

Business essays - environmental management system



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Environmental Management System

Abstract

The number of enterprises certified an Environmental Management System due to the Eco - Management and Auditing Scheme (EMAS) and to other Environmental Management System raised in the last few years. Especially companies from the industry sector realized how important it is to be certified.

The majority use and implement environmental management systems due to the Eco - Management and Auditing Scheme (EMAS) or due to the ISO 14001 regulation. Lots of them prefer to implement the ISO 14001 regulation because of the worldwide acceptance but others prefer the EMAS norm because the ISO 14401 certificate is absolutely contained into the EMAS regulations.

The EMAS certification seems to be very interesting for entrepreneurs because of the incorporations of all employees of a company. This can result that employees could get more ambitious and the employee loyalty could rise.

Additionally, companies often get subsidized by the European Union.

Organisations have to pass several stages to achieve the certification, the EMAS registrations and to benefit from it.

Chapter 1 Introduction

Implementing an environmental management system (EMS) is one of the best ways to show how an enterprise can act environmentally interested and efficient (Emilsson, 2002).

An EMS due to EMAS regulations shows to clients and the public that entrepreneurs take care about environmental impacts which are caused by the productions of goods.

Additionally, the implementation of efficient environmental management systems improves a company's processes and brings other economic benefits.

Now more and more companies realise how important an EMS is and how much they can profit from it. The two most important and famous regulations are the international standard ISO 14001 developed by the International Organization for Standardization (ISO) and the regulation the Eco-Management and Auditing Scheme (EMAS).

The majority of the companies certified their EMS under these two systems because of the worldwide acceptance of the ISO 14001 regulations and the European Union regulation EMAS, which was developed by the European Union. The EMAS regulation is European wide accepted but the included ISO 14001 regulation is as mentioned before worldwide into force.

Because of the additional cost and the additional time which is needed to implement an EMS due to the EMAS regulation a lot of companies decide to implement an EMS due to the ISO 14001 norm.

The purpose of the following study is to demonstrate how an EMAS EMS should be constructed in small and medium-sized enterprises (SME). In order to get a better overview the current Business and Environment will be defined and Environmental Management Systems will be elucidated with the corresponding literature.

The Stages of an EMS due to the EMAS regulation will be shown with its relevant literature in the literature review chapter as well. In addition, the differences between the EMAS regulation and the ISO 14001 norm also were examined and are being treated in the literature chapter review.

Followed with the methodology chapter in which the author presents how the corresponding research is done by using the relevant literature research in the secondary research area and by doing a questionnaire in the relevant primary research part.

In chapter Four the author presents the results which were discussed in the preceding research and analyses the results which were worked out with the help of the primary and secondary research.

Chapter Five considers the research and a conclusion can be worked out.

2 Literature Review

2.1 Business and Environment

2.1.1 Identification of Business

Business has experienced dramatic change since the beginning of the Industrial Revolution which took place in Western Europe two hundred years ago (Blair, 2001).

New businesses appeared such as chemical industry, motor industry, and retail industry; new technology was applied in everywhere; and new market was opened all over the world. All these changes of business area caused environmental impacts which totally different from two hundred years ago. In order to discuss the environmental impact of business we have to answer a basic question: what is business nowadays?

Strictly speaking, business is the range of commercial organizations and their activities that characterize the way in which trading is conducted in a capitalist economy (Blair, 2001). However, commonly the words “ industry” and “ business” are used interchangeably and this is the case in this article. Business with the same meaning of industry which is seen as the collection of firms who operate essentially the same series of processes that result in a related set of products (whether tangible products or services) that a third party wishes to buy (Blair, 2001).

By convention, industries are divided into primary, secondary and tertiary industries.

Primary industries include fishing, forestry, agriculture and the extractive industries (essentially, the quarrying and mining of minerals). They involve the collection, harvesting and exploitation of resources directly produced by physical processes. Secondary industries are the manufacturing industries. They take raw materials and by a variety of processes produce tangible goods by adding value to the raw materials.

The tertiary industries produce services, for either individuals or for other organizations. The way in which primary, secondary and tertiary industries
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effect the environment are seen as being sufficiently different to warrant separate analysis.

2. 1. 2 Environmental Impact of Different Businesses

The environmental impacts of different industrial sectors vary enormously (Welford, 1998). For example, the oil industry may cause serious environmental impacts while the retail industry has less direct impacts to the environment. This is because the oil industry belongs primary industries while retail industry belongs tertiary industries and the characteristics of these two industrial categories are totally different.

Because of their intimate relationship with the environment, the primary industries have a widespread and significant environmental impact. Firstly, they cause high pollution. For example, oil and gas flares, which happened in oil industry, contribute to global warming. Additionally, oil spills can cause great localized harm to marine ecosystems. Secondly, the primary industries generate considerable wastes.

The fossil fuel and mining industries are the main culprits in waste generation. However, the wastes of factory farming also should not be neglected. Thirdly, farming and forestry of the primary industries have the greatest overall impact on habitats because they occupy the greatest areas of land. The type of farming or forest has a profound influence on the nature of flora and fauna of a region. Finally, farming and forestry also has significant landscape impacts because they form important landscapes in much of the developed world.

Manufacturing is the core of the secondary industries. Raw materials and components are brought together and manufactured into either end product or a component for some other manufacturing process. Manufacturing processes consume huge amount of energy and inevitably produce waste products and pollution.

Waste is seen as part of the process, whereas pollution is seen as an inevitable consequence of the process that should not happen in the perfect industrial process but which, in practice, results in the degradation of some physical resource. This is most usually the air, watercourses or the ground. Sound and visual impact may also be included under the broad banner of pollution. In addition to the manufacture process, the products itself also cause environmental impact during its delivery, use and disposal.

Tertiary industries or so-called service businesses received relatively little attention on their environmental impacts. This may be because in comparison to primary or secondary industries they appear to depend far less on physical resources and they often deal with a more intangible product. However, the environmental impact of tertiary industries is less obvious but does not mean that it does not exist. For example, compared to an oil refinery, a supermarket seems to be much less environmental impact but it is not without impact.

The transfer of goods within the supermarket chain, and the customers travel to the store especially those suburban stores all cause air pollution. Other environmental impacts which tertiary industries cause include energy consumption in heating, lighting and equipment, pollution through the travel

of their employees and clients, produce waste from canteens, consume waster and materials and certainly produce large volumes of paper waste.

2. 1. 3 Strategy Towards Environmental Impacts

Since the 1960s, there has been a growing interest in the environment, or more specifically in the damage being done to the environment (Welford, 1998). During the first two decades, it was felt that growth and development and protection of the environment could not go hand in hand. Hence most of the theories that developed during this period were anti-growth. However, the 1980s witnessed a shift in thinking.

The concept of ' zero growth' was replaced by sustainable development which has been broadly accepted nowadays.

Sustainable development, in its simplest form, is defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987). It implies that it is possible to make development and

environmental protection compatible. However, the old ways of development which cause pollution and atmospheric damage, disrupts traditional ways of living, destroys ecosystems and feeds more and more power into international oligopolistic industrial structures must be changed into sustainable ways (Welford, 1998).

The Brundtland Report, commissioned by the United Nations to examine long-term environmental strategies, argued that this would require quite radical changes in economic practices throughout the world.

As an ultimate objective, the concept of sustainable development is immensely valuable. However, strategies are needed to translate conceptual theories of what sustainable development means into practical ways of achieving it over time within the corporate context. Firms clearly have a role to play in the development of substitutes for non-renewable resources and innovations which reduce waste and use energy more efficiently.

They also have a role in processing those materials in a way which brings about environmental improvements. Additionally, firms have the opportunity for considering both the use and disposal of the product during the design period. In order to achieve these goals, companies must seek to develop management strategies which will improve their environmental performance (Welford, 1998).

2. 2 Environmental Management Systems

Many companies have adopted environmental policies and carried out environmental audits or reviews in response to legislative pressures, green marketing opportunities, increased public pressure, ethical concerns and the commitment of local and central government (Netherwood, 1998).

However, companies still be faced with a problem of finding a systematic way of implementing commitments to environmental management within their existing organizational structure. In practical, one tool which companies

have generally accepted to facilitate implementation of environmental policy is an environmental management system (EMS).

An EMS is defined by the British Standards Institute (BSI) as: the organizational structure, responsibilities, practices, procedures, processes and resources for determining and implementing environmental policy (Netherwood, 1998). Similar definitions are found in the EU eco-management and audit scheme (EMAS) and ISO 14001.

Not like legislation, EMS is a voluntary tool which can help companies to control environmental impact caused by their operations (Roberts, 1998).

Despite the fact that different companies may develop different environment management system, usually there are some common steps can be found in these EMSs. This is because most of them were designed based on the steps of quality management system such as ISO 9000 (Netherwood, 1998).

Therefore, it is possible to create a standard for environmental management systems in order to ensure a certain quality for the EMS, and to encourage organizations to improve their environmental performance.

In the last few years a number of voluntary environmental management schemes have been developed. The standard-BS 7750- was published by BSI in March 1992 and was the world's first environmental management system standard. At the same time that BSI began work on BS 7750, the European Commission was setting out its proposal for an eco-audit scheme and it was from this proposal that EMAS eventually emerged in 1993.

In the same year of EMAS publishing, the activity relating to environmental management system standardization began on the international scene. And after a development time of a little under three years, ISO 14000 series were published in October 1996.

The standardized environmental management systems are voluntary and are designed to be externally verified by nationally accredited bodies, in a similar way as the quality standard ISO 9000. It is argued that companies which register with the schemes, gaining the EMAS and ISO14001 accreditation, will experience added value such as market advantages, and legal compliance (Netherwood, 1998).

2. 2. 2 Stages of Standardized Ems

Environmental management systems are very much related to quality management systems. They are mechanisms that provide for a systematic and cyclical process of continual improvement. As can be seen in Figure 1, the cycle itself begins with planning for a desired outcome (i. e. improved environmental performance), implementing that plan, checking to see if the plan is working and finally correcting and improving the plan based on observations from the checking process. Logically then, if the original outcome desired remains the same, a system of this nature will, by default, generate increments of progress that continually move toward the desired outcome (Roberts, 1998).

In order for a company to achieve environmental performance through a management loop as mentioned above, it will need to define responsibilities for environmental management, deploy resources to ensure that action is

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taken on environmental issues, train staff to become aware of their environmental responsibilities, monitor environmental performance and audit and review the system of achieving environmental improvement. The basis of all of this activity is an organizational commitment to continual environmental improvement and an environmental policy (Netherwood, 1998). The stages of a typical environmental management system were shown in Figure 2.

2. 2. 3 Why Develop an EMS?

Develop an EMS within a company will definitely cost resources such as time, human resource, and money (Bansal, 2002). Such costs become more apparent when a company applies certification for their EMS. Furthermore, it has been suggested that EMS and the standards will just add another layer of bureaucracy for the company. So why do a company need an environmental management system? The answer is creating a successful EMS could bring more benefits than the costs.

The advantages of improved environmental management can be divided into two broad categories (Roberts, 1998). The first category addresses the fact that improved environmental management is good for our planet and a fundamental requirement of global sustainability.

This is because respecting that present business patterns are fundamentally unsustainable, improved environmental management will serve at least to move our business patterns towards sustainability. The second category, which seems have a more direct relationship with companies, addresses the

fact that improved environmental management could benefit the company a lot. The table 3 lists some of the benefits.

2. 3 ISO 14001

2. 3. 1 Background Information of ISO 14001

ISO 14000 is a series of international standards for environmental management. In order to satisfy the increasing demand of establishing international environmental management standard, International Organization for Standardization (ISO) started to develop it in 1993 and after nearly three year's development, ISO published this series of standards (ISO 14001 and ISO 14004) in October 1996. It is the first such series of standards that allows organizations from around the world to pursue environmental efforts and measure performance according to internationally accepted criteria (Roberts, 1998).

The 14000series consists of over a dozen separate standards. But all these standards are fallen under two categories: specification standards and guidance standards (Krut, 1998). ISO specification standards are prescriptive documents: they describe what a company must do or not do in order to get certification. ISO 14001 is a blueprint for the company's environmental management system, and it is the only specification standard in the ISO 14000 series.

It describes how a company might manage and control its organizational system so that it measures, controls and continually improves the environmental aspects of its operations (Krut, 1998). ISO 14001 is intended to be applicable to ' all types and sizes of organizations and to accommodate

diverse geographical, cultural and social conditions' (ISO, 1996). The overall aim of both ISO 14001 and the other standards in the 14000 series is to support environmental protection and the prevention of pollution in harmony with socio-economic needs. ISO 14001 applies to any organization that wishes to improve and demonstrate its environmental performance to others through the presence of a certified environmental management system (Roberts, 1998).

With the exception of requiring the commitment to continual improvement and commitment to comply with relevant legislation and regulation, ISO 14001 does not prescribe environmental performance requirements. ISO 14001 specifies the requirements of the management system itself, which, if maintained properly, will improve environmental performance by reducing impacts such as air emissions and wastewater effluents (Roberts, 1998).

2. 3. 2 Stages for Implementing ISO 14001

2. 3. 2. 1 Environmental Policy

Environmental policy is a formal and documented set of principles and intentions with respect to the environment. Essentially, the environmental policy is the guiding document for corporate environmental improvement and adherence to it is fundamental to the integrity and success of the entire EMS (Roberts, 1998). A policy must contain commitments to:

- Continual improvement;
- Prevention of pollution; and

- Complying with relevant environmental legislation and other relevant requirements.

2. 3. 2. 2 Planning

The company must then set itself objectives and targets relating to its three policy commitments and devise a plan to meet these objectives and targets. Here the environmental objectives are the broad goals that your organization sets in order to improve environmental performance while environmental targets are set performance measurements that must be met to realize a given objective. All environmental objectives must have at least one target (usually more) and all targets must relate directly to a stated objective (Roberts, 1998).

2. 3. 2. 3 Implementing and Operation

Having devised its plan, the organization must then put in place the various elements necessary for its successful implementation and operation.

2. 3. 2. 4 Checking and Corrective Action

Having implemented its plan, the organization must then check to see whether it has been successful in meeting its objectives and targets. If any have not been met, then corrective action must be taken. The entire management system must be periodically audited to see that it meets the requirements of the standard (Welford, 1998).

2. 3. 2. 5 Management Review

Management must periodically review the system to ensure its continuing effectiveness and suitability. Changes are made to the system as and when necessary.

2. 4 Eco-Management and Auditing Scheme (EMAS)

2. 4. 1 Background Information of EMAS

EMAS - the Eco-Management and Audit Scheme, is a voluntary initiative designed for companies and other organizations to evaluate, report, and improve their environmental performance. It should be highlight that EMAS is a European Union Regulation, which applied within the European Union and the European Economic Area (EEA) — Iceland, Liechtenstein, and Norway. An increasing number of candidate countries are also implementing the scheme in preparation for their accession to the EU (EMAS, 2004).

The scheme has been available for participation by companies since 1995 (Council Regulation (EEC) No 1836/93 of 29 June 1993) and was originally restricted to companies in industrial sectors. The aim of EMAS is to recognize and reward those organizations that go beyond minimum legal compliance and continuously improve their environmental performance (EMAS-UK, 2004).

In addition, it is a requirement of the scheme that participating organizations regularly produce a public environmental statement that reports on their environmental performance. It is this voluntary publication of environmental information, whose accuracy and reliability has been independently checked by an environmental verifier, that gives EMAS and those organizations that participate enhanced credibility and recognition.

In June 1997 The Commission undertook a 5-year review of EMAS, taking into account experience gained during its operation. The final revised Regulation

(Regulation (EC) No 761/2001 of the European Parliament and of the Council of 19 March 2001) published in April 2001, is often referred to as EMAS II.

This new Regulation has been open to all economic sectors including public and private services. In addition, EMAS II was strengthened by the integration of EN/ISO 14001 as the environmental management system required by EMAS; by adopting an attractive EMAS logo to signal EMAS registration to the outside world; and by considering more strongly indirect effects such as those related to financial services or administrative and planning decisions.

2. 4. 2 Stages for Implementing EMAS

The objective of EMAS shall be to promote continual improvements in the environmental performance of organizations by (EMAS, 2001):

- (a) The establishment and implementation of environmental management systems by organizations as described in Annex I
- (b) The systematic, objective and periodic evaluation of the performance of such systems as described in Annex I
- (c) The provision of information on environmental performance and an open dialogue with the public and other interested parties
- (d) The active involvement of employees in the organization and appropriate initial and advanced training that makes active participation in the tasks referred to under (a) possible. Where they so request, any employee representatives shall also be involved.

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2. 4. 2. 1 Conduct of an Environmental Review

Consider all environmental impacts of the organization's activities: production processes, products and services, assessment methods, the legal framework as well as existing environmental management practices and procedures.

2. 4. 2. 2 Establish an EMS

Based upon the results of the environmental review, establish an effective environmental management system aimed at achieving the organization's environmental policy as defined by the top management. The management system needs to define responsibilities, objectives, means, operational procedures, training needs, monitoring and communication systems.

2. 4. 2. 3 Carry Out An Environmental Audit

Assess the management system in place and the organization's environmental performance in light of the organization's environmental policy and programme as well as of legal requirements.

2. 4. 2. 4 Prepare an Environmental Statement

The environmental statement should specify the results that have been achieved against the environmental objectives of the organization. It should also lay down the means by which the organization plans to continuously improve its environmental performance.

2. 4. 2. 5 Get Independent Verification By an EMAS Verifier

An EMAS verifier accredited with an EMAS Accreditation Body (UKAS in UK) of a Member State must examine and verify the environmental review, EMS, and audit procedure as well as the environmental statement.

2. 4. 2. 6 Register With The Competant Body of the Member State

The validated environmental statement must be sent to the appropriate EMAS

Competent Body for registration and be made publicly available.

2. 5 Drivers and Barriers of EMS Implementation In SME's

SMEs face internal and external barriers when seeking to address their environmental issues and adopt and implement EMSs, but it is the internal barriers that initially have the more significant role in impeding progress (Hillary, 1999). Negative company culture towards the environment and the disassociation between positive environmental attitudes and taking action cause the uptake of environmental performance improvements and EMS adoption to stumble at the first hurdle (Hillary, 1999).

On top of this general culture of inaction on the environment, SMEs are also very sceptical of the benefits to be gained from making environmental improvements (Hillary, 1999). In many cases, especially for the smaller organisations, low awareness and the absence of pressure from customers (the most important driver for environmental improvements and EMS adoption) and insufficient other drivers mean that no efforts are made to address environmental issues (Hillary, 1999). SMEs also face the problem of locating, and having the time to locate, good quality advice and information.

Once a SME has embarked on EMS implementation the process is often interrupted and resources are frequently diverted to core business activities (Hillary, 1999). It is the lack of human resources, not financial ones, which SMEs find most difficult to secure and maintain for EMS implementation.

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The more multifunctional the staff, as is common in micro and small companies, the more likely the process of implementation will be interrupted. Some studies indicate that SMEs, once on the route to certified EMSs, face inconsistency and high charges in the certification system. SMEs are subjected to a variety of stakeholder pressures related to their environmental performance and their adoption of EMSs.

Customer and supply chain are also prominent in driving SMEs environmental improvements (Hillary, 1999). However the regulator and local authorities exert greater influence on the general environmental performance of SMEs, in particular medium-sized enterprises, than customers.

3 Methodology

3.1 Introduction

This chapter provides a detailed explanation of the research methods used by the author in order to complete the study. White (2000) stated that “ research should be focused, not general” therefore the research conducted for the study will be to specific objectives.

Academic theory is used to explain the advantages and disadvantages of research methods. The study will also aim to outline research limitations at the end of the chapter.

3.2 Quantative Approach

In this thesis a study is applied to gain information and to fulfill the purpose: “ how can small and medium sized enterprises profit from environmental

management systems". Questionnaires are made with people from 12 different German companies.

Two types of methods can mainly be used in the scientific research, they are positivism and hermeneutic. Positivism starts with one well defined knowledge as an ideal, while the hermeneutic methods relate to different knowledge (Proctor, 2003).

Conclusively can be said, that the hermeneutic method is about the interpretation and the usage of feeling and understanding when interviews are performed, which is also known as qualitative approach (Thomas, 1997).

Thus the quantitative approach has received some critique, mainly when the data is collected. The risk is that the researcher could handle the topic to much facile way, without being aware of it (Thomas, 1997).

3.3 Why Qualitative Approach?

The choice of the research of the core and the structure of environmental management systems has led to the discretion of the quantitative approach which was essential due to the interpretation of the environment and the experiences of several companies (Deacon et al, 1999).

Furthermore, since the authors wanted to examine the meaning of environmental management systems on different levels, it is preferably to use a quantitative research method (Casell & Symon, 2004), given that environmental management systems have potential exploration.

What differs a qualitative method from a quantitative method is that the qualitative method a first qualitative perceptive of the fundamental motives
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and reasons is received, in the quantitative method the researcher is generalizing data from a sample to the population.

To enhance the reason of using a qualitative method in this thesis the quantitative approach will help to develop a good definition and a highly topical view of environmental management systems. This is due to the fact that the author will have a better understanding of the different definitions that exist today.

3. 4 Literature Study

The process of gathering data starts with the secondary research existing of the study of literature such as articles, books and journals. The author chose to use literature resources of the library of Northumbria University and furthermore literature such as articles and journals via databases like Emerald, Ebsco Host, Business Source Premier, FT. com (Financial Times), Science Direct and Nexis.

The usage of keywords was as follows EMAS, ISO 14001, sustainability, environmental management systems and continual improvement, thus several gave more hits than other. In order to cover other aspects, in especially the theoretical framework the author tried to use other keywords connected to the specific area. Also sources more connected to the entrepreneurial part of marketing have been used in order to get a broad and specific picture of environmental management systems due to the EMAS and ISO 14001 regulation.

The author pointed out that the literature parts into primary and secondary sources. Primary resources are written by an author that also took part in the <https://assignbuster.com/business-essays-environmental-management-system/>

research behind it. Secondary sources are literature that covers a certain topic but without a specific research behind it. Secondary literature sources do not always give enough