

THE IMPACT OF THE IMPLANTATION OF ENVIRONMENTAL MANAGEMENT SYSTEM ON THE ECONOMICAL PERFORMANCE OF THE COMPANY

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Abstract

In this actual context the concept of environment become more and more crucial for both the public and businesses, communities and administrations the environmental Management allows to ameliorate the performances of all organism towards environment. In this perspective, our research will concentrate on elaborating a scorecard that can gather a group of environmental indicators that may have a direct or indirect impact over the economical performances of the enterprise while dealing with the implantation of an environmental management system which is based on ISO 14001 norms. This dashboard can consult an aid tool to a an environmental decision that neglect the follow up results. This measure, whirl long term development, and get the interest of the public authorities and the Moroccan economical actors.

Keywords: Environnemental management system, ISO Norm 14001, T Environmental scorecard, economical performances.

1. INTRODUCTION

Nowadays everyone is aware of limits of our environment: threats exhaustion of overexploited resources , exceeding the auto-purification capacities in areas uses as receptacles of our waste, disruption of the equilibrium of the planet.

In the book "Our Common Future" in 1988, the World Commission on Environment and Development, chaired by Mrs Brundtland warned of the danger of global changes brought uncontrolled human activity: "Many of these changes go hand in hand with fatal dangers we must absolutely be aware of these new realities -. Nobody can escape - and we must assume them»

The development of human activity changes the environment, and these changes directly threaten the human activity: to protect the environment, and the same to protect us, we must be able to control the consequences of our activities on the environment.

Companies, which are as a link in the human activity chain, must also integrate new protection criteria of the environment in their operation.

In the meantime, this requires them to acquire new skills, changing their organization, by the integration of previously unknown environmental concerns. Ultimately, this implies a change in the culture of the company, which is productive exclusively, and that must also become citizens.

Our study presents a current context linked, to Morocco, businesses and environment. We present a this case of study in which we discuss the experience of implementation of EMS within a company specializing in rail transport (ONCF) and in accordance with the ISO 14001 standard for the protection and enhancement of environment.

2. ENTREPRISE / ENVIRONMENT CONTEXT :

Environmental constraints on enterprises today are no longer limited to the regulatory constraint, but widens to financial, economical pressures or from local actors issues. In fact, these pressures are exerted by a multitude of the interested parties who are related to the entreprise2 (Figure 1)



Figure1: Interested parties in relation to the Company

They are principally:

- The economical partners: upstream (suppliers, subcontractors, transporters ...) or downstream (contractors, customers, distributors, transporters, consumers...);
- Financial partners: investors, shareholders, banks, insurance;
- Institutionals: public authorities tax administration, local authorities, water agencies, - Pressure groups: local associations, residents associations, consumer associations, associations for the protection of the environment, media ...

We must therefore consider the company as a complex trading system with these interested parties, certainly its products, as well as material flow, cash flow and information. These expanded business partners have some expectations (or requirements) very different with respect to the consideration of the environment and information they wish to have. These requirements are not only reflected in the company by constraints but also opportunities. The stakes are of three types: regulatory, economic and strategic.

2.1-Regulatory Issues

The company is subject to regulations setting standards on discharges, nuisance, withdrawal limits, requirements regarding risk management in hazardous installations...

Parties interested by this regulatory issue are parts of an institutional nature, the main ones being the local authorities responsible for the inspection of classified installations. But others are also affected by regulatory compliance and respect, without being responsible for its control: it is, for example, the case of shareholders, insurance, banks, residents, nature protection associations...

2.2-Economic Issues

The economic impact of the environment on the company takes three forms: the cost of access to resources (consumption of raw materials and energy), the cost of compliance (risk reduction, development of storage, change processes, effluent treatment, landfill ...), and environmental taxations (Royalties on water, waste, air emissions ...). Interested parties are different for each category. The whole industry of eco-industries is concerned with the first two. The collection of taxes, or certain subsidies, are the domain of agencies. Local authorities can set fines for non-accordance. Of course, economic and financial partners are involved in the control of environmental costs in the company.....

2.3-Strategic Issues

It is for the company to integrate the environment in order to differentiate its products and its image in order to gain market shares. Economic partners and pressure groups are involved, because the position of the company on the market depends on them. All other interested parties are concerned; the consideration of strategic issues is as a guarantor of the continuity of the business

It may be noted that there is a connection between the types of issues (Figure 2) regulatory issues are part of the economic issues (non-accordance implies fines or obligations to work), and the economic and regulatory issues are themselves part of the strategic issues (the non-accordance and non-controlling costs cancel the sustainability of the company).

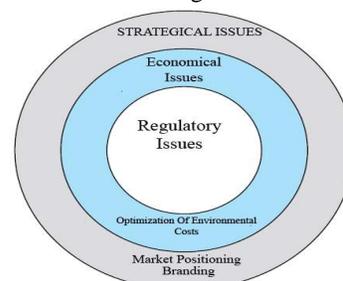


Figure 2. Nesting Environmental issues

2.4 Policy-regulation

The relationship between the company and its stakeholders are regulated by four types of policies (Table 1) that play an interface role. The first two (regulatory and economic) are obligatory and the company can not avoid. The last two (contractual and managerial) are voluntary and often reflect the research opportunities for the company and are now differentiating factor on the market, but it is possible, finally, they become conditions of market access.

Table 1. Environmental regulation and policy issues

Kind of actions	régulation politics	application tools	issues
compulsory	Regulatory policy	Regulation	Regulatory : fines, penalties, operating license
	economical policy	Taxation	Economic: cost control, competitiveness
Voluntary	Contractual policy	Labels produced (LCA)	Strategic: market share, branding, sustainability of the company
	managerial policy	Site certification: ISO 14001 EMAS	Strategic: market share, branding, sustainability of the company

The four types of regulatory policies used are different ways to achieve the same goal: to bring environmental concerns into the business. Mandatory policies and institutional actors today are more present for businesses, but the increasing expansion of the relevant financial and economic partners parts leads to the emergence of voluntary implementation of policies. Chart 1 summarizes the tools, issues and actors involved in each policy.

3. APPLICATION AND STUDY CASE

In the context of a case study, we conducted the implantation of an environmental management (ISO 14001) and this through the following steps:

- The exploring of the site;
- The functions of the EMS;
- The collection of environmental data;
- Identification of Environmental Aspects (EA);
- The evaluation and ranking of AE;
- The evaluation of regulatory compliance EA
- The development of the manual environment;
- The drafting of procedures;
- The drafting of environmental management;
- The development of environmental action plan;
- The development and implementation of a training plan for all staff the company.
- Statement of Economic Indicators company1;
- Application procedures;
- Implementation of the action plan;

And finally the study of the evolution of economic indicators before and after the implementation of EMS.

4. RESULTS OF THE APPLICATION

After developing environmental indicators, we noticed a positive impact on the economic performance of the company especially in terms of overspending reported to the energy level in this case:

- The city water bill: 95% reduction of drinking water consumption (Figure 3)

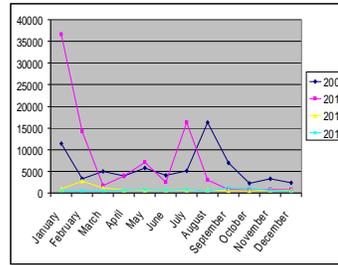


Figure 3. City water consumption

- The consumption of well water: 10% reduction (Figure 4)

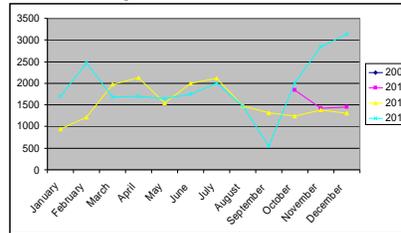


Figure 4. Consumption of well water

- The electricity bill: 15% reduction (Figure 5)

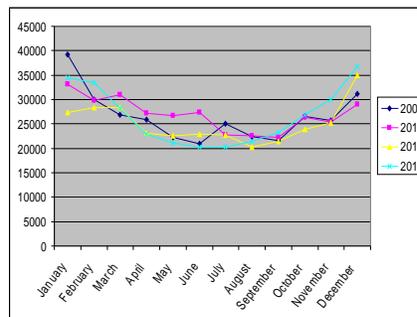


Figure5. Electricity consumption on kw

The impact has been reported even in waste through sorting operation which was adopted and the level of expansion of green spaces.

As far as the Subsurfaces water pollution and its impacts are concerned, analyzes of samples of the organism are being developed.

Conclusion

The approach discussed is highly multidisciplinary and interest to various industrial sectors in the region of Eastern. It will allow companies to develop strong skills in the field of environment resource efficiency, energy management, evaluation of aspects, reduction and recycling, use of renewable energy ...

Finally, it is important to consider the environmental analysis of the site above the action program of the company is the key point of the process.

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