

# Environmental Auditing in India: A study of the process and standards

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**Abstract :-** An environmental audit is a methodical investigation to judge a business's environmental responsibilities. The scope of the audit includes locating instances of environmental compliance, assessing whether gaps in the implementation of environmental responsibility are being filled, and recommending any necessary remediation measures. This paper examines the purpose and importance of environment audits in India, as well as any risks or threats that may be posed by a business. A number of topics can be examined, including the organization's environmental policies and practices, its energy usage patterns, recycling, waste management, energy conservation, and pollution control. As a result of the findings, the organization can decide what modifications need to be made for compliance in the future. This paper includes several factors that have contributed to the growth of environment audits and provides guidance on how to improve their structure. A major goal of this study is to clarify how environmental audits work in India to protect the environment and promote sustainable development. Using methodologies, the paper provides an analysis, an explanation of the importance of environmental production, and suggestions for optimizing it.

**Keywords —** Environment audit, Environment management system (EMS), Pollution control, Waste management

## I. INTRODUCTION

An environment audit is a rigorous assessment of the environmental data pertaining to a company, a building, or a location to ascertain if or to what degree they adhere to predetermined audit standards. The requirements may be based on regional, governmental, or international environmental norms. As a result, gathering and assessing information about environmental factors is a systematic procedure. The environmental audit is a management tool that entails a methodical, documented, routine evaluation of environmental performance, management systems, and equipment with the dual objectives of firstly facilitating management control of environmental practises and secondly determining compliance with an operation's or activity's environmental policies, including meeting regulatory requirements.

### *EA in India:*

The first nation in the world to compel environmental audits is INDIA. By gazette notification [No. GSR 329 (E)] on March 13, 1992, the Indian government mandated that all enterprises submit annual environmental audit reports of their operations starting in 1992–1993. Industries were expected to report information about the energy, water, and raw material resources they used as well as the trash and goods they

produced. These audit reports were to be delivered annually by September 30 to the relevant State Pollution Control Boards.

An objective review of the effectiveness of environmental organizations, management systems, and equipment is conducted as part of an environmental audit, which is a fundamental management tool. The audit's purpose is to help with management oversight of environmental practices and to give the business the ability to gauge how well its policies and regulations are being followed. This program was designed to encourage effective industrial activity monitoring, the deployment of low-cost technology, and resource consumption reduction. However, despite being in effect for more than two years, little progress has been made. In India, there are thousands of industries, yet only 2,995 audit reports had been submitted by December 1993. Unexpectedly, the government perverted this unique idea of an environmental audit when, on April 22, 1993, a revised notification [No. GSR.386 (E)] changed the phrase "Audit Report" to "Environmental Statement." Inevitably, this modification lessened the regulation's effect. [1]

The businesses were now required to complete a form and send it to the relevant Pollution Control Boards (PCBs). It made it simple for industries to claim that they have taken the necessary actions to comply with current pollution

control standards. These claims might not necessarily be supported by genuine audit reports. The entire goal of the environmental audit regulation would be defeated if this were to become a rule. If carefully planned and managed, an environment audit program can improve an industry's environmental performance. Audits would be a common and much simpler process if an industry had its own system in accordance with the law. It will reveal issues that demand resolution. It boosts the material and energy effectiveness of production processes, conserves resource, reduces waste, offers the industry immediate economic benefits, and encourages industry growth as well as the overall national economy. [1].

## II. OBJECTIVE OF ENVIRONMENT AUDIT

The objective of the environmental audit is to evaluate environmental practices both inside and outside the industrial unit that will affect the environment. The systematic identification, quantification, recording, reporting, and analysis of environmental components is known as an environment audit. It was started with the intention of examining the work being done within the industry whose operations could endanger the health of the local population and the environment. The environment audit provides guidance on how to strengthen the environment's framework and takes into account a number of variables that have influenced the audit's expansion. [3]

1. To assess present activities that may have an effect on the environment, such as resource use, waste management, etc.
2. To recognize and assess important environmental problems.
3. Establish a goal, vision, and mission for the campus' environmental practices.
4. Implement and set up an environment management program in several departments.
5. Ongoing evaluation to improve environmental performance

## III. ENVIRONMENTAL AUDITING: ITS IMPORTANCE, BENEFITS, AND SCOPE

An environmental audit's primary goal is to thoroughly examine how well a firm is doing in terms of the environment across all of its current operations. Varied people have different interpretations of the word "environmental audit." The same kind of work is referred to by words like assessment, survey, and review. Additionally, although some organisations define a

"environmental audit" as a review of only environmental issues, others define it as an examination of environmental, health, and safety issues. The process of discovering and evaluating whether a plant's operations are sustainable and favourable to the environment is known as environment audits. We have a reputation for being wise and effective users of natural resources. However, excessive resource consumption, particularly in public spaces, becomes ingrained over time for everyone. The time has come to assess whether we are handling resources responsibly. An effective method of utilizing natural resources is provided by environmental audits, which regulate all such actions. Verifying the processes and changing them to green, clean ones is vital in the age of climate change and resource depletion. A strategy for it is environment audit. Additionally, it raises environmental awareness among all employees of the institution. [2]

The scope of an environmental audit can range from a focused review of a minor component of an activity to a comprehensive assessment of all environmental components of a complex operation (such as big industrial premises). (Environmental Auditing (1989))Activities subject to environmental audits also include audits of: [3]

- ❖ evaluate the equipment and environmental management systems' performance.
- ❖ Verify that the appropriate municipal, national, and other rules and regulations are being followed.
- ❖ reduce the risk that people will experience from environmental, health, and safety issues.

### *Benefits of Environmental Auditing:*

- ❖ Preserving the environment
- ❖ Check for adherence to regional and federal legislation.
- ❖ Identify issues that need to be resolved now or in the future.
- ❖ Companies may improve on strong environmental performance, offer praise where it is due, and point out shortcomings by assessing training programmes and providing data to support training.
- ❖ Determine any room for cost savings, such example through waste reduction
- ❖ Aid in information comparison and exchange between several facilities or subsidiary businesses.
- ❖ Demonstrate to staff, the public, and the government the company's dedication to environmental protection. [3] [4].

#### IV. TYPES OF AUDITS

Depending on the reason for conducting the audit, a different type of audit may be selected. There are three main categories of audit:

*A. Self-Audit / Self-Evaluation* -The staff of the business, operating unit, or department that will be audited is used to choose team members.

*B. Internal auditing*- Team members are chosen from within the organization, not from the department, business, or operating unit that is being audited. However, in some cases having a unit representative on the audit team may be advantageous. They shouldn't serve as team captains.

*C. External Audit*- Members of the team are chosen from outside the organization, such as consultants. Employees of the organization who serve as a team's guide and counsellor, such as business, operating unit, or department managers, may, however, be of assistance. When neutrality, certification, and third-party benchmarking are required, or when corporate resources do not permit internal audits, this sort of audit may be helpful.

#### V. AUDIT PROCESS

An audit can be as basic as a quick local management team examination of a plant operation against environmental standards over a few hours or as sophisticated as a thorough evaluation of the effectiveness of an entire location's environmental management system. An environmental audit's implementation will rely on the type of audit being conducted, the nature of the company or activity, and the procedures of the auditor.

##### A. Pre-audit:

A crucial step in the environmental auditing process is the pre-audit activity. Planning carefully at this point will help to guarantee the success of both the initial audit and any follow-up audits. information in-depth on the operations performed at the location, the facility's legal standing, including data on monitoring and permits, the management structure, and the extent of the organization or activity that will be audited. The choice of the audit protocol team and the funding of the audit program are other pre-audit processes.

##### Activity on the Site:

1. The audit process begins with a meeting between the audit team and the organization's or activity's management to discuss the audit's goals, process, and timeline.

2. The preparatory meeting should be followed by the initial site assessment.

- **Fillable Forms:** Fill-in forms based on reports, which will be prepared as an audit guide, are used in the simplest form of an audit.
- **Check List:** This kind of protocol, which offers a thorough list of all concerns to be handled, is frequently employed.
- **Questionnaires:** In many auditing protocols, questionnaires are employed, and the auditor is required to provide a comprehensive response to each one. For conducting an audit and creating the final report, an auditor typically creates a standardised format.
- **Guidance:** The most typical kind of protocol is a guideline protocol. They offer the auditor detailed instructions and directions to follow as well as areas that need to be looked into.
- **Photographs:** "A picture is worth a thousand words" Use photos to corroborate findings and highlight best practises; keep in mind to get the site management's permission and abide by any safety regulations (e.g., use appropriate equipment in flammable zones etc).

3. The audit protocol, supporting documentation provided by the organization or activity's owner, the auditor's notes and observations, the results of sampling and monitoring, photos, plans, maps, diagrams, working papers, and other pertinent items will all be included in the data and information gathered during the environmental audit. To make retrieval simpler, this information needs to be well- documented. Data collection is primarily done to support audit results and serve as a foundation for verification.

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5. The audit findings should be compared to the audit objectives and the agreed-upon protocol to confirm that all concerns and problems have been addressed. To ensure that adequate backup and verification are accessible for all of the findings, it is important to thoroughly check the supporting documentation.

- **B.** On completion of the site investigations, the audit team should present their preliminary findings in a

formal exit meeting. The audit team must present an overall analysis of the results and state when the final report will be ready. The management of the company or activity should receive all the papers gathered during the audit.

### C. Post-audit procedures

Provide site management with a draught audit report: A complete written report on the audit's findings should be created by the audit team. A presentation of an action plan for resolving the concerns found should be included in the report. The intricacy of the audit will determine the format of this report. The report should include factual findings, particularly when it comes to conformity with standards, policies, and any legal obligations. The report should also provide suggestions for corrective or improvement measures.

### D. Update and publish final report

Before the audit report is finalized, it is crucial to provide the management of the unit being audited the chance to review and comment on a draught in order to clarify any unclear information and fix any errors. The final report is then made public, and if necessary, a follow-up meeting is conducted.

### E. Plan of action

The report should be used to create an action plan. With available resources locally, it might be possible to do several tasks rapidly. Some acts could need more resources than others. [3] [4] [8]

### The criteria for ISO 14001

Environmental management and protection-related international standards have a high degree of formalization and unity, and they should be consistently understood and applied. The constant improvement of environmental attitudes is a fundamental criterion of the ISO 14001 standard. Guidelines for using ISO 14001 are provided, along with particular requirements for environmental protection systems. The global federation of national standards bodies and the International Organization for Standardization (ISO) have developed and approved ISO 14001.

Any enterprise that desires to: Establish, maintain, and improve the system of environmental protection; Align this system with the environmental policy; Demonstrate conformity with ISO 14001 by: - Determining and declaring compliance by the enterprise itself; - Requesting a certificate of conformity from stakeholders; - Requesting a certificate of compliance from an outside organization; and - Seeking external organization certification or registration of its environmental protection system.

The International Organization for Standardization acknowledged the significance of environmental audits when it established general principles (ISO 14010), processes (ISO 14011), and environmental auditor credentials as part of the ISO 14000 standard series (ISO 14012). Given the foregoing, it seems important to note that ISO14010, among other things, indicates that environmental audit can only be undertaken if there is sufficient information on the audit subject, if there are enough resources for conducting the audit, and if there is enough cooperation between the members of the audit team, environmental auditors, and the enterprise. Along with ISO 14010, ISO 14011 is also crucial for carrying out environmental audits because it outlines how to carry out EMS audits. In order to assess whether the EMS complies with the established criteria, this standard provides audit processes linked to the design and execution of the EMS audit. [5] [6]

## VI. ENVIRONMENTAL AUDITORS

Businesses and non-governmental organizations are advised to create and put into effect a code of ethics and certification of environmental auditors in order to guarantee that environmental audits are carried out in a respectable and competent manner.

The skills that environmental auditors need:

- Methodologies, procedures, and processes for environmental auditing.
- Management system characteristics and analyses.
- Environmental policies, laws, and technologies that safeguard human health and safety against environmental hazards.
- How the facilities under audit are being used.
- Potential threats to worker health and safety as well as the environment.

Additionally, auditors should be skilled in communication and have a track record of performing audits in these areas.

- Planning and scheduling the workday.
- Analyzing and discovering data.
- Producing audit reports.

Environmental auditors should take all necessary professional precautions to guarantee the accuracy, consistency, and objectivity of audits. [4] [7]

## VII. CONCLUSION

Environmental audits are essential not only for a clean environment but also because they can be used to eliminate waste, discover problems at their source, and plan for conservation and maintenance measures that will

be required to avoid serious pollution issues. Industries in industrialized nations perform audits as part of their broader push for quality assurance to get an "edge" over rivals in markets with sensitive environmental regulations. Additionally, before investing money, investment institutions need green audits. Industries in India must go green in order to stay competitive as the country's economy opens up.

## REFERENCES

- [1] [https://www.devalt.org/newsletter/apr95/of\\_2.htm](https://www.devalt.org/newsletter/apr95/of_2.htm)
- [2] <https://penpoin.com/environmental-audit/>
- [3] Environmental auditing: its benefits and counterance, Sangita Pradeep Ingole et al., IJSID, 2012, 2 (5), 152-156 International Journal of Science Innovations and Discoveries, Volume 2, Issue 5, September-October 2012152
- [4] Environmental auditing in India: practices and principles, International Journal of Advanced Research in Commerce, Management & Social Science (IJARCMSS) 47 ISSN: 2581- 7930, GIF : 0.9063, CIF : 2.965 , Volume 02, No. 03, July - September, 2019, pp 47-52
- [5] Environmental audit for environmental improvement and protection, ECONOMIC THEMES (2017) 55(4): 521-538 DOI 10.1515/ethemes-2017-0029
- [6] An Empirical Study of Environmental Awareness and Practices in SMEs, Gadenne, D. L., Kennedy, J. & McKeiver, C. (2009).. Journal of Business Ethics. 84 (1), pp. 45-63
- [7] Environmental auditing guide, European Industrial Gases Association, (EIGA), Document 135/12/E
- [8] <https://www.iloencyclopaedia.org/part-vii-86401/environmental-policy/item/748-environmental-auditing-definition-and-methodology>

