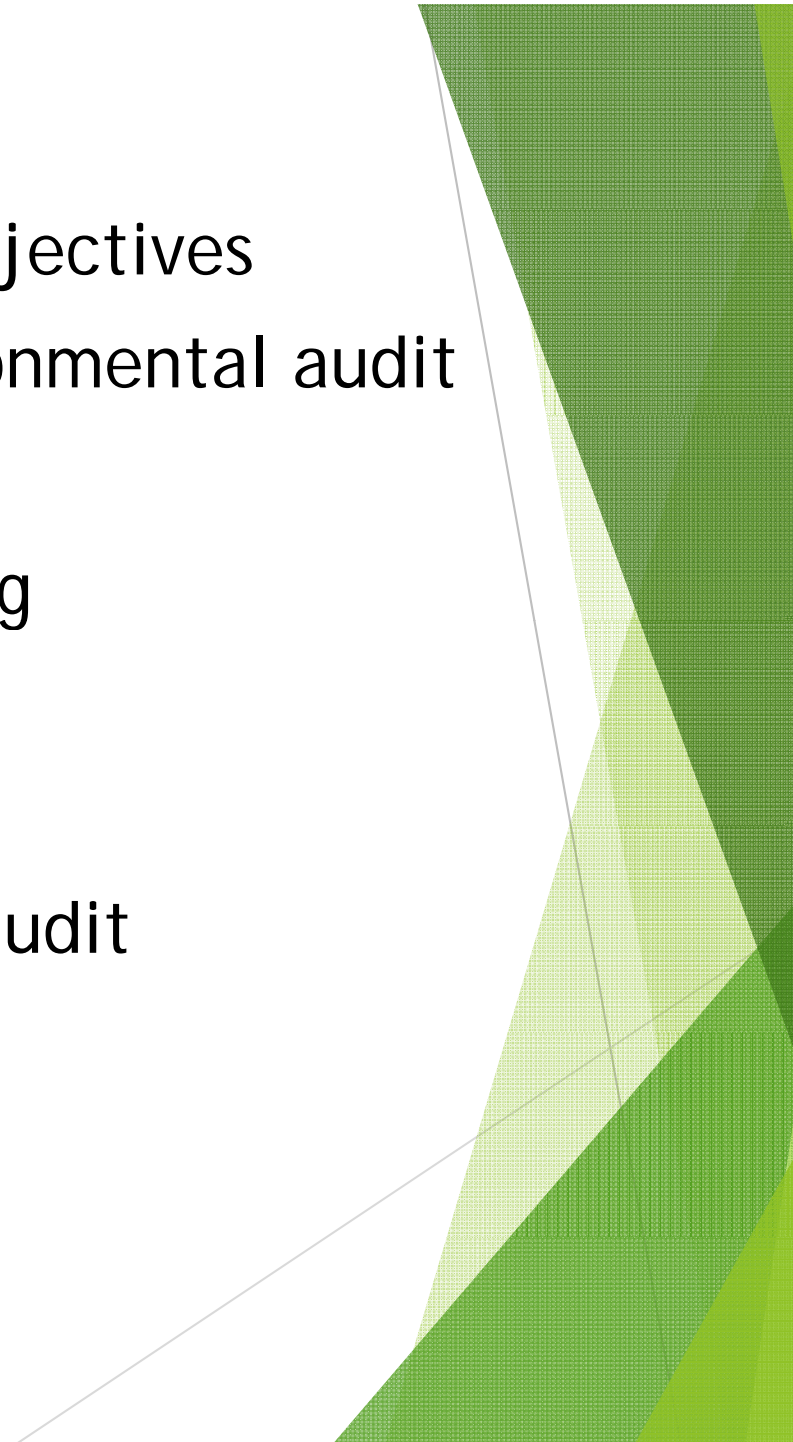


ENVIRONMENTAL AUDITING



Environmental Auditing

- ▶ Environmental Audit and its Objectives
- ▶ Principle functions of an environmental audit
- ▶ Environmental Auditing
- ▶ Areas of environmental auditing
- ▶ Types of audits
- ▶ Audit protocols and tools
- ▶ Conducting an environmental audit
- ▶ Contents of audit Report
- ▶ Structure of Audit Report
- ▶ The benefits of auditing



Environmental Audit and its Objectives

“Environmental audit” means a **systematic** evaluation of **activities** and **processes** of a project to determine how far these activities and processes **conform** with the **approved environmental management plan** of that **specific project** and **sound environmental management practices** and **applicable environmental standards**;

Environmental Audit and its Objectives

Environmental auditing is an attempt to provide information on the environmental performance of a company, and thus include environmental issues in the decision making process.

An environmental audit assesses the nature and extent of harm to the environment caused by the activities, wastes or noise from a particular company.

Environmental audits must be independent, objective, credible and transparent in order to be successful. Audits should also be regular and ongoing.

Objectives



Effectiveness of
Implementation of EMS



Compliance to Legal
Requirement



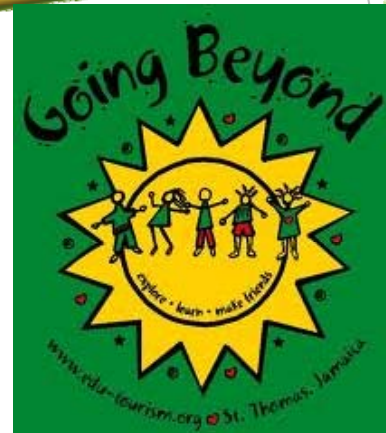
System Compliance



Identification of Gaps



Internal Benchmarks and
International Benchmarks



On going Beyond
compliance

Principle functions of an environmental audit

- (a) improve an organization or activity's compliance with environmental legislation and regulations such as air emission standards, effluent standards, waste management standards, and standard operating procedures;
- (b) document an operation or activity's current environmental performance of operation and environmental management procedures, including emergency response planning, monitoring and reporting system and planning for future environmental performance;

Principle functions of an environmental audit

c) prevent damage and the tendency for environmental damage

(d) improve resource use through reduction in material use, to minimize wastes and to identify recycling opportunities; and

(e) actions undertaken or needing to be undertaken by an organisation or activity to meet environmental goals such as sustainable development, recycling and efficient use of resources.

Environmental Auditing

Two forms of auditing have been defined:

1- **External Audit**

2- **Internal Audit**

an assessment of the conditions of the local environment, and consisting of '**Policy Impact Assessment**', a review of the activities (objectives, services, practices and policies) of the authority related to the environment protection as well as '**Management Audit**', a review of the procedures by which environmental policies are managed by the authority.

METHODOLOGY

S. No	Period	Subject
1.	Pre-audit Period	<ul style="list-style-type: none">• Questionnaire survey• Pre-audit visit to assess the facilities available to team• Identify the key persons and organize at the time of audit
2.	Activities at Site	<ul style="list-style-type: none">• Collection and collation of information (review of records)• Material balance• Water balance• Monitoring and verification
3.	Post Audit	<ul style="list-style-type: none">• Draft report• Final report

Areas of environmental auditing

Areas of environmental auditing normally include:

- ▶ Management Systems
- ▶ Material management, savings and alternatives;
- ▶ Energy management and savings;
- ▶ Water management and economy of use;
- ▶ Waste generation, management and disposal;
- ▶ Noise reduction, evaluation and control (internal and external);
- ▶ Work Zone Environment Quality
- ▶ Health Monitoring

Areas of environmental auditing

- Air emissions and indoor air quality;
- Transportation and travelling practices;
- Staff awareness, participation and training in environmental issues;
- Environmental information publicity;
- Public enquiry and complaints response; and

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Types of audit

1- Compliance audit:

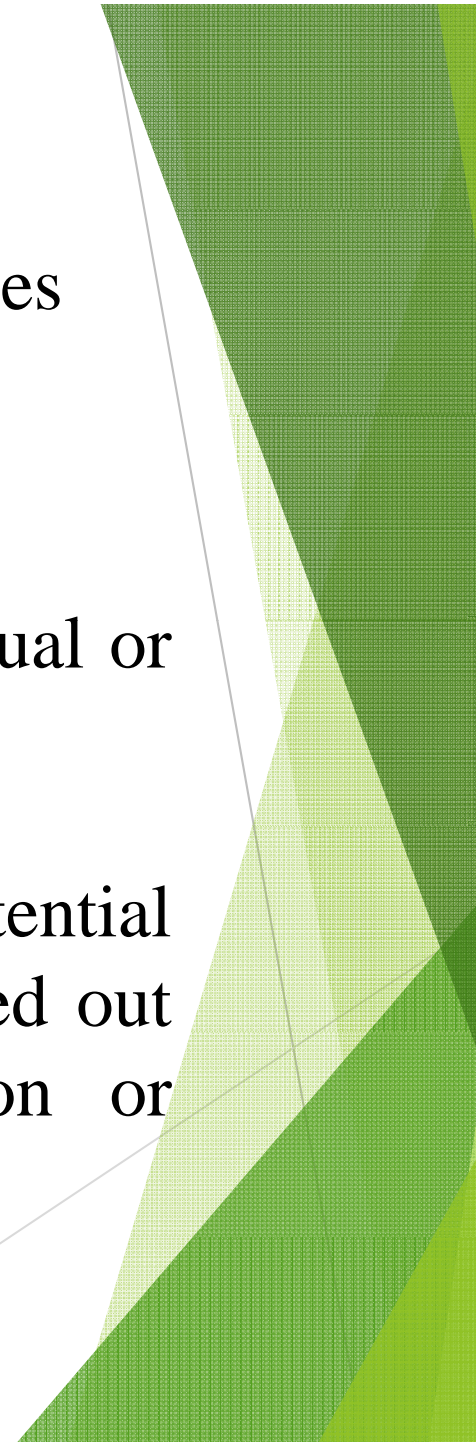
The most common type of audit. it consists of checks against environmental legislation and company policy. Compliance audits may be multimedia or programmatic. Multimedia audits involve identifying and auditing all environmental media (air, water, waste, etc.) that apply to the operation/company. Programmatic audits (which may also be called thematic or media-specific) are limited in scope to specific areas, such as air.

Types of audits

Issues audit: an evaluation of how a company's activities relate to a specific environmental issue such as global pollution or energy use;

Site audit: an audit of a particular site to examine actual or potential environmental problems;

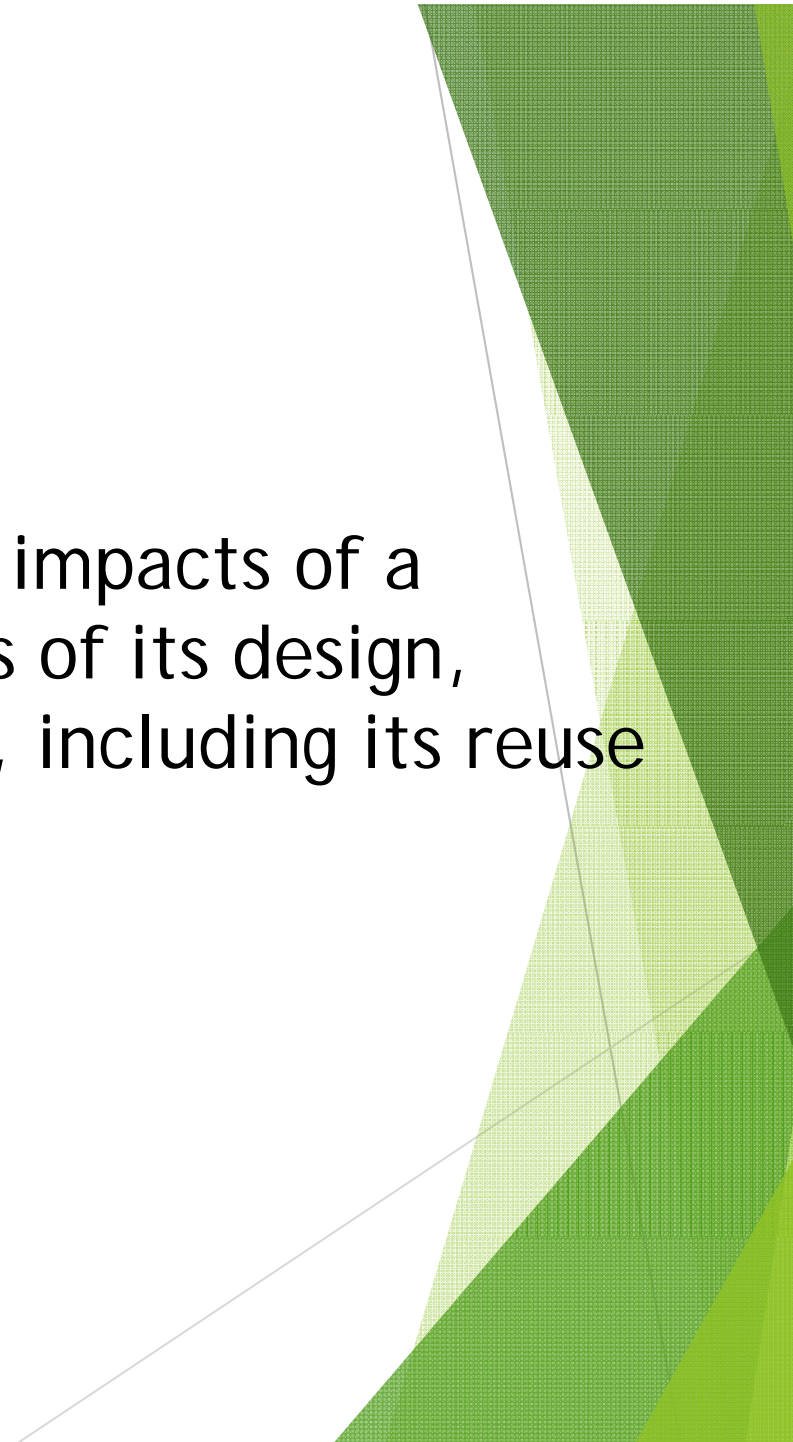
Due diligence audit: an assessment of potential environmental and financial risks and liabilities carried out because of a company merger or site acquisition or divestiture (e.g. contaminated land remediation costs);



Types of audits:

Product or life cycle audit

an analysis of environmental impacts of a product throughout all stages of its design, production, use and disposal, including its reuse and recycling.



Audit protocols and tools

- The term "protocol" means the **checklist** used by environmental auditors as the guide for conducting the audit activities.
- Current technology supports many versions of computer-based protocols that attempt to simplify the audit process by converting regulatory requirements into questions with "yes", "no" and "not applicable" check boxes.
- Other auditors use permits directly as protocols.

Audit protocols, methods and tools

During the past 20 years, advances in technology have had major impacts on auditing. Laptop computers, portable printers, CD/DVDs, the internet, email and wireless internet access have all been used to improve audits, increase auditor access to regulatory information and create audit reports on-site.

Conducting an environmental audit

- (a) Describe the project;
- (b) indicate the objective, scope and criteria of the audit;
- (c) study all relevant environmental law and regulatory frameworks on health and safety, sustainable use of natural resources and on acceptable national and international standards;
- (d) verify the level of compliance by the Proponent or the developer with the conditions of the environmental management plan;

Conducting an environmental audit

- (e) evaluate the proponent's or the developer's knowledge and awareness of and responsibility for the application of relevant legislation;
- (f) review existing project documentation related to all infrastructural facilities and design;
- (g) examine monitoring programs, parameters, and procedures in place for control and corrective actions in case of emergencies;
- (h) examine records of incidents and accidents and the likelihood of future occurrence of the incidents and accidents;

Conducting an environmental audit

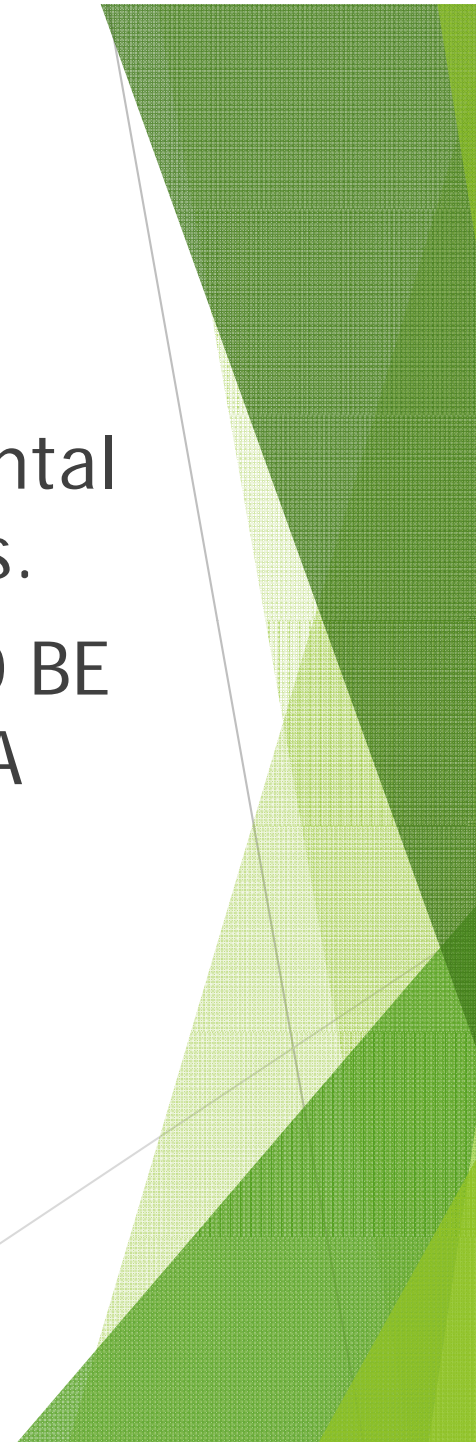
(i) inspect all buildings, premises and yards in which manufacturing, testing and transportation takes place within and without the project area, as well as areas where goods are stored and disposed of and give a record of all significant environmental risks associated with such activities;

(j) examine and seek views on health and safety issues from the project employees, the local and other potentially affected communities; and

Conducting an environmental audit

(k) prepare a list of health and environmental concerns of past and on going activities.

THE CHECK LIST FOR EACH PLANT SHOULD BE PREPARED BASED ON ABOVE STEPS AFTER A WALK THROUGH THE PLANT AND AFTER UNDERSTANDING THE PROCESSES AND ACTIVITIES>



Contents of environmental audit report

- (a) a presentation of the type of activity being audited;
- (b) an indication of the various materials, including non-manufactured materials, the final products, and by-products, and waste generated;
- (c) a description of the different technical activities, processes and operations of the project;
- (d) a description of the national environmental legislative and regulatory frameworks on ecological and socio-economic matters relevant to that particular project or activity;

Contents of environmental audit report

- (e) a description of the potentially affected environment on ecological and socio-economic matters;
- (f) a prioritization of all past and ongoing concerns of the project;
- (g) an identification of all environmental and occupational health and safety concerns of the project;
- (h) an opinion on the efficacy and adequacy of the environmental management plan of the project;

Contents of environmental audit report

- (i) detailed recommendations for corrective activities, their cost, timetable and mechanism for implementation;
- (j) an indication of the measures taken under the environmental management plan to ensure implementation is of acceptable environmental standards; and
- (k) a non technical summary outlining the key findings, conclusions and recommendations of the auditor.

Structure of the Audit Report

- (a) executive summary;
- (b) project's current status information;
- (c) audit objectives and scope;
- (d) audit protocol, criteria and methodology used;
- (e) findings and observations;
- f) description of key issues including the discovered project strengths and weaknesses;
- (g) recommended actions;
- (h) conclusions;
- (i) list of documents used or cited as references; and
- (j) appendices (photographs, future Plan of Action, consultancy and the list of stakeholders consulted).

The benefits of auditing

Ensuring compliance, not only with laws, regulations and standards, but also with company policies and the requirements of an Environmental Management System (EMS) standard if adopted

Enabling environmental problems and risks to be anticipated and responses planned;
To demonstrate that an organization is aware of its impact upon the environment through providing feedback;



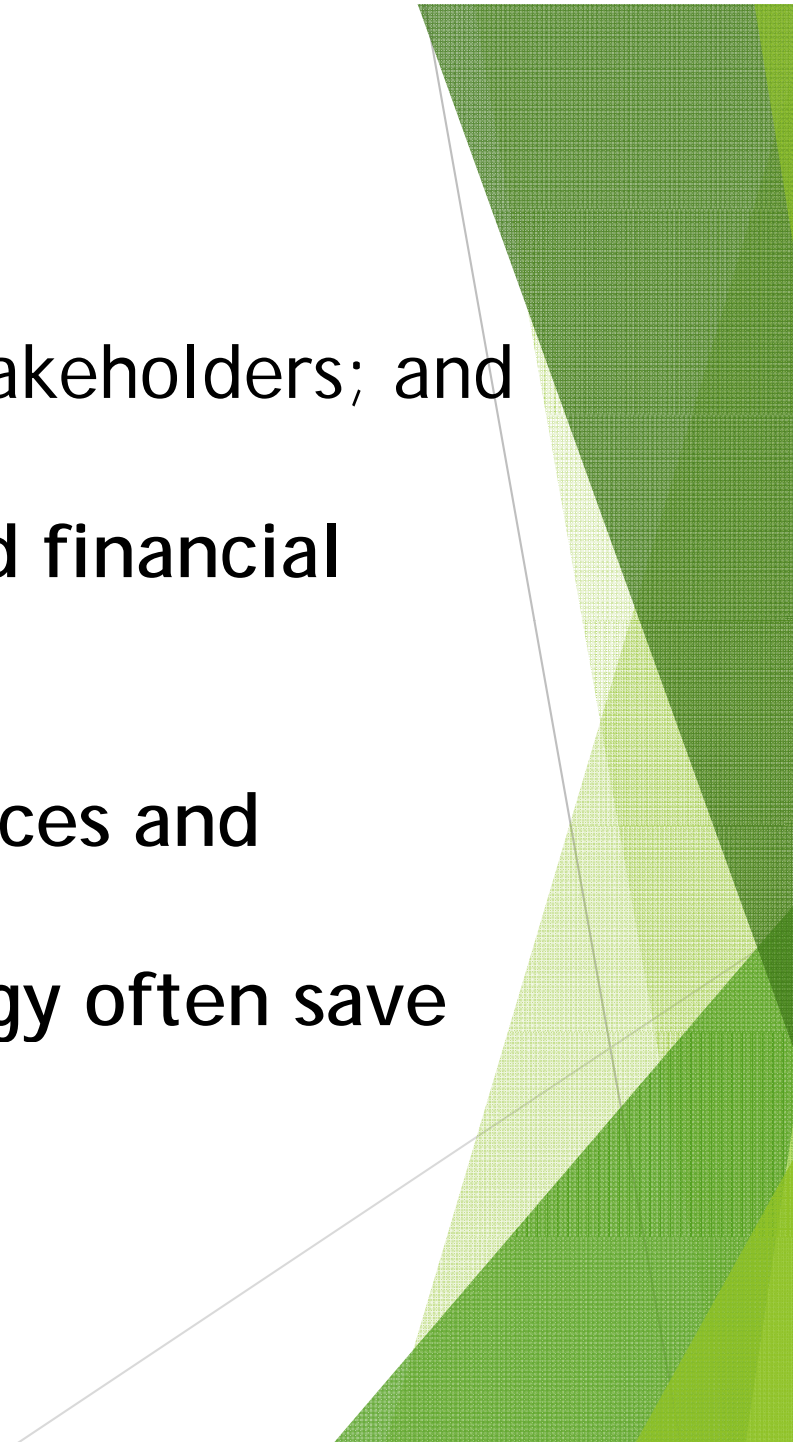
The benefits of auditing

Increased awareness amongst stakeholders; and

More efficient resource use and financial savings.

Improved environmental practices and

environment friendly technology often save money in the long run



Thanks

