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ENVIRONMENTAL MANAGEMENT SYSTEM

Khanna,D.R. ; R. Bhutiani and Gagan Matta

Department of Zoology and Environmental Science
Gurukula Kangri University, Haridwar
For correspondence: gaganmatta@gmail.com

ABSTRACT

Improving the environmental performance of corporations is one way of limiting environmental damage. Environmental management systems (EMSs), such as ISO 14001, provide a framework for organizations that wish to effectively manage their environmental affairs. Implementing an EMS that conforms to the ISO 14001 standard may help businesses integrate environmental values into their operations.

This research helps bridge the gap between EMS theory and business practices. Its goals were to identify challenges associated with training and awareness components of an ISO-based EMS and to propose training initiatives that may help organizations achieve successful EMS implementation. These goals were fulfilled through a case study of Vancouver International Airport Authority.

The study identified developing a common vision of environmental performance as a key to successful EMS implementation. It also proposed an awareness-based approach to EMS that focuses on shared vision and feedback between different hierarchical levels within an organization. The recommendations of this study present detailed management processes and initiatives that could help the Airport Authority improve implementation of its "Air Quality Management Program," as well as its overall programs for "Environmental Training" and "Awareness and Communication."

An awareness-based approach may also help stakeholders monitor an organization's success with integrating environmental policies into its day-to-day operations. Although the ISO standard is useful as an EMS framework, meeting ISO 14001's minimum requirements will not necessarily improve a company's environmental performance. It is the commitment of an organization and its employees, driven by environmental regulations and pressure from stakeholders, which determines the extent to which an organization will achieve leading-edge environmental management.

Keywords: *management, EMS, environmental management system, environmental strategies.*

INTRODUCTION

Today with the emerging industrialization, the concern about the environmental protection and sustainable development is increasing. The environmental movement is no longer of special interest only to students and avid environmentalists but also government, corporations, and individuals are recognizing the benefits of environmental sensitivity and environmental progress.

Consumers are more responsive to environmental concerns in their purchasing, use, and recycling decisions. Corporations are recognizing the benefits to the community and to long-term corporate profitability of reducing their environmental impact. "Green" consciousness has grown. There is an increased recognition and concern for the fragility of the environment. Regulations and stricter regulatory enforcement are modifying organizational strategies. There is growing

recognition of the concept of sustainable development, which teaches that the costs of tomorrow's cleanup must be set against the profits of today.

Environmental protection and economic growth are becoming more closely aligned. Companies in environmental technology are proliferating and businesses are in redesigning processes to reduce environmental impact, improve production efficiency, and reduce costs. The environmental agenda is quickly becoming an integral part of corporate strategy. Without a corporate environmental strategy, organizations will not understand legal, political, and financial pressures, including strict liability, labeling standards, and packaging laws.

Some firms are just beginning to understand the importance of this interplay between strategy and environmental responsibility and of the effects of a changing and complex regional, national, and international environmental agenda. Managers must continue to learn and integrate new environmental concerns into corporate strategy. There are no final answers. There are, however, multiple opportunities.

An environmental management system is exactly that; a systematic way to manage any aspect of a company's business that impacts the environment. The tools like ISO 14001 standard is a documented operational plan that addresses any impact or potential impact a business creates. Since each business environment is unique, each 14001 EMS is specifically created for that operation.

There are companies and industries that have employed environmental management systems, but have not called them that. For example, in the chemical industry, there is Responsible Care(r), which does have similarities to 14001, but the former system is based on conformance as opposed to the performance that the latter requires. Whatever form it may possess, an EMS is an important contribution to a business' success.

What is Environmental Management System (EMS)?

An Environment Management System (EMS) is a tool for managing the impacts of an organization's activities on the environment. It provides a structured approach to planning and implementing environment protection measures.

Components

To develop an EMS, an organization has to assess its environmental impacts, set targets to reduce these impacts, and plan how to achieve the targets.

The most important component of an EMS is organizational commitment. For an effective EMS to be developed and implemented, you need commitment from the very top of the organization, as well as all staff. Further examples of components that should be considered when developing an EMS are:

- **Environmental Policy:** this is a statement of what an organization intends to achieve from an EMS. It ensures all environmental activities are consistent with the organization's objectives.
- **Environmental Impact Identification:** identification and documentation of the

actual and potential environmental impacts of an organization's operations need to be undertaken. This can be achieved through undertaking an environmental audit.

- **Objectives and Targets:** an environmental audit forms the basis of determining an organization's environmental objectives and targets. An organization can find benefits in adopting more stringent longer term objectives to encourage it to improve its performance. To continually improve, targets should be regularly reviewed.
- **Consultation:** staff and community consultation should be undertaken before, during and after establishment of an EMS. This is necessary to ensure that all staff are involved in, and committed to the EMS. It can also help to improve public perception of the company, one of the benefits of implementing an EMS.
- **Operational and Emergency Procedures:** all procedures should be reviewed to ensure they are compatible with the organization's environmental objectives and targets. Any changes should be included with the documentation.
- **Environmental Management Plan:** this details the methods and procedures which an organization will use to meet its objectives and targets.
- **Documentation:** all objectives, targets, policies, responsibilities and procedures should be documented along with information on environmental performance. Documentation is useful for verifying environmental performance to staff, regulators and the community.
- **Responsibilities and Reporting Structure:** responsibilities need to be

allocated to staff and management to ensure the EMS is implemented effectively.

- **Training:** staff should undergo environmental awareness training to familiarize them with their responsibilities for implementing the EMS and with the overall environmental policy and objectives of the organization. This provides staff with the necessary skill and motivation for the effective implementation of the EMS.
- **Review Audits and Monitoring Compliance:** review audits should be undertaken regularly to ensure the EMS is achieving its objectives and to refine operational procedures to meet this goal. In order to ensure regulatory and other requirements are being met, it is often necessary to undertake regular environmental monitoring.
- **Continual Improvement:** an important component is continual improvement. An EMS comes into its best use when used to review progress towards the targets and objectives set by a company to protect the environment. The procedures set in place to meet these objectives should be constantly examined to see if they can be improved or if more effective systems can be introduced.

Future of EMS

EMS describes companies' approaches to improving their environmental performance and to integrating environmental considerations into management decisions. The guideline suggests approaches that might be adapted and implemented by many types of firms: regional or international firms; companies with large Environmental, Health, and Safety

(EH&S) departments or those lacking full-time EMS staff. The approaches apply in both high- and low-environmental impact industries.

This EMS is both descriptive and prescriptive. Its descriptive parts shape a vision of the future, build commitment for change, and define strategies. Its prescriptive parts address how to lead, plan, and implement a corporate environmental strategy.

The concepts and techniques included in this guideline apply to:

- organizations in the business and service sectors;
- government entities; and
- Both large and small organizations.

The concepts in this EMS will help managers and others:

- understand key elements of corporate environmental strategies;
- appreciate the organizational and management
- accounting challenges in designing and implementing a corporate environmental strategy;
- Understand how a corporate environmental strategy relates to the organizations overall goals, strategies, and objectives.

Creating an Environmental Management System

Corporate environmental policy statements and action programs are important for organizations. Another key is to develop a support system through an effective environmental management system (EMS) that can anticipate changing regulations; social, economic and competitive pressures; and

environmental risks.

Effective corporate EMS's contain numerous elements that span all aspects of an organization's operations. These elements, which are critical to implementing the environmental strategy throughout the organization, are:

- policies and procedures;
- employee buy-in to the vision;
- alignment and integration;
- accountability and responsibility;
- management information;
- training and management development;
- performance measurement;
- monitoring of trends;
- formal risk management systems; and
- Emergency preparedness.

Environmental Strategies

Environmental strategies are the part of EMS. They change management practices and systems based on the business implications of environmental issues. Such a strategy helps change the corporate culture and establish policies. The strategy should integrate environmental concerns into managerial decisions in all parts and levels of the organization. Other objectives of corporate environmental strategies are:

- to recognize global environmental trends early and modify the company's plans accordingly;
- to increase stakeholder satisfaction and confidence;
- to improve long-term corporate profitability;
- to seek competitive advantages by minimizing environmental impact through improved design of products,

- packages, and processes;
 - to adopt a proactive, creative approach to ecological challenges throughout the company;
 - to reduce costs by taking advantage of eco-friendly technologies and through energy and resource conservation;
 - to minimize risks arising from management of product liabilities, sudden changes in legal norms, sudden increases in ecology-motivated consumer demands, or changes in comparative risk assessments; and
 - to ensure that the company meets compliance and due diligence requirements.
- environmental management and traditional financial management systems, such as those that occur in capital investment appraisal and capital budgeting;
 - contribute to life-cycle assessment;
 - assess potential liabilities of past practices;
 - assess the need for new or modified management information and financial systems;
 - consider the financial costs and risks associated with an investment that will likely cause or increase pollution; and
 - Make environment-related costs more visible.

Well-defined environmental policies and objectives support a firm's environmental strategy by providing guiding principles for employee activities. Managers can play an integral role in developing environmental strategy, using these strategies to assist in policy and objective development as well as defining environmental measurement, analysis, and control.

The manager's environmental roles vary with the type of job and enterprise. Ideally, management accountants should work closely with other multi-disciplinary groups in areas pertinent to their individual enterprise's business lines. For example, the management accountant may:

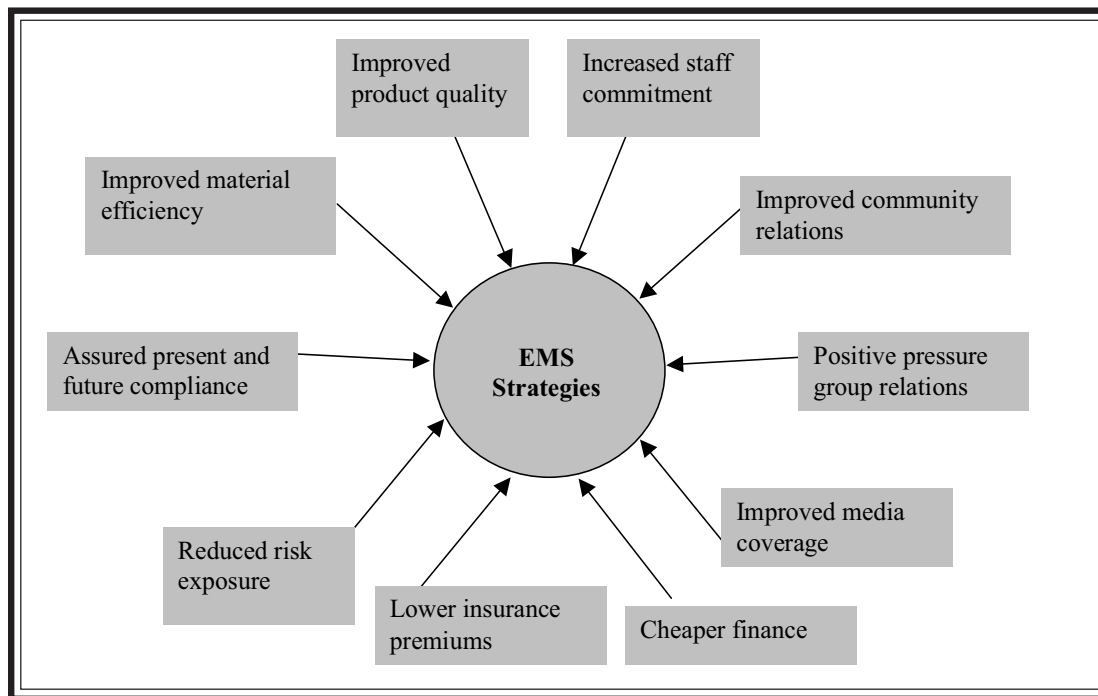
- cost areas that directly relate to environmental objectives, such as waste treatment, resource recovery, disposal, or site maintenance;
- help resolve conflicts between

Why do we need EMS?

An EMS can assist a company in the following ways:

- minimize environmental liabilities;
- maximize the efficient use of resources;
- reduce waste;
- demonstrate a good corporate image;
- build awareness of environmental concern among employees;
- gain a better understanding of the environmental impacts of business activities; and
- Increase profit, improving environmental performance, through more efficient operations.

An EMS can be a powerful tool for organizations to both improve their environmental performance, and enhance their business efficiency. An EMS is not prescriptive, rather, it requires organizations to take an active



The benefits of EMS Strategies

role in examining their practices, and then determining how their impacts should best be managed. This approach encourages creative and relevant solutions from the organization itself.

Although the implementation of an EMS is essentially a voluntary initiative, it can also become an effective tool for governments to protect the environment as it can assist regulation. For example, regulatory systems can encourage organizations to use EMS to meet standards, by providing incentives for strong environmental performance.

Likewise, organizations can use EMS to ensure that their performance is within regulatory requirements, and to keep ahead of

more stringent regulations which might be introduced in the future.

Strategic responses

Given the internal and external demands to improve the environmental performance of an organization, the organization will achieve high standards of environmental performance finally get the benefit of cost reduction and also reflect a more ethical approach to business where profits will not be the sole motivation. In order to realize a competitive advantage based on environmental management, companies must seek to develop strategies which translate actions into benefits, improving their environmental performance and addressing the environmental demands placed upon them by government. By incorporating the increasingly

important environmental dimension into the decision-making processes and strategies of the firm, managers can seek to reduce costs and exploit the opportunities offered by increased public environmental concern within a dynamic market place. Such a strategy must be proactive and honest. It may also be evangelical, educating and campaigning. But more than anything it must be ethical. The environment is too important an issue to be treated as a gimmick for long-term advantage.

CONCLUSION

Today with the rapidly changing environment we must focus on strategies which organizations, governments and industries can adopt to improve the environmental performance. We should try to establish a system which is favorable to all because there is a need, not need a desire on the part of industries and organization to change the way it views the environment and there is a need to look in details at the tools available to achieve the goal of healthy environment for every living organisms. Tools like ISO, different environmental conservation policy with various acts which previously was left unseen should be implemented strictly.

From last few years we are now seeing a fundamental change in the way that government's and corporate worlds views for the protection of the environment. Now organizations have begun to consider the interplay of industrial strategies and environmental management. Organizations that set out to develop a sustainable business will gain in stature and enhance their reputation and business results in a daunting and

challenging world.

Improving the environmental performance of corporations is one way of limiting environmental damage. Environmental management systems (EMS's), such as ISO 14001, provide a framework for organizations that wish to effectively manage their environmental affairs. Implementing an EMS that conforms to the ISO 14001 standard may help businesses integrate environmental values into their operations.

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