



Environmental Auditing: A Tool for Reducing Ecological Pollution

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Abstract:

Balancing ecological, economic, and social objectives, natural resources must be managed responsibly to evaluate organization environmental performances, policies, and procedures. To meet present needs without endangering the future generations and Sustainable living. The Environmental Audit is a crucial instrument for the management system. The primary goal of this study is to perform an Environmental Audit that recommends various standards, procedures for smooth conduct of audit, reviews, and corrections. Additionally, this study highlights some of the remedial actions to reduce environmental Pollution. Green Auditing promotes cost savings and understands our social and personal obligations to protect the environment and the planet.

Keywords: *Environmental Audit, Renewable Energy, Water Harvesting, Environmental Management Systems.*

Introduction:

Life on Earth depends on the environment, yet in recent years, environmental pollution and contamination have increased globally, raising serious concerns. We are currently dealing with several worldwide environmental problems, including deforestation, wildfires, acid rain, global warming, smog, air, water, and soil pollution. A broader understanding of the potential direct and indirect effects on human health can be achieved by using health-related environmental impact factors, which are crucial for a project's community inclusion (Ukaogo, P. O et al., 2020; Cofone et al., 2024).

Our living environment is crucial since it directly affects our ability to survive (van Wassenhove, 2007; Yahya & Hidayat, 2020; Yovita & Amrania, 2018). Green audits can be accomplished in several ways,

such as by creating rules for work and safety standards while tasks are being completed (Khalaf, A. Z., & Hamad, S. B. 2023). Protect the ecosystem and preserve the world with clean up the environment strategy and reduce our carbon footprint by implementing a few easy lifestyle adjustments.

Every audit is conducted in four steps. These consist of an initial survey, fieldwork, reporting, and follow-up confirmation that the recommendations from earlier audits have been successfully applied Hudkins, A. (2010).

Methodology:

Managerial environmental and auditing systems are systems are crucial to environmental preservation. The green economy requires management strategies for ongoing optimization based on efficient and

trustworthy data that the auditor provides (Nazarova K., et al., 2021). One of the concerning problems of e-commerce is the immediate need for Personalized

experiences. This can be addressed with disruptive technology. Brief explanation is given in the below Table 1.

Table 1: One of the concerning problems of e-commerce is the immediate need for personalised experiences. how can this be addressed with disruptive technology?

| Type of Audit | Scope | Objective | Sources |
|---------------------------------|--|--|---|
| Compliance Audit | Adherence to environmental laws | Ensure compliance with regulations | Environmental laws, permits, and policies |
| Management Systems Audit | Environmental management systems (e.g., ISO 14001) | Evaluate the effectiveness of systems and policies | ISO standards, organizational policies |
| Performance Audit | Resource usage, waste, emissions | Measure performance against sustainability goals | Organizational data, KPIs |
| Risk Assessment Audit | Environmental risks in operations | Identify and mitigate potential hazards | Risk assessment frameworks, site surveys |
| Functional Audit | Specific operational areas (e.g., energy or water) | Improve efficiency in targeted areas | Operational records, technical reports |
| Water Audit | Water usage and wastewater management | Optimize water conservation and treatment | Water bills, flow meters, usage records |
| Energy Audit | Energy consumption patterns | Identify inefficiencies and recommend savings | Energy bills, equipment specifications |
| Waste Management Audit | Waste generation and disposal practices | Promote recycling and safe waste handling | Waste logs, disposal records |
| Risk Management Audit | ESG risks (e.g., climate change, greenwashing) | Integrate ESG into risk management strategies | ESG reports, internal audit plans |

Stages to Perform an Environmental Audit:

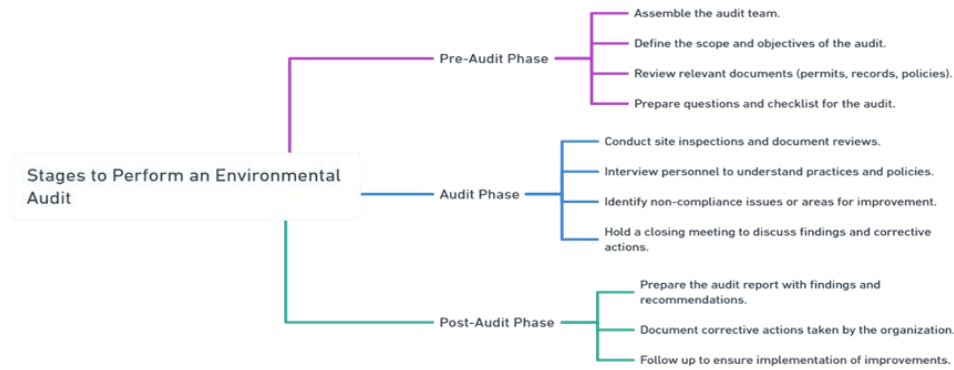


Figure 1: Flow chart of Stages to Perform an Environmental Audit

1. Pre-Audit Phase:

- Organize the audit group.
- Specify the audit's goals and parameters.
- Examine pertinent papers, such as records, policies, and permits.
- Create the audit's questions and checklist.

2. Audit Phase:

- Perform document reviews and site inspections.
- Conduct staff interviews to learn about procedures and guidelines.
- Determine any non-compliance problems or potential improvement areas.
- Call a final meeting to go over conclusions and remedial measures.

3. Post-Audit Phase:

- Draft the audit report, including conclusions and suggestions.
- Keep track of the organization's corrective actions.
- Monitor to make sure the changes are being implemented.

The process of a green audit can be summarized into four simple steps:



Figure 2: Flow chart for the process of a green audit in four simple steps

1. Planning and Preparation:

- Define the scope and objectives of the audit.
- Assemble the audit team and gather necessary documents (e.g., permits, policies, and prior reports).
- Create an audit plan and checklist for assessment.

2. Data Collection:

- Conduct site inspections to evaluate operations and facilities.
- Review documents, policies, and compliance records.
- Interview personnel to understand practices and identify gaps.

3. Evaluation and Analysis:

- Analyze collected data to assess environmental performance.
- Identify areas of non-compliance or opportunities for improvement.

4. Reporting and Follow-Up:

- Prepare a report summarizing findings, recommendations, and corrective actions.
- Monitor progress on implementing improvements and ensure compliance is maintained.

The following is the flowchart for systematic evaluation of organization environmental performances, identifying area of improvement and implementing corrective action which can lead to significant reduction in pollution.

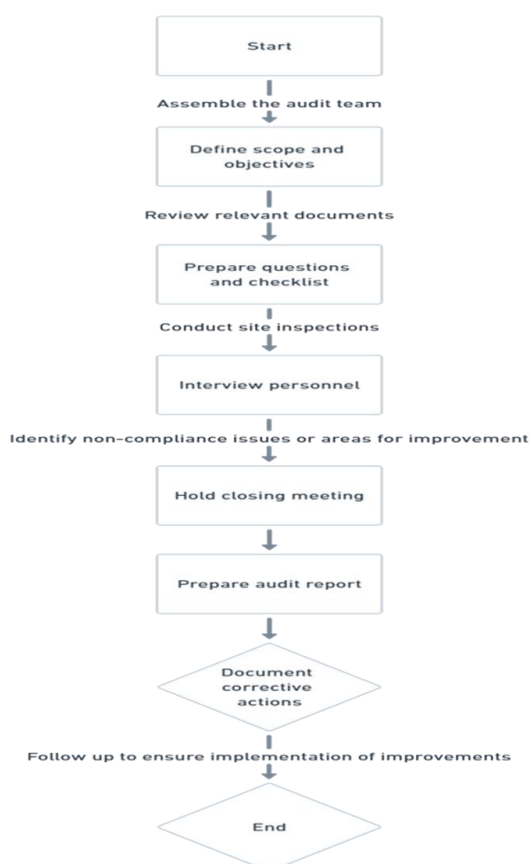


Figure 3: Flowchart to perform Environmental Auditing in an organization to reduce Ecological Pollution

1. Initiation:

- The audit process commences with an official kick-off.
- The necessity for an audit is established based on regulatory mandates, organizational policies, or directives from management.

- The specific type of audit (internal, external, compliance, financial, operational, or quality) is identified.

2. Form the Audit Team:

- A group of auditors is chosen based on their expertise, knowledge, and independence.
- The team may include internal auditors (from within the organization) or external auditors (from third-party firms).
- Responsibilities are allocated to each member to guarantee a comprehensive and impartial evaluation.

3. Establish Scope and Objectives:

- The **scope** outlines the limits of the audit, detailing which departments, processes, or functions will be assessed.
- The **objectives** specify the purpose of the audit, which may include:
 - Ensuring adherence to laws and regulations.
 - Identifying operational inefficiencies.
 - Evaluating financial integrity.
 - Reviewing risk management practices.
- This phase sets clear expectations for the outcomes of the audit.

4. Review Relevant Documentation:

- The audit team collects and analyzes existing documents, including records, policies, and previous audit reports.
- This encompasses:
 - Standard Operating Procedures (SOPs).
 - Regulatory guidelines.
 - Internal policies and protocols.
 - Financial statements (for financial audits).
 - Prior audit reports to identify unresolved issues.
 - Familiarity with these documents aids auditors in pinpointing critical areas for evaluation.

5. Develop Questions and Checklist:

- A checklist and a series of questions are created to ensure a systematic and thorough audit process.
- The checklist may cover:

- Compliance requirements.
- Operational standards.
- Accuracy in financial reporting.
- Employee compliance with policies.
- This step guarantees that all essential areas are systematically addressed during the audit.

6. Conduct Site Inspections:

- The audit team visits the physical location where operations occur.
- Observations include:
 - Work practices and employee conduct.
 - Condition and maintenance of equipment.
 - Safety protocols and compliance measures.
- Record-keeping and documentation methods.
- n-site inspections validate whether actual practices align with documented policies.

7. Interview Staff:

- Employees and key stakeholders are interviewed to gather insights on processes, compliance, and challenges faced.
- Questions may focus on:
 - Their understanding of company policies and procedures.
 - Their adherence to compliance regulations.
- Any issues encountered in maintaining compliance.
- This step helps reveal potential gaps in training, communication, or policy enforcement.

8. Identify Non-Compliance Issues or Areas for Enhancement:

- The audit team analyzes findings to uncover:
 - **Non-compliance:** Instances where policies, laws, or regulations are not being adhered to.
 - **Inefficiencies:** Processes that could be optimized for better performance.
 - **Risks:** Potential threats to financial, operational, or regulatory stability.

- Evidence is collected and categorized according to severity (critical, major, minor issues).

9. Conduct Closing Meeting:

- The audit team presents their findings to management and relevant stakeholders.
- Discussions revolve around:
 - Key issues identified during the audit.
 - Areas requiring improvement.
 - Recommendations for corrective actions.
- Stakeholders may offer feedback or clarification regarding the audit findings.

10. Create Audit Report:

- A **formal audit report** is prepared that includes:
 - A **summary** of the audit process and objectives.
 - **Findings** supported by evidence of non-compliance or inefficiencies.
 - **Recommendations** for corrective actions to be taken.
 - An **action plan** detailing timelines and responsible parties for implementation.
- The report is distributed to relevant departments, senior management, and regulatory bodies (if necessary).

11. Document Corrective Actions:

- Actions taken to address identified issues are documented thoroughly.
- This includes:
 - Assigning responsibilities for implementing corrective measures.
 - Establishing deadlines for changes to be made.
 - Monitoring progress through follow-up reports.
- Documenting corrective actions ensures that identified problems do not recur.

12. Follow Up on Implementation of Improvements:

- Management or the audit team follows up to verify that recommended actions have been executed effectively.
- This may involve:
- A **re-audit** to confirm resolution of issues identified earlier.
- Continuous **monitoring and reviews** to ensure ongoing compliance.
- Additional **training or policy updates**, if necessary.
- The effectiveness of corrective measures is evaluated, with adjustments made as needed.

13. Conclusion:

- The audit process is formally concluded.
- A final review ensures that all steps were carried out appropriately.
- Lessons learned are documented to enhance future audits.

Conclusion:

Green audit is a powerful tool for reducing pollution and promoting environmental sustainability. Green audit improves ecological and environmental quality and has a positive controlling influence on economic development, this effect is greater when considering economic development for ongoing environmental monitoring. Green audit makes it extremely important for Social and economic considerations. There are several ways to accomplish green audit, such as establishing rules for work and follow up on Implementation of Improvements of safety measures while tasks are being completed, recommendations, procedures, reviews, and corrections to conserve environment

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