Techniques and Methods of Green Audit An exploratory and analytical study of the opinions of a sample of workers in the field of control and audit

Ameen Zaidan Khalaf1,* and Salah Ben Hamad1

1Aliraqia University College of Administration and Economics, Iraq
*Corresponding author: ameenzaidan97@gmail.com

KEYWORDS
control and audit
green auditing
sample of workers

ABSTRACT The purpose of the research is to identify the concepts related to green auditing because of the great importance of the environment in which we live. By producing a commodity or service and among consumers, the research has tried to answer a major question: What are the techniques and methods of green auditing? The research is based on the hypothesis that there are a number of techniques that are used to implement green auditing, and the research assumed the existence of a number of techniques and methods for green auditing, and in order to achieve the research objectives and test the hypothesis, the questionnaire was used to obtain information for the research, and the results of the research data for the adult sample were analyzed 29 individuals using the statistical program SPSS and relying on arithmetic averages and standard deviations. The research has concluded the great importance of green auditing because of its impact on the environment in which we live. Environmental auditing also suffers from many obstacles. In addition, green auditing is affected by economic and social factors. Likewise, the green audit process goes through three stages: the pre-audit stage, the audit stage, and the post-audit stage. All of these stages need follow-up in order to reach the desired goal. There are a number of methods and techniques to achieve green audit, including the development of regulations for work and safety requirements during the completion of tasks. Ensure that production wastes are disclosed, ensure that production wastes and others are not discharged into river water, and ensure that there are mechanisms for the purpose of treating them in appropriate ways and not discharging them randomly. The researcher recommends the need to ensure the existence of special programs for recycling. Not disposing of production waste in a random manner, as well as promoting a culture of responsibility towards society by focusing on green operations.

© The Author(s) 2023

1. INTRODUCTION
The environment in which we live is of paramount importance because it is directly related to survival. Maintaining a healthy environment is the responsibility of every individual, and there can be no life without a suitable environment and therefore there is no human being. At a time when environmental issues have become critical concerns around the world, organizations are constantly under pressure to develop responsible and environmentally friendly operations. Commitment to the natural environment has become an important variable within the current competitive scenarios as companies around the world are constantly trying to develop new and innovative ways to enhance their global competitiveness. A group of organizations has strengthened its competitiveness by improving its environmental performance (Lin & Ho, 2008:17), in addition to that, the company can enhance its competitiveness through improvements in environmental performance to comply with environmental regulations, address environmental concerns of customers and reduce the environmental impact of its products and services activities (Smith & Perks, 2010:1)

On the other hand, green auditing and reporting practices are considered an important tool for understanding the influencing aspects of the natural environment in relation to the economy, due to the increasing social and legal pressures, as there has been an increasing demand for disclosure of environmental policies and practices and the performance of the company concerned inside or outside the company (Agrawal & Sharma, 2019:17). The seriousness of the environmental threats facing humanity in the twenty-first century, such as global warming and climate change, the risks of disaster, social inequality, unsustainable lifestyles, and the urgent need to shift to an economy based on renewable energy. I created a challenge for everyone (Ogoc, 2015:297). In order to confront these dangers and reduce their severity, policies and procedures of green auditing should be provided. It should be noted that there is a great similarity and congruence between the concepts of green auditing and environmental auditing, both of which are related to the environment and its preserv-
tion. In this research, it will consist of a methodology and some previous studies and research related to the research in addition to Addressing some concepts of green auditing, whether in terms of the concept or importance, stages and factors that affect green auditing.

Finally, the techniques and methods of green auditing will be detailed, which represent the main objective of the research and the answer to its problem. Finally, conclusions and recommendations.

2. LITERATURE REVIEW

2.1 The concept of green auditing

There is a need to cultivate a culture of green business and to ensure that these green policies are in place, a formal team should be assigned to monitor and promote green issues, which is called green auditing to ensure standards are met (Smith & Perks, 2010:20). Green auditing is defined as a systematic process to objectively obtain evidence. related to the company's performance and evaluation (Agrawal & Sharma, 2019:17)

The researcher believes that the green audit is represented by a group of systematic activities that enjoy independence that are followed to obtain audit evidence and evaluate these evidence objectively to ensure the extent of compliance with the rules, laws and standards of activities related to the environment.

2.2 Benefits and importance of green auditing

Green auditing is useful for detecting and controlling sources of environmental pollution and emphasizes management of all types of waste, control of energy consumption, control of water quality and quantity, risk monitoring, stakeholder safety and even disaster management (Patil et al, 2019:133).

2.3 Objectives of the green audit

The goal of a green audit is to provide citizens with the information they need to be able to question environmentally damaging companies from their customers and others, but also to find ways to act wiser and more environmentally responsible, including renewable resources such as wind, solar and energy. Geothermal (Verma et al, 2012:79), on the other hand, the green audit aims to provide a full understanding of the effects of global warming and the current and imminent effects of climate change, and to provide a clear understanding of how the interrelationship between their health and the health of ecosystems, providing a comprehensive understanding of the principles and processes of development sustainable (Ogoc, 2015: 297). Simply put, green auditing aims to preserve the environment.

2.4 Green audit stages

The green audit goes through stages in order to obtain the desired results, as in the following stages (Patil et al, 2019: 137-140):

2.4.1 The pre-audit stage

The first and very important stage of green auditing requires the establishment of an environmental management system (EMS) by the company. The environmental management system is the backbone of the auditing process and has a wide role in the auditing process. Every aspect of green auditing is monitored by this system.

2.4.2 Audit stage

At this stage, the actual audit takes place by developing an audit plan by the competent auditor, after which the documents are carefully examined and evaluated, and the necessary recommendations are proposed.

2.4.3 Post-audit stage

At this stage, the auditor takes into account all the facts and observations of the audit together with respect to the environmental management system, and then evaluates his findings and compares them with the standard procedures. After that, the auditor prepares a brief report on the audit with recommendations, in consultation with the environmental management system in the company, and it is sent to the competent authorities. It should be noted that this stage requires the preparation of an action plan by the environmental management system in accordance with the recommendations made by the auditor. Finally, the post-audit stage requires regular follow-up. The researcher believes that the green audit stages can be depicted according to the figure below:

![FIGURE 1. Green audit stages (Khalaf, 2023)](image)

2.4.4 Green Audit Scope

Green auditing basically involves carrying out inspection activities on the operations of a particular company to assess the overall environmental impact of its activities, or for a particular product or process and also suggests ways to reduce it. Therefore, the scope of green auditing can be listed as follows (Pradip & Patil, 2014: 89): 1) Measuring the main environmental standards. 2) Analyzing and reporting primary data. 3) Communicating with contractors, suppliers, customers and organizers. 4) Examining internal policies, records and reports related to environmental aspects.

2.4.5 Obstacles and determinants of green auditing

The green audit did not achieve much progress due to the many obstacles and determinants that impede the audit process. Among these determinants and obstacles are the following (Patil, 2019:134):

1. Expediting implementation without any infrastructure or experts.
2. The high cost of auditing.
3. The lack of detailed plans, in addition to the need to follow up on those plans.
4. Lack of feedback to the audit reports prepared by the competent authorities.
5. Not to disclose the method of work to the public.
6. Fear among industrialists that the data they disclose may lead to legal arguments and lawsuits.
7. There was also a fear among the industrialists that the data related to the raw materials used, which were supposed to be mentioned by the industries, might reveal their trade secrets.

On the other hand, the researcher believes that the lack of sufficient knowledge among some of those who prepare green audit reports and their users constitutes a great obstacle and challenge to the optimal completion of green audit tasks.

2.4.6 factors affecting green auditing

There is a set of factors affected by green auditing, whether economic, such as the rate of economic interest from new market opportunities, enhancing profit through the use of resources, reducing waste, improving the environmental performance of institutions through green purchases, improving market share through environmental accounting, and finally (Agrawal & Sharma, 2019:18) All of this represents a challenge in completing green audit tasks according to the controls.

2.4.7 Green auditing techniques and policies

After proceeding with the theoretical aspect of the research by looking at the published research literature, the researcher concluded that there are a number of policies and techniques for green auditing, including the following:

1. Ensure the nature of the products produced by the company to verify that they are environmentally friendly products (Smith & Perks, 2010:23).
2. Physically ensure the installation of devices that reduce pollution and whether these devices have been approved by the competent authority (Pradip & Patil, 2014: 88).
3. Develop regulations for work and safety requirements during the completion of tasks.
4. Ensure that production residues are disclosed.
5. Ensure that production and other wastes are not discharged into river water, and ensure that mechanisms are in place for the purpose of treating them in appropriate ways.
6. Ensure that the health and environment inspection committees take samples from the production waste and identify the extent to which they are within the permissible limits.
7. Ensure the existence of special programs for recycling.

On the other hand, the standard (ISO 14001,2004:8) has defined some audit policies for the purpose of ensuring that audits are conducted at planned intervals, as follows:

1. Determine whether the environmental management system is in compliance with the planned arrangements for environmental management, including the requirements of international standards,
2. Determine whether the environmental management system has been properly implemented
3. Provide information about the results of audits in the form of reports to senior management.

3. THE PRACTICAL SIDE

3.0.1 Reliability

The degree of consistency of the research sample's answers was tested using the spss statistical program through Cronbach's Alpha, and it was concluded that the degree of reliability of the research scale reached (0.919), which indicates a good reliability ratio.

3.0.2 Analyze the questionnaire

The results shown in the table below, which are related to the arithmetic mean and standard deviation.

Table 1. Paragraph analysis

4. RESULT AND DISCUSSION

Through the results shown in the aforementioned table, it was found that there is an agreement by the research sample that the body subject to control works to comply with the laws related to environmental protection, as the arithmetic mean was 3.31, and the standard deviation was 0.93, in addition to the fact that the body subject to control provides social requirements that are relevant in Environment, the arithmetic mean was 3.41, and the standard deviation was 0.907. Also, the controlled entity places warning signs about activities that cause potential harm to the environment in order to avoid them. The arithmetic mean was 3.24, while the standard deviation was 0.951. On the other hand, it became clear that the research sample was keen on the controlled entity. On the setting of educational boards to reduce the risks of operational processes that have an impact on the environment, and on the contrary, it was found that some of the bodies subject to control are not keen to dispose of waste in a safe and non-harmful way to the environment and not to discharge production and other waste into river water. The arithmetic mean was 2.90 with a standard deviation 0.205. With regard to the existence of recycling programs, the research sample did not agree on the existence of these programs in the entities subject to supervision. The arithmetic mean was 3.48, and the standard deviation was 0.911.

5. CONCLUSION

Through the foregoing, a number of conclusions were reached, my agencies:

1. The great importance of green auditing because of its impact on the environment in which we live.
2. The green audit suffers from many obstacles and limitations.
3. Green auditing is affected by economic and social factors.
4. The existence of a number of methods and techniques to achieve green auditing, including setting regulations for work and safety requirements during the completion of tasks, ensuring that production waste is disclosed, ensuring that production waste and others are not discharged into river water, and ensuring the existence of mechanisms for the purpose of treating them in appropriate ways.
5. Ensure that the inspection committees concerned with health and the environment take samples from the production waste and identify the extent to which they are within the permissible limits.
6. Ensure the existence of special programs for recycling, which indicate a lack of interest in being carried out by the entities subject to supervision.

After reaching the results, the researcher recommends the following:

1. The green audit should be given great importance because it is related to the environment.
2. Providing material and financial requirements for the purpose of achieving the audit plan.
3. The efforts of all parties should be combined to ensure the success of the audit process.
4. The need to promote a culture of caring for the environment and society by paying attention to green operations.
5. The need to pay attention to the existence of recycling programs.
6. Not disposing of production waste in a random manner.

References

Agrawal, Dipti & Sharma, Rajendra (2019), Identification of economic factors contributing to green auditing and reporting practices, 8(2), 17-21.


