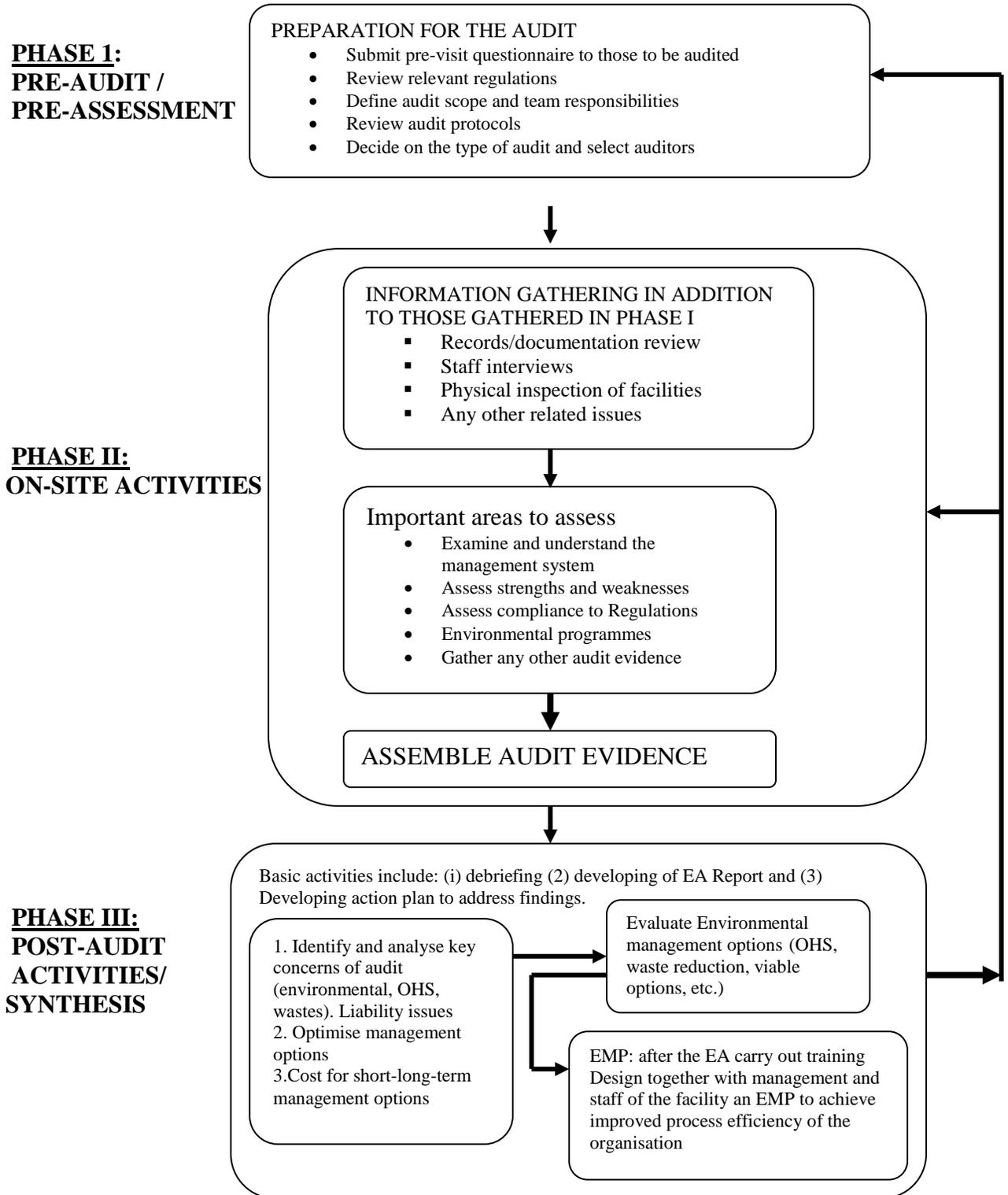
The lead auditor in consultation with the clients and REMA should determine which of these items listed above together with any additional items, will be included in the report.

Recommendations for corrective measures are provided by the auditors after consultation with the client or auditee. This is because corrective measures have to be realistic (e.g. affordable, available, etc) to the client.

3.2 Environmental Audit Procedure

The activities that constitute Environmental Audit procedure are chronologically summarised by Figure 1. The EA procedure is presented in the three phases as pre-audit activities, on-site activities and post-audit activities for an effective EA process.

Figure 1: General Environmental Audit Flowchart



People involved in Environmental audits should use the chart in Figure 1 together with sections 3.3 and 3.4 of these guidelines for details descriptions of the activities. The audit procedure includes broadly the following:

- i) Pre-audit activities
- ii) Activities at the site; and
- iii) Post-audit activities.

The procedure for environmental auditing is presented in details in the following sections below.

3.3 Pre-Audit activities

Preliminary information

Step I: Collection of preliminary information on the project/facility to be audited:

Pre-audit activities include various preparatory works. Having known the project/facility to be audited, preliminary information on the project/facility is to be obtained through a questionnaire. The information includes:

- i) location of the project with surrounding land uses,
- ii) climatic conditions,
- iii) business or activities (e.g. project/facility, agriculture, mines, manufacturing industries, outputs/products),
- iv) raw materials used (e.g. natural resources like water, minerals, fuel wood, non-renewable fuels, etc)
- v) details on water utilization, energy utilisation
- vi) waste generation and disposal (wastewater, solid wastes, other categories like hazardous, etc),
- vii) gaseous emissions, and
- viii) organizational set-up and policies of the enterprise or company for environmental management

The preliminary information received on the project should be reviewed to identify main areas of concern and determine the composition of the audit team. Details of pre-audit activities are given in Figure 1.

Step II: Assembling of Audit Team and Resources

Thereafter it is required to prepare and organize audit team and resources, and allocate specific tasks to team members. Resources such as the sampling and monitoring equipment and laboratory facilities for analysis should be checked if available at site or else arrangements should be made for their availability through external sources such as private or government laboratories or loan from other industries.

The process for selecting audit team members should ensure that the audit team possesses the overall experience and expertise needed to carry out the audit; consideration should be given to:

- i) Qualifications.
- ii) The type of organization, processes, activities or functions being audited.
- iii) The number, language skills and expertise of the individual audit team members.
- iv) Any potential conflict of interest between the audit team members and the auditee.
- v) Requirements of clients, and certification and accreditation bodies.

The Audit team should be carefully selected to cover various aspects of the audit. The team should include but not limited to:

- i) Employees from production.
- ii) Quality control/laboratory.
- iii) Research and development (R&D).
- iv) Pollution control operations.
- v) Technical staff for monitoring and analysis of waste samples and the environment.
- vi) An environment specialist.

The number of people may vary depending on the size and complexity of the facility or project being audited. In addition, the team should be sufficiently detached to provide an independent view. The members should be in a way that they would not hesitate bringing out even criticism, owing to obligations with the supervisor. It is important to have well-defined and systematic procedures, which are known and understood by all concerned. The duration of the audit may vary from days to months depending on the nature of the project or facility to be audited.

Effectiveness of the audit is a direct result of: the qualification; expertise; confidence; training and proficiency of the personnel who conduct the audits. The team must be able to understand regulatory requirements, relevant control technologies and their operations and process. In effect, they should have capability to examine; question; sample and analyse environmental materials and interpret the data.

Step III: Prepare Audit Programme:

The EA visit programme should be introduced to the project/facility mentioning that the environmental audit should not be considered as *a raid* but a means of improving environmental management.

The prior information to the project/facility helps the EA team convince the senior management and staff at various levels of the purpose of audit and the cooperation they have to extend to the audit team. The staff should not feel that the audit would lead

to surfacing problems and hence would be subjected to criticism by the management. They should be clear about the purpose and objectives of the audit and how beneficial it would be for the project/facility. This would also increase employee's awareness towards environmental management and promote input and support for the audit.

Scope of Audit

The scope describes the extent and boundaries of the audit in terms of factors such as physical location, specific project activities, timing and organizational activities as well as the manner of reporting. The scope of the audit is determined by the client and the lead auditor. The auditee should normally be consulted when determining the scope of the audit. Any subsequent changes to the audit scope need the agreement between the client and the lead auditor.

The resources and time committed to the audit should be sufficient to meet its intended scope. The scope of the audit should be finalised at a preliminary meeting with the company (Client/auditee).

Preliminary document review

At the beginning of the audit process, the lead auditor should review the organization's documentation such as environmental policy statements, programmes, records or manuals for meeting its environment requirements. In doing so, use should be made of all appropriate background information on the auditee's organisation. If the documentation is judged to be inadequate to carry out the audit, the client should be informed. Additional resources should not be spent until further instructions have been received from the client.

Key pre-audit information includes:

- i) A map of site and its locality.
- ii) A brief history of the site and activities carried out.
- iii) A summary of current organisational structure.
- iv) A list of personnel who would be available for interview e.g. general or production manager, officers responsible for environment.
- v) A list of key environmental issues from management point of view.
- vi) Environmental policy and other information relevant to the environment e.g. corporate objectives, targets, guidelines, and environmental reports.
- vii) Previews of environmental reviews or audit reports.
- viii) Restrictions on audit team such as restricted access to parts or safety requirements.
- ix) Process flow diagrams.
- x) Copy of Environmental Impact Statement (EIS) relating to site.

Other relevant information includes: awareness and training of staff and monitoring procedures in place

3.4 Preparing the audit

Audit plan

The audit plan should be designed to be flexible in order to permit changes in emphasis based on information gathered during the audit, and to permit effective use of resources.

The plan should include the following wherever applicable:

- i) The audit objectives and scope. The audit criteria. (Legislation, best practices, motivating factors, local pressures, societal concerns and expectations).
- ii) The auditee's organisational and functional units to be audited.
- iii) The functions and /or individuals within the auditee's organisation having significant direct responsibilities regarding the auditee's environmental management.
- iv) Elements of the auditee's environmental practices that are of high audit priority.
- v) The procedures for auditing the auditee's environmental management elements as appropriate for the auditee's organisation.
- vi) The working and reporting languages of the audit.
- vii) Reference documents.
- viii) The expected time and duration for major audit activities.
- ix) The dates and places where the audit is to be conducted.
- x) Composition of the Audit Team.
- xi) The schedule of meetings to be held with the auditee's management.
- xii) Confidentiality requirements.
- xiii) Report content, format and structure, expected date of issue and distribution of the audit report.
- xiv) Document retention requirements.
- xv) The sections of the public affected and to be consulted.

The audit plan should be communicated to the client or auditee and the auditors. The client should review and approve the plan. If the Client or auditee objects any provisions in the audit plan, such objections should be made known to the lead auditor. They should be resolved between the lead auditor, the auditee and or the client before conducting the audit. Any revised audit plan should be agreed between the parties concerned before or during execution of the audit.

Audit Team Assignments

As appropriate, each audit team member should be assigned specific terms of references (ToR) to cover functions, or activities to audit and be instructed on the audit procedure to follow. Such assignments should be made by the lead auditor in consultation with the

audit team members concerned. During the audit, the lead auditor may make changes to the work assignments to ensure the optimal achievement of the audit objectives.

Working documents

The working document (*see Appendices II and III*) required to facilitate the auditor's investigations may include:

- i) Forms for documenting supporting evidence and audit findings.
- ii) Procedures and checklists used for evaluating environmental management practices.
- iii) Records of meetings.

Working documents should be maintained at least until audit completion, those involving confidential or proprietary information should be suitably safeguarded by the audit team members.

Step IV: Conduct of the Audit at the site

Following agreement on audit plan and programme, the audit team led by their team leader can start to conduct the EA on site. The sequence of EA activities that will take place at the client's facility include the following:

a) Opening Meeting between Audit Team and Management

The purpose of an opening meeting is to:

- i) introduce the members of the audit team to the auditee's management;
- ii) explain and review the scope, objective and audit plan and agree on an audit time table;
- iii) provide a short summary of the methods and procedures to be used to conduct the audit;
- iv) establish the official communication links between the audit team and the auditee;
- v) confirm that the resources and facilities needed by the audit team are available;
- vi) confirm the time and date for the closing meeting;
- iv) promote the active participation by the auditee;
- v) review relevant site safety and emergency procedures for the audit team; and
- vi) resolve misunderstandings or fill any gaps in the pre-audit information.

b) Collecting of Audit evidence

Sufficient audit evidence should be collected to be able to determine whether the auditee's environmental practices conforms to the audit criteria. Audit evidence should be collected through interviews, examination of documents and observation of activities and

conditions. Indications of nonconformity to the audit criteria inspections should be recorded.

Information gathered through interviews should be verified by acquiring supporting information from independent sources, such as observations, records and results of existing measurements. Non verifiable statements should be identified as such.

Auditors should examine the basis of relevant sampling programmes and the procedures for ensuring effective quality control of sampling and measurement processes. Information gathering is normally, assisted by the use of audit protocol/and or checklists found in *Appendices VI, VII and VIII*.

An example for evidence collection for manufacturing industries at site can be summarized to include:

- i) Identifying all key activities important for environmental management.
- ii) Deriving material balance.
- iii) Identifying waste flow lines.
- iv) Monitoring of waste and waste source characteristics.
- v) Evaluating performance of pollution control equipment/system.
- vi) Evaluation of performance of safety and occupational health issues.
- vii) Determining compliance with statutory environmental requirements
- viii) Evaluation of performance of energy and water use management.
- ix) Assessing environmental quality.
- x) Holding discussions with the management and finally preparing the draft report.

On-site activities for all other categories of project (e.g. infrastructure, agriculture, mines, etc) can be carefully selected after carrying out thorough pre-audit assignments described in section 3.3.

Interviews should be carried out with various cross-sections of the staff engaged in running the facility or project so as to understand different operational mechanisms. Having a fair idea on the operational process, reconnaissance surveys should be made to be familiar with layout of the site and process operations, and to understand possible impact on the surrounding environment.

c) Audit findings

The audit team should review all of their audit evidence to determine where the environmental practices do not conform to the audit criteria. The audit team should then ensure that audit findings of nonconformity are documented in a clear, concise manner and supported by audit evidence.

Audit findings should be reviewed with the responsible auditee manager with a view to obtaining acknowledgement of the factual basis of all findings of nonconformity. If

within the agreed scope, details of audit findings of conformity may also be documented, but with due care to avoid implication of absolute assurance.

d) Closing Meeting

After completion of the evidence collection phase and prior to preparing an audit report, the auditors should hold a meeting with the auditee's management and those responsible for the functions audited. The main purpose of this meeting is to present audit findings to the auditee in such a manner to obtain their clear understanding and acknowledgement of the factual basis of the findings.

Disagreements should be resolved, if possible before the lead auditor issues the report. Final decisions on the significance and description of the audit findings ultimately rest with the lead auditor, though the auditee or client still may disagree with these findings.

Step V: Preparation of the Audit Report

Draft Report

The audit report is prepared under the direction of the lead auditor, who is responsible for its accuracy and completeness. The topics to be addressed in the audit report should be those determined in the audit plan. Any changes desired at the time of preparation of the report should be agreed by the parties concerned. The report should include a detailed Environmental Management Plan (EMP) that incorporates costs and liability issues.

Content of Report

The audit report should be dated and signed by the lead auditor and key team members. The audit report should contain the audit findings with reference to supporting evidence. Subject to agreement between the lead auditor and the client, the audit report may include the following:

The identification of the organisation audited or the client. The agreed objectives, scope and plan of the audit.

- i) The agreed criteria including a list of reference documents against which the audit is conducted.
- ii) The period covered by the audit and the date(s) the audit was conducted.
- iii) The identification of the auditee's representatives who participated in the audit.
- iv) The names and responsibilities of each audit team member.
- v) Statement on the confidential nature of the contents if applicable.
- vi) The distribution list for the audit report.
- vii) A summary of the audit process including any obstacles encountered.
- viii) Audit conclusions such as: Conformance to the audit criteria; whether the system is properly implemented and maintained; and whether the internal management

-
- review process is able to ensure the continuing suitability and effectiveness of the operations.
- ix) Prioritised recommendations which should include: Estimation of cost; Resources; Requirements and optimum time for introduction; monitoring of implementation and next review dates.

The audit report should:

- Highlight both the positive and the negative.
- Identify inefficiencies within current practice.
- Be clear and concise.
- Minimize subjective statements.
- Specify obvious deficiencies and indicate priorities for improvement.
- Suggest the potential cost effective improvements.
- Seek agreement with site management.
- Bear in mind potential user of the report.

The draft report should be presented before the senior management and various points should be thoroughly discussed. The management should put forward their views. The participation of the management and their acceptance of various observations and recommendations make the task of implementation meaningful.

Step VI: Post Audit Activities

After the fieldwork has been completed there are a number of post-audit activities that should take place to complete the audit process. They are: (1) conduct debriefing, (2) develop the audit report, and (4) develop an action plan to address audit findings

Conduct audit debriefing

This provides an opportunity to informally review the audit findings together with the project/facility officials before writing the audit report. This helps to clear up issues and confirm accuracy of information and also helps the audit team to identify any additional data or information needed to complete analysis.

Attendance of audit debriefing should include the following: senior management, legal officer, key project supervisors, and other staff who have significant responsibilities at the facility.

Develop Audit Report

Audit report is the document in which the findings of the audit team are presented with respect to compliance status of the facility. It may also include recommendations for follow up actions and suggested changes in the operation of the facility for better environmental management. There are several philosophies and attitudes concerning the format and purpose of audit report. However there are several common elements of good

audit reports that are generally accepted principles or common denominators that are embraced including: establishing a consistent format, be clear and concise; assure legal review of the report. Examples of EA report format is provided by Table 1.

Table1: Format for EA Report

<ol style="list-style-type: none">1. Executive Summary2. Introduction: Purpose of the audit and terms of Reference3. The Audit Team4. The audit methodology5. The Audit Findings6. Recommendations7. Environment Management Plan8. Annexes

Step VII: Preparation of the Final Audit Report

Final Report

Various aspects discussed above should be compiled and a final report prepared along with recommendations. The final report may if necessary, be sent to the top management for comments so as to make further modifications.

Action Plans

The recommendations include measures for best practicable environmental management. If the annual burden, i.e. the annualized capital cost of the control measures and their operating cost, for the implementation of all the recommendations, is high and the investment not feasible for the facility, then these recommendations should be implemented in phases. Priorities should be fixed and action plans with time-frame should be formulated in consultation with REMA. For example, compliance agreements can be signed with REMA to phase out environmental management commitments to mitigate environmental impacts of the operation of the enterprise.

Follow-up Actions

Follow-up actions should be taken to check the progress of implementation of recommendations. The Environment Division of the facility should meet the other Divisional heads periodically to review the progress. A summary of the Environmental Audit procedure described above is provided by Figure 1 as a quick reference.

Distribution of Report

The audit report should be sent to the client (REMA or any other person mandated) by the lead auditor. Distribution of the audit report should be determined by the client in accordance with the audit plan. The audited organisation (auditee) should receive a copy of the audit report.

Audit reports are the sole property of the client and confidentiality should be respected and appropriately safeguarded by the auditors and all report recipients.

The audit report should be issued within the agreed time period in accordance with the audit plan. If this is not possible, the reasons for the delay should be formally communicated to both the audited organisation and a revised issue date established.

Document retention

All working documents and draft and final reports pertaining to the audit should be retained by agreement between the audited organisation or client, the lead auditor and in accordance with any applicable requirements. REMA should decide on who will receive the audit reports for review before the final decision on the document is made. It is normal practice to involve sector lead agencies in the review of EA reports.

3.5 Cost of EA

The cost of the EA process is borne by the audited project owner as indicated in Article 69 of the Organic Law (Nº 04/2005 of 08/04/2005) for EIA.

PART IV: STRATEGY FOR IMPLEMENTING THE ENVIRONMENTAL AUDIT GUIDELINES

4. STRATEGY FOR IMPLEMENTING THE ENVIRONMENTAL AUDIT GUIDELINES

The strategy proposed for implementing the guidelines for environmental auditing, is based on the knowledge that there is an institution for the coordination, supervision of audit activities in Rwanda. Rwanda is still in the process of establishing Environmental management guidelines, regulations, standards and other statutory requirements. The implementation of the EA Guidelines will be in accord with these other documents and will be subject to reviews in pace with socio-economic development of Rwanda.

There is need to prepare a road map in consultation with all stakeholders, setting goals for the short, medium and long terms. Ensuring compliance is a requirement that needs to be gradually developed to accommodate the demands that regulation places on organizations. For environmental concerns to be integrated in organizations operations a gradual involvement strategy is required to achieve a good compliance status by most organisations. This should be the desired objective for requiring environmental audits which implies gradual cultural changes within organizations from which audits are expected.

This requires providing assistance and incentives during the initial introduction stages of the EA guideline. As the infrastructure improves laws can be strictly applied and there would be no justification for non-compliance. Environmental management is about partnerships so a partnership approach should be adopted. The overall impact would raise the credibility of all parties involved.

4.1 Promote the adoption of environmental Management Systems by all organizations.

EA should be conducted within a structured management activity by having an Environmental Management System (EMS). Putting together an effective EMS for an organisation is not an easy task. It is time consuming and a process that will never end but rewarding in the long run.

Having EAs within an EMS provide a more strategic and comprehensive view as it recognizes that:

- i. Activities of an organisation may have significant environmental impacts.
- ii. Environmental management is a responsibility shared by all managers and it is not the unique preserve of a specialized technical department. Environmental management must therefore become integrated with other management processes.

-
- i) Strategic decisions, e.g. those relating to product design, selection of plant and equipment, site acquisitions, inputs and other investments may have important environmental consequences that also need to be considered.

To be effective in environmental management and meet compliance requirements all projects must have an effective EMS. This will enable the organization to adopt a programme of continuous environmental improvement undertaken in a logical manner. The EMS is done in a planned, systematic, documented way in order to create an organizational culture which protects the environment.

There are ten stages in implementing an EMS:

- a) Understand the environmental challenge.
- b) Be committed to environmental improvement and communicate the commitment.
- c) Establish an environmental policy and publish that and other associated objectives.
- d) Assess and measure the extent of environmental damage within the organisation.
- e) Organize and structure the EMS.
- f) Plan to improve environmental performance
- g) Train to achieve the plans to facilitate the EMS.
- h) Improve systems to achieve environmental improvement.
- i) Record achievements and impediments to improvement.
- j) Do it all again.

4.2 Activities Requiring Environmental Audit

Carrying out EAs is demanding on time and resources. It is therefore important not to try to cover every conceivable activity due to lack of capacity for environmental auditing. It is therefore recommended that it is initially restricted to activities for which EIA is required as indicated in the Ministerial Order establishing the list of works, activities and projects that have to undertake EIA indicated under article 2. However, REMA should set priority areas for EAs based on the major socio-economic development areas in Rwanda that includes:

- a) Agricultural projects (e.g. sugarcane, rice, tea, etc).
- b) Manufacturing (processing) industries (food, tobacco, sugar, textiles, beverages, timber, etc).
- c) Agro processing industry.
- d) Mining industry.
- e) Chemicals and paints.
- f) Municipal facilities such as water and sewage works and solid waste disposal and management facilities.
- g) Energy (electricity generation, transmission, other energy sources).
- h) Water Projects.

To launch the EA guidelines, initially it can be introduced to large enterprises that have the capacity in terms of personnel and the resources to initiate cultural change without much disruption. The same is not true for medium and small enterprises as they do not have the management systems to guide and restructure their environmental effects.

Support should be given to medium and small enterprises to develop their own effective EMS. This is because they are disadvantaged by a lack of trained technical personnel and limited financial resources. They do not see the environment as an opportunity to cut costs and improve their market advantage.

To handle the peculiar problems of the various categories of enterprises, REMA should **conduct a survey to take an inventory** of all categories of industrial enterprises as well as State and Municipal organisations which could impact on the environment. From the inventory REMA can make a selection of a few projects from each category for piloting the use of the EA guidelines to conduct environmental audits and demonstrate the benefits of having EMS in their organisation. This would be followed with a series of workshops for the various categories for related enterprises to discuss the outcome. This would ensure collaboration and cooperation by working in partnership.

4.3 Frequency of Environmental Audits

The criteria for determining the frequency of environmental audits, should be guided by the fact environmental audits are time consuming, as such frequent audits could make enterprises uncooperative. The timing of the first audit should be guided by the provision in the General EIA Guidelines (REMA 2006) that is annually or as directed by REMA after project completion for new developments. Suggested frequency for EA is provided in appendix V of the EA Guidelines, the first one being 12 months after implementation of a project (NEMA 1999) REMA can set the frequency for audits after the first audit as it deems adequate. Provision should also be made for requesting audits on case by the case basis. Audits should be frequent for enterprises with poor environmental records until a satisfactory situation is established.

4.4 Public Involvement in Environmental Audits

Environmental audits have been generally considered as private and confidential. However, it is still possible to use the public in audits so that they highlight areas of priority concern to them. Local communities close to a facility can assist greatly in monitoring and compliance. An organisation making its audit public can help establish good community relations and transparency, that it has nothing to hide and seeks the community's welfare.

A balance approach has to be adopted. A general rule should be that it is private unless certain situations demand it be made public. For instance if the public have made persistent complaints or there is great public interest or there is significant impact of the operations on the lives of the community. This may be done to restore public confidence.

4.5 Coordination and Supervision of the Audit Process

The environmental audit process should be guided by REMA as the government institution for environmental matters. REMA should work in partnership with lead agencies and other stakeholders and interested parties to achieve the desired objectives of EAs. The responsibility for EAs is stated in the General Guideline for EIA for Rwanda section (2.1.6.9)

4.6 Capacity Building

In the absence of capacity for environmental audit in the country, capacity building is a priority for the successful implementation of the guidelines. Capacity has to be developed for all stakeholders in the form of training, workshops and seminars for personnel in both public and private sectors in environmental auditing techniques. Training is important in environmental auditing. Environmental auditors should possess and have ready access to knowledge, skills and disciplines needed to accomplish audit objectives. REMA should select key institutions and organisation for training to ease the implementation of the guidelines. Consultants may also be hired to train selected institutions environmental auditing.

To effectively create capacity for EA in Rwanda programmes for capacity development should be developed and implemented. This should include identification of suitable training institution to develop training modules based on an initial training needs assessment and implementing a training programme. Awareness and sensitisation programmes should also be developed targeting Developers, key institutions and the public in Rwanda. Appendix IV summarises the necessary content of EA training module.

4.7 Registration and Accreditation of Environmental Auditors

Registration, certification or accreditation as an environmental auditor generally constitutes a declaration by individuals concerned that they consider themselves professionally competent to practice as auditors. Usually professionals and consultants have implied duty of care towards their client to require a high standard of performance.

To create a system that achieves the desired outcome in terms of registration, that is recognized and valued internationally four steps are needed:

- Auditors must be trained and knowledgeable in their assessments area to have Credibility.
- Courses attended for education and training must have the proper content and appropriate educational rigor; otherwise, auditors will not acquire the requisite knowledge.
- Registrars must follow international guides and professional protocols to safeguard the integrity and standings of registrations.
- Those in charge of accreditation must follow appropriate guides and protocols to

ensure that no part of the system receives accreditation before it satisfies all qualitative and procedural requirements.

These conditions cannot be attained in the short-term. It is gradual which requires both administrative set up for registration and capacity building of potential auditors. The registration scheme should be opened to both internal and external auditors working within the areas of environmental auditing, environmental management systems (EMS) and closely related fields. *Refer to appendix IV – capacity building and appendix V.* Minimum academic qualifications for registration as an EA practitioner is a Bachelor degree or its equivalent in the respective fields of specialisation.

REMA should set up a registration system for EA practitioners that issues certificate for practice. The applicants for certification should provide copies of certificates of relevant academic qualifications; curriculum vitae indicating years of experience in their respective professions and in EA and names of three referees. REMA should have in place a committee to vet these applications before certification and registration.

Appendix I: Pre-Audit Questionnaire

The purpose of this questionnaire is to gather the necessary information on the audit site prior to undertaking an on-site audit. Audits of facilities or enterprises will be most efficient when the auditor has some prior knowledge of the facility and its environmental programs and has access to key materials, such as permits or compliance reports, at the onset of the visit. This will help to eliminate disruptions and delays of routine operations and lengthy searches through files. Therefore a pre-visit questionnaire is important to specify the particular sorts of information and materials that the Environmental Manager should compile for the auditors. This questionnaire is designed to familiarise the environmental audit team with the site operations prior to the visit, while information checklists highlights a list of documents required prior to the audit.

Please complete the forms as thoroughly and accurately as possible. Where a question cannot be answered or does not apply, please respond with not applicable or unknown. Response should reflect the actual conditions as opposed to “ideal” situation.

This questionnaire should be completed by the Environmental Manager and or designated Internal Auditor of the facility and returned to the Audit Team Leader one week before the scheduled visit. The questionnaire is provided in the boxes that follow. You may use extra sheets of paper to answer questions and attach to the questionnaire

1 GENERAL

- i. Name of the enterprise
- ii. Year of establishment or registration(attach registration evidence)
- iii. Are the premises owned or leased?
- iv. Indicate the dates, ownership, and use(s) of the properties prior to the date of acquisition or lease by this organization
- v. Outline below the environmental organisation at the site (use chart if possible or attach separate sheet)

vii Was EIA done before the project implementation?

viii Have there been any remedial investigations or corrective actions taken at these premises (e.g. indoor air quality monitoring, wastewater monitoring, noise monitoring, audits, etc.)? Describe briefly:

ix Give a brief description of the operational activities (e.g. processing, manufacturing, etc) of your organization

x State any process modifications or expansions currently being planned

xi Describe the major pollution facilities employed at your site

xii List any areas of non-compliance associated with your operations over the last six months

xiii Highlight areas of environmental concerns at the premises including any areas of regulatory uncertainties

Provide name of staff responsible for estates services issues.

Name and Title:

Location:

Telephone no.:

E-mail address:

2 OVERALL ENVIRONMENTAL MANAGEMENT

- i. The number of staff at the premises (by department or location):
Professional:
Technical/Field:
Others (specify):
- ii. Is there a company Environmental Policy? (provide a copy)
- iii. Describe the scope of the existing policy (e.g., pollution prevention, energy and water conservation, training, public relation, etc)
- iv. Is the policy endorsed (signed) by the head of the organisation?
- v. Has a company or facility Environmental Coordinator been formally appointed and is responsible for the implementation of the policy within the facility?
- vi. Has the Environmental Coordinator been given the responsibility for monitoring the effectiveness of policy implementation?
- vii. Is the Environmental Policy displayed prominently in all departments?
- viii. Is every staff member knowledgeable about the Environmental Policy?
- ix. Is the policy reviewed regularly?
- x. Have the necessary resources been allocated to cover specific environmental issues (i.e., emergencies, waste management, monitoring, audit, etc.) at Departmental level? Please specify.

Provide name of staff responsible for Environmental Policy issues.

Name and Title:

Location:

Telephone:

E-mail address

3 POLICY ON PROCUREMENT OF MATERIALS

A. Do you have inventory of all incoming supplies and materials for:

- i. Offices (e.g. papers, stationery, etc)
- ii. Computer related items (e.g. toner cartridges, paper, etc)
- iii. Canteen supplies (e.g. food and drink packaging, plastics, Styrofoam, polythene, bags, sacks, glass, straws, etc)
- iv. Chemicals (e.g. detergents, biocides, acids, alkalis, etc)Others (specify)
- v. Others (specify)

B Do you have defined procedures for inventory keeping, updating and checking?

C Do you have a mechanism for verifying new supplies and materials:

- i. Nature
- ii. Quantity
- iii. Quality
- iv. Specification
- v. Compliance with environmental regulations and/or company/facility guidelines
- vi. Potential environmental impacts
- vii. Compliance with health and safety regulations and/or company/facility guidelines

-
- viii. Packaging materials (e.g. quantity, biodegradable, non-biodegradable, recyclable, etc)

Provide name of staff responsible for Departmental procurement.

Name and Title:

Location:

Telephone:

E-mail address

4 MATERIAL MANAGEMENT

Office operation

- A** Is there any company policy to enable reviews of supplies and materials for Environmentally friendly alternatives:
- i. Eliminate/minimise use of 'environmentally unfriendly' materials
 - ii. Eliminate/minimise storage of 'environmentally unfriendly' materials
 - iii. Eliminate/minimise waste generation
 - iv. Recycling and reuse (i.e. printer toner cartridges, used paper etc.)
- B** Is there a control system on materials introduced to departmental premises (e.g. estates, laboratory samples, clinic items, garage, repair workshops, etc)
- C** Describe any practice on management of materials by your company/facility leading to good environmental performance(e.g. use of recycled paper, double sided printing, single line spacing, non glossy report covers, water recycling, energy saving lamps, etc)

Laboratory Operation

- D** Indicate activities using hazardous materials
- E** Describe the nature of the hazardous materials –acids, bases, irritants, asphyxiating substances, heavy metals, cryogenes, flammables, poisons, carcinogens, infectious materials, radioactive, biological agents, explosives, etc
- F** Is there an inventory of all incoming supplies and materials:
- i. Standard laboratory supplies
 - ii. Chemicals
 - iii. Biological/infectious materials
 - iv. Dangerous materials
 - v. Radioactive materials
- G** Provide details of any licenses, permits or application to use, storage and handling of these materials
- H** Describe any monitoring or corrective actions taken in the past on (e.g. fugitive emissions, chemical spills, discharges, etc)

I Provide details on any policy or practices related to prevention or minimization of environmental impact concerning

- i. Elimination of use of environmental or health and safety adverse substances (i.e., ozone depleting substances, asbestos, carcinogens, etc.)
- ii. Proper storage and leakage containment of dangerous materials and chemicals (i.e., corrosive substances, explosives, poisons etc.)
- iii. Appropriate storage and labelling of materials
- iv. Scheduled inspection of storage and handling facilities

Provide name of staff responsible for handling hazardous materials.

Name and Title:

Location:

Telephone:

E-mail address

Pesticides

J Are pesticides used by your company? Indicate the types and state whether restricted by any regulations:

Algaecides ----- Herbicides-----

Fungicides----- Insecticides-----

Rodenticides----- Others-----

K Who applies the pesticides? Are they certified?

L If pesticides are stored at the facility, describe the following:

- i. Locations and storage practices
- ii. Measures in pesticide storage, application and disposal
- iii. Segregation practices

M If outside contractors are used for pesticide application, indicate:

Contractor

Service Provided

Initial Date of Application & Frequency *Certification Number*

Provide name of staff responsible for pesticides.

Name and Title:

Location:

Telephone:

E-mail address

Asbestos

N Do you have asbestos at your premises?

O Is there any asbestos management programme?

P Is there any compliance audits for asbestos in your premises? Describe the audit?

Q Do you know exactly where the asbestos are within your premises? Describe Briefly.

Provide name of staff responsible for management of asbestos.

Name and Title:

Location:

Telephone:

E-mail address

5 WATER SUPPLY

- A** Indicate the source of water supply at your premises
- B** Outline the uses of the water supplied to your premises
- C** Describe any on-site water treatment systems
- D** Do you sample (monitor for quality) the raw water at source and the treated water? Show records
- E** Outline the maintenance of the water treatment system (e.g. back wash frequency, resin regeneration, etc)

Provide name of staff responsible for water supply and quality issues at the premises.

Name and Title:

Location:

Telephone:

E-mail address:

6 WASTEWATER MANAGEMENT

- A.** list the sources of wastewater, type of discharges and daily volumes for the following:

<i>Source</i>	<i>Discharge Frequency</i>	<i>Volume (units)</i>
Cooling water		
Contact		
Non-contact		
Laboratory		
Wastewater		
Sanitary Wastewater		
Others (describe)		

- B** Provide details of any licenses or application related to water pollution control

C Describe type(s) of wastewater pre-treatment prior to discharge.

Maintenance schedules.

Are records kept?

D Indicate locations of all wastewater discharge points

E Provide wastewater monitoring records and compliance standards used

F Is wastewater recycled? If so describe briefly (i.e. treatment and use)

G Describe any wastewater management strategies you use (i.e. reduce, eliminate, reuse, etc)

H Describe any procedures followed in the event of exceeding of discharge standards

I Are all relevant staff fully trained in the above procedures?

J Describe any wastewater compliance monitoring programmes in place. Where are records of all monitoring results kept?

K Were there ever any internal investigation and/or mitigation actions taken for wastewater related issues? If so, specify.

Provide name of staff responsible for wastewater regulatory issues.

Name and Title:

Location:

Telephone:

E-mail address:

7 ENERGY MANAGEMENT

- A** Are there records of energy use at the premises? Provide location of record
- B** Have energy audits taken place at your premises? Provide location of the report
- C** Are there defined maintenance programmes to ensure all equipment is operating at optimum efficiency?
- D** Are there programs to replace energy inefficient equipment/systems?
- E** Are there policy to consider energy efficiency when purchasing new equipment?
- F** Is there commitment to reduce energy use? If so, attach a written copy.
- G** Has the responsibility to reduce energy use been formally allocated in writing?
- H** Are there programmes to monitor energy use and to quantify reduction? Where are the records kept?

Provide name of staff responsible for energy management issues.

Name and Title:

Location:

Telephone:

E-mail address:

8 WASTE MANAGEMENT

A Provide details of wastes at your premises (including waste samples brought in for analysis, used pesticides, etc)

i. Dangerous waste

ii. Chemical waste

iii. Biological/infectious waste

iv. Solid waste (including obsolete equipment)

v. Radioactive waste

vi. Other wastes (specify)

B Provide details of any permits, licences or applications related to waste generation, storage, handling, transportation and disposal

C Provide details of any on-site waste disposal system or pre-treatment systems

D Briefly describe any waste recycled (i.e. type, source, characteristics, treatment and use).

E Briefly describes any current waste minimisation programmes (i.e., reduction, reuse and recycling) and indicates responsible staff.

F Provide information on any off-site facilities used for waste treatment, storage or disposal

<i>Company name</i>	<i>Premises name</i>	<i>Type of waste</i>	<i>Volume month</i>	<i>per</i>	<i>Treatment /disposal method</i>
---------------------	----------------------	----------------------	-------------------------	------------	---

G Is there any programme for compliance audit in place? Describe briefly

H Has there been any internal investigation in relation to waste generation, storage, handling or disposal? If so, describe briefly.

Provide name of staff responsible for waste management issues.

Name and Title:

Location:

Telephone:

E-mail address

9 AIR QUALITY MONITORING AND CONTROL

General

A Describe any policy on air quality (e.g., ozone depleting substances in refrigerants, solvents and fire extinguishers, use of non-formaldehyde furniture, smoking policy, etc)

Office Operation

Indicate the number of the following equipment in the offices

- i. Laser printer-----
- ii. Xerox/Photocopier-----
- iii. Facsimile machine-----
- iv. Computer-----
- v. Others(e.g. ozone generator, specify)-----

-
- B** What are the other sources of indoor emissions not covered above?
- C** Has indoor air pollution been monitored in the past? If so provide records
- D** Is there a programme to monitor the indoor air quality at this premise? If so, describe briefly.
- E** Describe any mitigation actions taken in the area with respect to indoor air quality improvement
- F** Indicate any medical symptom experienced by your members related to air quality

Provide name of staff responsible for indoor air quality issues at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

Laboratory Operation

- G** Identify operations that involve air emissions (i.e. handling of chemicals and solvents, biological sample preservation etc.).
- H** Is there an inventory of all emissions (including fugitive emissions) released from the area?
- I** Describe any programme of updating emissions inventory.

-
- J** Describe the air pollution control equipment installed and operating at the premises (i.e. Particulate filters, scrubbers etc.).
- K** Indicate the number and location of stacks, vents or other outside emission points originating from the area.
- L** Provide details of any licences or applications related to ambient air quality regulations
- M** Describe any formal criteria for reviewing the premises emission strategy (i.e., eliminate or reduce emissions).
- N** Have you ever carried out any internal monitoring and taken mitigation action? If so, specify.
- O** Describe any ambient air compliance monitoring programmes in place at the premises. Are records kept of all monitoring results?
- P** Explain any procedures to be followed in the event of exceeding standards.
- Q** Are all relevant staff fully trained in the above procedures?

Provide name of staff responsible for indoor air quality issues at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

10 NOISE MONITORING AND CONTROL

- A** Identify all operations or activities that may generate substantial noise levels beyond normal premise background levels
- B** Describe any current practices to reduce noise levels at the premises
- C** Have there been any noise monitoring programmes undertaken at the premises? If so, describe briefly.
- D** Have there been any formal complaints received on noise generated within the area? If so, provide details.

Provide name of staff responsible for noise monitoring and control issues at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

11 TRANSPORT

- A** Explain fleet management methods and environmental performance (i.e. fuel type and economy, refrigerant use, emissions standard, noise level, recyclables, paint use, repair workshop procedures, etc.).
- B** Describe scope of maintenance programme in place for all transportation devices.
- C** Is there policy on spillage prevention and disposal of maintenance wastes (e.g. engine oil, refrigerant, tyres, etc)?

D Is there a programme in place to monitor air and noise emissions and to effect appropriate arrangement for corrective maintenance as required?

E Is there any written policy or guidance on use of Department vs. private vehicles?

F Is there any existing guidance on staff transport arrangements to encourage use of public transportation?

12 EMERGENCY RESPONSE

A Do you have any emergency response procedures and / or contingency plan (attach copy) on? Answer as applicable

- i. Disruption of water supply
- ii. Supplied water treatment system failure
- iii. Wastewater treatment system failure
- iv. Chemical/chemical waste spillage
- v. Dangerous materials/waste spillage
- vi. Biological/infectious materials/waste release
- vii. Radioactive materials/waste release

B Provide details of any equipment located in areas where emergencies may occur

C Are the staff in these areas appropriately trained in emergency response procedures?

Provide name of staff responsible for emergency response procedures issues at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

13 STAFF AWARENESS TRAINING

Staff Awareness

- A** Do you hold regular meetings on the improvement of the working environment?
- B** Have staff participated widely in any environmental management issues at the premises (e.g. reduction in paper, water and energy usage)
- C** Are members adequately informed on the objectives, approach etc of such activities?

Training

- D** Describe any environmental training (topics and nature) workshops, seminars or campaigns offered in the past by your company
- E** Who has been trained among the staff?
- F** Have participant been involved in reviewing the training?

Provide name of staff responsible for staff awareness and training issues at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

14 ENVIRONMENTAL INFORMATION PUBLICITY

A Do the staff members responsible for publicity of environmental information have relevant experience and adequate training?

B Are there formal procedures to review the adequacy of publicity materials?

C How do you ensure up to date correctness of information in the publicity materials?

Provide name of staff responsible for publicity of environmental information at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

15 RESPONSE TO PUBLIC ENQUIRIES AND COMPLAINTS

A Describe any formal procedures or guidelines for enquiry (i.e. both internal and external)

B Does your company have any procedure in place to handle enquires on environmental information of public interest? If so, describe the procedure

C Are there any procedures or guidelines available to handle complaints received from the public? If so, describe briefly.

Provide name of staff responsible for public enquiries and complaints at your premises.

Name and Title:

Location:

Telephone:

E-mail address:

The QUESTIONNAIRE WAS COMPLETED BY:

Name and Title:

Job Title:

Company/facility address:

Telephone No:

Fax:

E-mail address:

Website:

Date:

Appendix II: Legal Requirements for Compliance in Projects

1. Examples of Environmental Law and Regulations that can be used for compliance Audit¹

S/NO	ACT/STATUTE/Policy	AVAILABILITY		LOCATION	
		YES	NO	Project/ Facility	GOVERNMENT/LEAD AGENCY
1	The Constitution of the Republic of Rwanda				
2	Environment Policy				
3	Water Policy				
4	The Public Health Act/Policy				
5	Petroleum Act/Policy				
6	Mining and Quarry Law				
7	Forest Act /Policy				
8	Wildlife Act/Policy				
9	The Investment/ Industry Policy				
10	Local Governments Act				
11	Decentralisation Policy				
12	Food and Drugs Act/Policy				
13	Waste Management Policy				
14	Land Act/ Policy				
15	Wetlands policy				
16	Agricultural Policy				
17	Plant Protection Act				
18	Water and sanitation laws				

1= requirement is facility dependent

2- Environmental compliance audit

Law / regulation /permit	Obligation, limit	Compliance issue
❖		
❖		
❖		
❖		
❖		
❖		
❖		

Note: In column 3 explain the company status of compliance with the regulation and what is being done. Indicate whether the company is in compliance or not by:

C= Complying; NC = Not complying.

Appendix III: Develop an action plan to address audit finding

Suggested Methodology of Assessing Audit Findings

Compliance Assessment

Observed conditions are assessed against the relevant Rwandan and International requirements. The compliance status against the reviewed guidelines can use the following terminology.

No = non compliant with any one or a combination of requirements

Yes = compliant with all of reviewed requirements

NA = no requirements applicable

In some instances, only the Rwandan or the World Bank requirements may apply. Where both requirements apply, the more stringent of the two requirements should be considered for further evaluation.

Risk/Liability Ranking

The following terminology can be used in ranking of Risks and Potential Liabilities:

Liability is ranked using an assessment of the criticality of the issue (described below) including consideration of financial and legal implications for the proprietor [and staff] of the facility, if conditions continued unchanged from observed conditions. For example, if process effluent continues to be discharged to storm water, in determination of the severity, frequency and probability of the item identified, the past and present (or future) liability would be determined based on the criticality that arises from consideration of these factors. The resultant ranking can be scored in the range of 0 to 10 derived from the summation of the values given to each of the criteria for each issue.

Potential liabilities may include fines, plant closure, installation of pollution abatement equipment and compensation. The following issues should be taken into consideration in determining potential liabilities:

- Actual or potential non-compliance with law or environmental policy.
- Poses significant risk to people, property or the environment.
- Actual or potential effect on economic viability or performance of facility (beneficially or negatively).
- Actual or potential off-site impact that affects the organisation's public profile.

The risk assessment component of the audit can be derived from the allocation of the severity, frequency and probability values (Rwanda Francs or US Dollars) to each liability issue identified based on scales.

Remedial Options

A range of potential remedial options can be considered for management of identified liabilities. The options can be classified ranging from *No Action* to obtaining required *compliance agreements, developing policies, process improvements* or *more intensive actions requiring implementation of on-site works*.

Considering the following can do cost estimate associated with the implementation of remedial options:

- Current requirements;
- The anticipated scope of work required to achieve compliance;
- Capital investment;
- Staff time and fees required to implement the action; and
- Information provision.

Summary of Audit Findings

After the completion of the on-site audit assignments the auditors will prepare a summary of the audit findings detailing concerns, compliance, risk, remedial -options, etc as detailed in the table in *Appendix II and Appendix III*

3 Summary of Audit Findings

Finding category	Legislative Compliance	Conformity with Corporate Policies, Procedures and Guidelines	Good Environmental Practice Recommendations
Material management			
Energy Management			
Water and Wastewater management			
Waste Management			
Air Quality			
Noise Emission			
Transport & Travelling			
Emergency Response Procedures			
Staff Awareness & Training			
Response to Public Enquiries & Complaints			
Environmental Management Systems (EMS)			

- Implementation levels:**
- [1] Relatively easy and simple to implement with minimal resource requirements
 - [2] Require some planning and coordination at moderate expense and time commitment
 - [3] Involve significant modification of existing system at high cost in protracted time period

4 Action Plan Framework

Environmental Issues	Objective	Target	Action	Responsible Department	Personnel Responsible	Budget	Timescale for Implementation /Completion
Material management							
Energy Management							
Water and Wastewater management							
Waste Management							
Air Quality							
Noise Emission							
Transport & Travelling							
Emergency Response Procedures							
Staff Awareness & Training							
Response to Public Enquiries & Complaints							
Environmental Management Systems (EMS)							

Summary of Audit Findings

ID No	Section No	Concern	Compliance		Risk		Ranking Total	Remedial Options	Comments	Cost (Rwanda Francs or US \$)
			Rwanda regulations	International Guidelines	Current On-going Liability	Past Operational Liability				
AIR QUALITY										
<i>Environment</i>										
<i>Health & Safety</i>										
WATER QUALITY										
<i>Environmental</i>										
<i>Health & Safety</i>										
HAZARDOUS MATERIALS										
<i>Environmental</i>										
<i>Health & Safety</i>										
WASTE MANAGEMENT										
<i>Environmental</i>										
<i>Health & Safety</i>										

ID No	Section No	Concern	Compliance		Risk		Ranking Total	Remedial Options	Comments	Cost (Rwanda Francs or US \$)
			Rwanda regulations	International Guidelines	Current On-going Liability	Past Operational Liability				
SOIL										
GROUNDWATER										
QUALITY										
NOISE										
<i>Environmental</i>										
Health & Safety										
ENVIRONMENTAL										
MANAGEMENT										
MANAGEMENT										
OH & S										
OBSOLETE										
EQUIPMENT										
<i>Environmental</i>										
<i>Health & Safety</i>										

Appendix IV: Capacity Building, auditors qualification and registration

Training Workshop materials for - Environmental, Health & Safety Audit Training and Capacity Building

Introduction

The training is designed for Developers or project owners. However the contents can be adapted for training any target group after a training needs assessment.

The training material should be prepared in PowerPoint presentation or slides format. Other training aids like the use of flip charts, pictures and video presentations etc are encouraged to help in the learning process.

Training should be conducted within the company premises. This will make it easy to verify information and have hand-on practical experience to confirm some facts for discussion during the training. Being on site there will be no excuse for absenteeism for senior management and key staff identified for training.

Training materials

The training should be conducted using materials and format presented below:

(i) Presentation during the training will cover the following topics:

- Environmental Audit overview.
- Legislation & guidelines.
- Identification of key areas to be covered during Environmental audit.
- Key findings of the environmental audit.
- Implications.
- Discussion.
- Recommendations.

(A) AUDIT OVERVIEW

- EHS management.
- Site characteristics and surroundings.
- Physical & biological environment – air, water, soil, vegetation.
- Operational issues – noise, dust, wastewater, solid wastes, wastewater/effluent, PPE, materials management, OHS.

(B) LEGISLATION & GUIDELINES

Legislation

- National Environment Policy
- Environmental Regulations and Standards, Guidelines

-
- Summary of Rwandan Legislative Framework, to give a comprehensive presentation and for discussion with participants.

(C) KEY AUDIT FINDINGS

Examples:

- EHS management.
- Wastes and Waste management.
- Hazardous materials.
- Air quality.
- Soil contamination.
- Water pollution.

(i) KEY AUDIT FINDINGS - EHS Management

- Record of Systems in Place: policies, procedures, responsibilities, monitoring, recording, reporting
- Designated responsibilities. Any need for improvement?
- Training (any need for more focused training on EHS?).
- Housekeeping (waste reduction, dry cleaning, etc). Any need for improvement?
- Reaction from participants/discussion.

(ii) KEY AUDIT FINDINGS – Overall

- Process within the project (e.g. manufacturing process, infrastructure, mining, irrigation, etc)
- Management awareness of environment issues. Is there need for actions orientation?
- Environmental improvements to be considered.
- Does Environment & safety Committees exist? Is participation of everyone to be enhanced?
- The need for professional touch i.e. Continuous external assessment/advise if found necessary.

(iii) KEY AUDIT FINDINGS – Wastewater

- Sources: e.g. Process wastewater, storm water, etc.
- Management (Total review of the system may be needed).
- Direct disposal to the environment (Assess the quality of the effluent against the receiving environment).
- Permitting (Discharge permit).
- Implications (Ecosystems, residents, etc).

(iv) KEY AUDIT FINDINGS - Storm water

- Sources: e.g. open yards, open work areas, etc.
- Management: Are there any management issues? (e.g. Drainage needs improvement and segregate storm water).
- Disposal: Rivers/streams & Wetlands, land, etc (Consider quality).
- Permitting (Discharge permit).

(v) KEY AUDIT FINDINGS - Waste management

- Waste management plan: Is it up to standard? Sources, recording, storage, disposal, minimization/recycling.
- Permitting (management permit).
- Hazardous waste (e.g. sanitary, medical, agrochemicals, chemicals, waste oils, oil filters, medical wastes, etc).
- Storage –e.g. skips, bunkers, bunding of holding areas – is storage condition adequate/good?
- Disposal. How is it being done? Is it according to regulations?

(vi) KEY AUDIT FINDINGS - Hazardous materials

- Permitting issues e.g. agrochemicals, radioactive, medical.
- Chemical storage. Is there need for a review of the storage systems and management capacity?
- Inventory update schedule adequacy..
- Material safety data Sheets (MSDS)
- Emergency planning.
- Training.

(vii) KEY AUDIT FINDINGS - Air quality

Examples

- Permitting.
- Boiler stack.
- Incineration.
- Humidity.
- Heat.
- Dust generation and process emissions.
- Worker exposure.
- Complaints management.

(viii) KEY AUDIT FINDINGS - Soil contamination

examples

- Oil /roleum storage.
- Asbestos.
- Agro-chemical spills.

-
- Laboratory chemicals
 - Wastewater treatment systems.
 - Waste oil storage areas.
 - Waste storage (e.g. solid wastes, expired chemicals, waste dumping, etc).
 - Underground oil storage tanks (leakage surveillance)
 - Aboveground oil storage tanks (leakage surveillance)

(ix) KEY AUDIT FINDINGS - Occupational Health & Safety

- Noise levels in work areas
- Safety procedures. Is there any documentation and implementation
- Worker exposure to chemicals
- Provision and enforcement of the use of PPE (personal protection equipment use incentives/disincentives)
- Medical surveillance of workers

(D) Environmental, Health, Safety & Management

- Why have one?
- International standards: ISO 9000 (Quality Assurance/Control); ISO 16000 (Occupational Health & Safety); ISO 14000 (Environmental)

EHS management plan

- Policy.
- Objectives.
- Targets.
- Responsibilities.
- Strategies.
- Programs & procedures.
- Monitoring & inspection.
- Verification, auditing & reporting.

(E) DISCUSSION

- Audit findings.
- Remedial options.

After the training there should be a system of registration of EA experts through a systematic qualification evaluation method as presented in sections F and G below.

F. Evaluation of the qualifications of environmental auditors.

General

This provides guidance for evaluating the qualifications of environmental auditors.

Evaluation process

This requirement may be implemented by the establishment and operation of an evaluation process. The process may be internal or external to the auditor's audit programme management. Its purpose is to evaluate the qualifications of environmental auditors.

This process should be directed by an individual or individuals having current understanding and experience of auditing operations.

The environmental auditor evaluation process may be subject to a quality assurance programme.

Evaluations of education, work experience, training and personal attributes

There should be evidence to show that environmental auditors have acquired and maintained the necessary education, work experience, training and personal attributes. The evaluation process should include some of the following methods:

- i) Interviews with candidates, written and/or oral assessment or other suitable means.
- ii) Review of candidate's written work.
- iii) Discussions with former employers, colleagues etc.
- iv) Role playing.
- v) Peer observation under actual audit conditions.
- vi) Reviewing records of education, experience and training.
- vii) Consideration of professional certifications and qualifications.

G. Environmental auditor registration body

General

This contains guidance on the development of a body to ensure a consistent approach to the registration of environmental auditors.

Auditor registration

If it is appropriate to establish a body for ensuring that environmental auditors are registered in a consistent manner, such a body should be independent and the following guidelines should apply.

The body may act to register environmental auditors directly or accredit other organizations who in turn register environmental auditors to the criteria as above.

The body should establish an evaluation process consistent with methods for evaluation of qualifications presented in section F above. The process should be subject to a quality assurance programme.

The body should keep a register of environmental auditors who currently meet the criteria specified in these guidelines.

Appendix V: Periods and Frequency for Audit Report

Within a period of not less than 12 months and not more than 36 months after the completion of the project or the commencement of its operations, whichever is earlier, the developer shall undertake an initial environmental audit of the project, provided that an audit may be required sooner if the life of the project is shorter than the period prescribed under this sub regulation.

This implies that between 1-3 years of starting a new development an initial EA should be submitted to the Authority.

Registration of Environmental Auditors

Details of procedure for certification and registration of EA practitioners is provided in section 4.7 of the Guidelines. Persons whose names and qualification have been approved by REMA carry out EAs.

Review of the Environmental Audit Report and the Role of the Public in the Environmental Audit Process: A member of the public, after showing reasonable concern, may petition the Executive Director of REMA to cause an audit to be carried out on any project.

Appendix VI: Example of General Checklist for an Environmental Audit
(Source: EPA, Australia 1996)

1. Site

- 1.1 Position relative to environmental features and public scrutiny
- 1.2 Location relative to usage of surrounding areas
- 1.3 Site history
- 1.4 Chance of prior contamination
- 1.5 Security of site
- 1.6 Safety of site (Fire, chemicals, explosives, etc) and emergency equipment
- 1.7 Accessibility in emergency situations
- 1.8 Layout with respect to operations
- 1.9 Housekeeping/landscaping
- 1.10 Presence of asbestos and asbestos cement sheeting
- 1.11 Loading bays - containment of spills

2. Management

- 2.1 Environmental policy and guidelines
- 2.2 Environmental personnel
- 2.3 Environmental laws and procedure
- 2.4 Environmental budget
- 2.5 Environmental training
- 2.6 Third party environmental involvement
- 2.7 Data collection and storage
- 2.8 Public relations on Environmental mailers
- 2.9 Staff suggestion schemes

3. Raw materials

- 3.1 Pollution potential
- 3.2 Toxicity potential
- 3.3. Quality testing
- 3.4 Dangerous goods legislation compliance
- 3.5 Containment of spills/leaks
- 3.6 Storage
- 3.7 Documentation
- 3.8 Transportation on-site and between sites
- 3.9 Raw material sources

4. Processes

- 4.1 Process monitoring
- 4.2 Plant maintenance
- 4.3 Process transfers
- 4.4 Quality control and testing

5. Liquid wastes

5.1 Storm water

- 5.1.1 Storm water drain protection
- 5.1.2 Vehicle and plant wash down

5.2 Sewer

- 5.2.1 Treatment systems prior to discharge
- 5.2.2 Pollution potential of untreated discharge
- 5.2.3 Discharge monitoring and recording
- 5.2.4 Permits
- 5.2.5 Visual check of sewer discharge

5.3 Tanker

- 5.3.1 Presence of proper contract
- 5.3.2 Contractor licence check
- 5.3.3 Pollution/toxicity potential
- 5.3.4 Knowledge of quality
- 5.3.5 Knowledge of destination
- 5.3.6 Knowledge of quantities, contractor and disposal
- 5.3.7 Recycling/resale programmes

6. Solid wastes

- 6.1 Presence of proper contract
- 6.2 Pollution potential
- 6.3 Segregation programmes
- 6.4 Recycling/resale programmes and potentials
- 6.5 Knowledge of destinations

7. Air emissions

- 7.1 Visual check on air emissions
- 7.2 Pollution potential
- 7.3 CFCs, Halons and use of and alternatives
- 7.4 Cooling tower cleaning and testing
- 7.5 Complaints

8. Noise

- 8.1 Noise level at external boundaries
- 8.2 In-house noise level

8.3 Noise monitoring, protection and abatement programmes

9. Products

9.1 Transportation

9.2 Labelling

9.3 Packaging

10. Emergency response procedures

10.1 Documentation of procedures

10.2 Scope and detail of procedures

10.3 Liaison with external authorities

10.4 Testing of procedures

10.5 Demographic studies

10.6 Natural disaster planning

10.7 Staff training and knowledge

11. Prior convictions and complaints

11.1 Prior convictions by statutory authorities

11.2 Any actions by environmental/community groups

11.3 Customer complaints about environmental issues

11.4 Recording of complaints and responses

11.5 Management structure for dealing with external bodies

12. Transport

12.1 Servicing of vehicles

12.2 Recycled oil use

12.3 Unleaded fuel use

12.4 Air conditioning CFC charging

12.5 Refrigerant issues

12.6 Disposal of worn tyres

12.7 Cleaning chemicals and waste water

12.8 Catalytic exhaust on vehicles

12.9 Transport labelling on vehicles

12.10 Emergency response procedures

12.11 Fire fighting equipment

Appendix VII: Environmental Management Audit Protocol

Management Commitment and Controls

1. Are there written policies signed by senior persons for company and individual site/areas?
2. Is there a person, with written responsibility, to co-ordinate the overall programme?
3. Are realistic and achievable objectives set and regularly reviewed?
4. Are individual managers held accountable for their environmental responsibilities and costs?
5. Are environmental costs defined and passed back to the originating department?
6. Is there a waste minimisation policy in place?
7. Does the organisation possess, or have full access to, relevant qualified/licensed personnel?
8. Are adequate library and database facilities provided with easy access?
9. Is a formalised audit and inspection procedure in place?
10. Do objectives contain both short-term requirements and long-term goals with due consideration to financial realities?
11. Is an open attitude to public information and public concerns shown?
12. Are responsible managers fully aware of the legal extent of their position?

Personnel training

1. Is a large proportion of the management team trained in the requirements of the environmental programme?
2. Are regular training updates used for managers?
3. Is the coordinator appropriately trained, knowledgeable and experienced?
4. Are operators familiar with company environmental objectives and procedures?
5. Is training structured, monitored and regularly reviewed?
6. Are environmental issues a regular part of company meetings and communications?
7. Is the knowledge base of the trainers adequate?
8. Is selection and suitability of staff for particular tasks adequately addressed?
9. Do adequate external contracts/liasons exist to ensure broad knowledge of professional staff?
10. Are adequate emergency procedure training sessions given with relevant practices?

Change control

1. Are change control procedures implemented which includes consideration of environmental impacts?
2. Are adequate mass balances conducted, with appropriate frequency, to detect changes of materials?
3. Do appropriate engineering policies exist from the design stages onwards to record and assess all changes?
4. Are professional environmental specialists consulted on individual projects or engineering reviews?
5. Is responsibility for change control clearly defined?
6. Does a defined route exist for legislative changes to be appropriately communicated?

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7. Are there adequate purchasing controls with a clearly written policy statement, specifically including environmental issues?
 8. Is the quality of all input material adequately monitored and records kept?
 9. Are records kept of the quantity and quality of waste materials?
 10. Are contracts adequately defined and contractors adequately trained with regard to environmental consequences?
 11. Are environmental change control procedures regularly reviewed and revised?

Hazard assessment

1. Are surveys regularly carried out, to identify possible emission/spill sources?
2. Have known sources of emission been reviewed/improved/eliminated?
3. At a project's initiation are environmental impact assessments made?
4. Is there a written procedure, which must be followed, for investigation of environmental incidents?
5. Are records/reports of investigations kept and reviewed?
6. Do procedures exist, and are they implemented, to detect material losses and action the findings?
7. Does a system exist, and are they implemented, to detect material losses and action the findings?
8. Are operational tasks analysed and the criticality of certain plan items identified and controlled?
9. Are audits of the environment performed and are they regular, comprehensive, evaluated, and recorded?
10. Are assessments performed on waste reduction, re-use and recycling, transportation and distribution, and for potential hazard elimination?
11. Is the potential for emergency situations understood, and are adequate, workable response plans in place (i.e. Training exercises)?
12. Have the incident/accident investigation reports and statistics been analysed to show root causes and underlying trends?

Hazard control

1. Do routine planned inspections take place of operational procedures/equipment having environmental consequences?
2. Are all potential waste streams monitored for quality and quantity?
3. Are records kept of all wastes and necessary regulatory compliance?
4. Are there written emergency procedures and are they specific, realistic, practised and demonstrably working?
5. Do adequate written procedures exist for all processes/operations, including releases to the environment? Do they take account of the need to minimise environmental impact?
6. Are there written procedures for responding to external complaints?
7. Are resources and equipment demonstrably adequate to achieve the stated aim for hazard control?
8. Are standards/compliance steadily improving?
9. Do operational procedures give due regard to waste minimisation?
10. Is adequate information passed to customers, transporters and distribution outlets regarding products and their use?
11. How the periodic reviews are conducted, the results reported and is action really taken?

Appendix VIII: Environmental Issues Checklist

1. Atmospheric emissions

- Emission standards (quality and quantity)
- Air quality standards
- Licences
- Fuels
- Protected Zones
- Emergency exclusions
- Scheduled processes
- Planning control
- Enforcement and monitoring
- Odour nuisance

2. Hazardous substance installations

- Storage and use of hazardous materials
- Notification of installations handling hazardous materials
- Major accident hazard sites
- Worker protection
- Toxic gas sites
- Enforcement and monitoring

3. Noise

- Nuisance
- Noise abatement zones
- Planning control
- Construction noise
- Workplace noise
- Monitoring and enforcement

4. Water protection

- Local, regional and/or national bodies
- Emission standards (quality and quantity)
- Discharge consents
- Dangerous substance directives
- Sectoral directives
- Water use directives
- Groundwater protection
- Spill prevention and clean up requirements
- Water improvement plans
- Monitoring and enforcement

5. Waste production and disposal

- Definitions of waste
- Requirements on waste generators
- Requirements on waste transporters
- Requirements on waste disposal operators
- Waste management licences
- Specific substance legislation
- Local, regional and national requirements
- International transfer/disposal
- Notification requirements
- Monitoring and enforcement
- Duty of care, requirements and audit trail

6. Site decontamination

- Decontamination, dismantling and disposal (D, d and d) of toxic related process equipment?
- D, d and d of toxic related contaminated storage?
- D, d and d of non-contaminated materials?
- D, d and d of buildings and structures?
- Demolition and disposal of catchment and effluent areas?
- Disposal of contaminated soil?
- Groundwater-clean up?
- Site reinstatement?
- Testing, monitoring before, during and after decontamination?

7. Site redevelopments

- Planning controls, local or national
- Environmental impact assessment/study
- Environmental statement
- Public enquiry
- Clean-up liability
- Enforcement and monitoring

8. Transport of materials

- Suitability/competence of hauler (i.e. Licensing)
- Packaging and labelling
- Emergency response
- Waste transporters regulations
- Hazardous goods regulations
- Worker protection
- Enforcement and monitoring