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Business Sustainability: A Need To Re-Look Environmental Practices And Initiatives

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Abstract
Due to the increasing degradation of the natural business enterprises' environmental commitment has become an important variable in most of today's competitive business environment. This is because activities of most enterprises are the main causes of environmental degradation which in turn impact on the sustainability of their performance. This study looks at the specific business environmental practices and initiatives and how they impact on their sustainability. The overall objective of the study was to establish the impact of environmental initiatives on business sustainability around Lake Naivasha. The study design was descriptive survey in order to pick behaviors which needed to be mitigated for purposes of business sustainability. Purposive random sampling was used from the target population which comprised of farming, hospitality and fishing sectors. Discriminant analysis was used to analyze the data and the key findings of the study show that business sustainability depends mainly on the current environmental practices and initiatives that have been put in place. The study recommends that business associations be at the frontline in regulating activities by their members in order to achieve sustainability.
Keywords: Business Sustainability, Lake Naivasha, Environmental Initiatives, Enterprise Performance

1. Introduction

In order to mitigate on environmental degradation, most businesses have embarked on Corporate Social Responsibility (CRS) which forms part of their environmental practices and initiatives. CSR as a concept means being ethical towards stakeholders, that is not harming or hurting any stakeholder (Jones, 2005). It represents voluntary company activities and initiatives meant to achieve sustainability. CSR is sometimes taken to mean, at the minimum, being legally compliant to the rules of the land (Carroll, 1979). The dominant goal for CSR is to better the condition of various stakeholders including the broader society, communities and most importantly the natural environment (Kotler & Lee, 2005). Further corporate social responsibility has been seen as a continuous process of engagement of the firm with the stakeholders (Waddock, 2004). The goal of CSR is to internalize the externalities in order to avoid the sources of conflicts between companies and the society that could in the long-run hurt the enterprise sustainability (Heal, 2007). An example of such source of conflict is pollution, an externality which shows the private-social cost differences. The costs for the society are much higher than the private costs for the company (Heal 2005). In this study, corporate social responsibility initiatives by organizations will be interchangeably be interpreted to imply environmental practices and initiatives.

According to Heal (2005), there are six mechanisms linked to CSR programs that lead to higher profits and enhanced competitiveness of the company in the long-run. These mechanisms include reduction of risk, reduction of waste, improvement of relations with regulators, generation of brand equity, improvement of human relations and employee productivity, and decrease in cost of capital. However, the European Competitiveness Report (2008) argued that the strength of the positive impact of each of these mechanisms, and the extent to which it is relevant to all companies varies. They state that each case of CSR is unique for different sectors, sizes and conditions related to the current situation of the companies. The strongest evidence of a positive impact of CSR programs on competitiveness and sustainability was found to be in the cases of human resources, risk management, brand equity generation and innovation.
To guide the study, researchers developed a conceptual framework based on the sustainability triangle as shown in Figure 1 below.

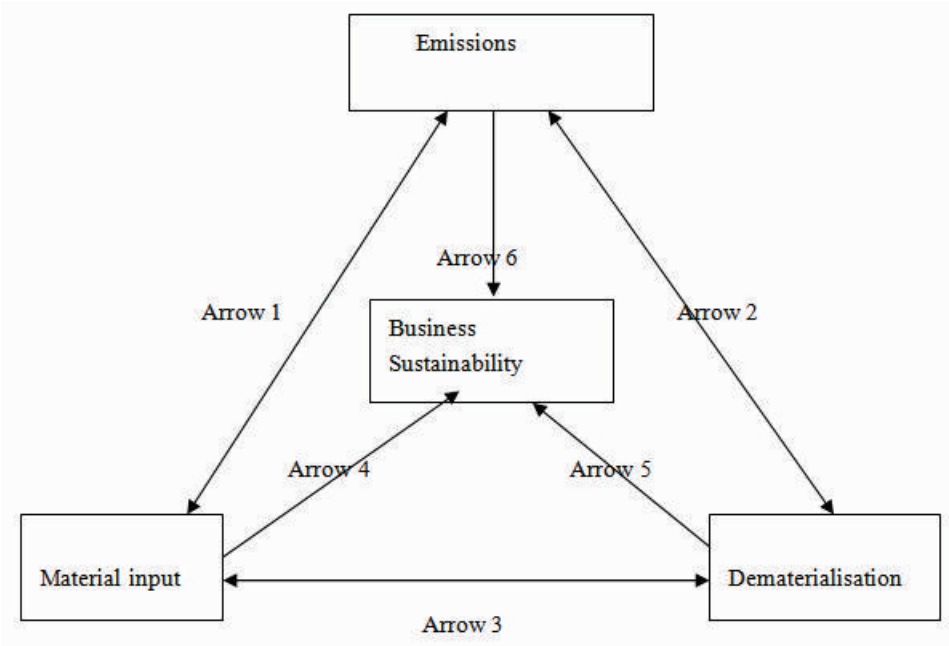

Figure 1: Modified Sustainability Triangle (Source: Modified from Charles, 1994)

Notes to Figure 1:

Arrow 1: Indicates that materials input and emissions influence one another.

Arrow 2: Indicates that dematerialization and emissions will influence one another.

Arrow 3: Indicates that dematerialization and materials influence will influence one another.

Arrow 4, 5, and 6: Indicates that business performance, social capital and environmental initiatives will have an influence on business sustainability.
Based on the above conceptual framework, we formed the following hypothesis which the study sought to test. The Null Hypothesis (H_0): Business practices and initiatives have an impact on business sustainability with the Alternative Hypothesis (H_1): Business practices and initiatives have no impact on business sustainability.

2. Literature Review

Impink and Gaynor (2010) undertook a study on the sustainability implementation program within the Maasai community in southern Kenya. They noted that land tenure and subsequent land use changes have compromised the ability of the traditional systems to adapt to drought and other disturbances. Communities are now unable to move away from the barren rangelands during the dry periods thus making their animals die in large numbers. Communities are thus unable to practice rotational pasture use by moving to fertile grasslands to allow for the regeneration of the pasture. The confinement to smaller grazing areas causes increased livestock depredation, disease transmission and competition for water and forage. Further, at high densities, livestock have influenced vegetation species composition and soil characteristics thus compacting soil and disrupting its water absorption capacity leading to environmental degradation. It was established that the Maasai pastoralists would have remained sustainable in their ancestral land if it were not for the changes in the land tenure system. The study therefore recommends that local communities should play great role in future sustainable development efforts. Environmental practices and initiatives to be put in place are mainly associated with the adoption of Environmental Management System (EMS) as documented in the ISO 14001:2008. Darnell *et al.*, (2008) noted that facilities, institutional pressures, resources and capability together with improved business performance are motivational factors when deciding to adopt environmental management systems (EMSs) worldwide. The study investigated whether organizations that are motivated mainly by their resources and capability benefits to the

same extent as organizations that are driven to adopt an EMS mainly because of institutional pressure. The study established that facilities that are motivated to adopt comprehensive EMS because of their complement resources and capabilities are more likely to improve their business performance as opposed to those that adopt EMS due to institutional pressures. The current study has been informed by this recommendation in order to establish the kinds of environmental practices and initiatives that have been put in place by business enterprises to address environmental degradation in Naivasha.

The economist intelligence unit investigated the challenges of sustainability in 2008. A survey of 1,200 executives worldwide was conducted along with numerous in-depth interviews with leaders of business and non-governmental organizations (NGOs) as well as other sustainability experts were conducted to establish if sustainability can be seen as an opportunity or merely another drag on the bottom line. The results indicated that businesses knows that they need to raise their sustainability but they are confused by new and poorly defined demands; many companies lack clear leadership on sustainability; the supply chain needs to be incorporated in the sustainability practices; reporting on sustainability needs to be well developed; benefits of pursuing sustainability practices outweigh the costs; there is a link between corporate sustainability & strong share price performance; and uncertainty over government policy is making it difficult to plan strategies for corporate sustainability. The foregoing has also been captured in the ISO 26000 (Corporate Social Responsibility Guidelines) published by the International Organization for Standards in Geneva Switzerland in November 2010. Although this standard is not meant for accreditation it forms a good guideline for enterprises that may want to implement Corporate Social Responsibility as a way to improve business sustainability.

While assessing the impact of seasonal closures of fishing in Lake Naivasha, Njiru *et al*., (2008) noted that for further recovery and sustainability of the fishery to be attained, poaching and water abstraction which are a major threat have to be tackled. They concluded that to ensure sustainability of the fisheries, there is a need to involve all the stakeholders in the management of the Lake. This is because the top down management coordinated by the central government has not worked very well in Kenya. As had been noted, community involvement in management of Lake Victoria through beach management units drastically reduced illegal fishing methods and gears (Njiru *et al*., 2007). In Lake Naivasha, the stakeholders are being involved through the Fisheries Department, Kenya Marine and Fisheries Research Institute, The Lake Naivasha Riperian Owners Organization among others. The study failed to link these initiatives to the welfare of the stakeholder in an effort to encourage them to be part of the process. The current study sought to fill the gap by linking the business environmental initiatives to their sustainability. This is expected to inform the stakeholder so that they become fully involved in environmental conservation issues.

Musota (2008) undertook a stakeholder analysis through fieldwork interview and secondary literature to find out the common interests, perceptions and influences of stakeholders in business sustainability. One of the objectives of the study was to carry out an assessment of stakeholders related to sustainable water use and management in the water catchment of Lake Naivasha. Assessment of key drivers behind sustainable water management was done through analysis of available water abstraction records of registered water users and by remote sensing through image analysis. The study established that the most important stakeholders are large commercial farmers and Naivasha municipality with an overarching interest in water abstraction, access to the Lake, land use and power generation. Majority of stakeholders' visions indicated preference for a high Lake level and good water quality. The Maasai pastoralists were however found to prefer access to the Lake for watering their animals. The current study will therefore explore how these stakeholder references are to be managed to ensure specific enterprise sustainability.

Dean and McMullen (2007) used existing theories to explain how entrepreneurship could help resolve environmental problems of global socio-economic systems. They argued that environmental degradation results from the failure of markets while opportunities are inherent in market failure. This suggests that environmentally relevant market failures represent opportunities for achieving profitability while simultaneously reducing environmental degrading economic behaviors. They conceptualize sustainable and environmental entrepreneurship which detail how entrepreneurs seize the opportunities that are inherent in environmentally relevant market failures. They further examine the ability of the proposed theoretical framework to transcend its environmental context and provide insight into expanding the domain of the study of entrepreneurial sustainability.

Jones (2002) while advocating the use of marine protected area strategies for fishery sustainability noted that although the strategy may be justifiable from a preservationist perspective, they may be objected from a resource

exploitation perspective. This is because Marine Protection Areas (MPAs) generate both internal and basic conflicts which may be exacerbated when scientific arguments for MPAs are motivated by the preservationist concerns. He concludes that both scientific and socio-economic approaches to sustainability had their benefits and that it is necessary to move forward from the either/or approach to one that recognizes that both approaches have a role.

Everard and Harper (2002) while undertaking the sustainability of Lake Naivasha Ramsar site noted that sustainable development remains a pressing priority as a matter both of long-term protection of the lake ecosystem and of the economic and social progress that depends upon it. They recommend that the issue be addressed at catchment-scale to protect the ecosystem services that constitute the region's primary resources by addressing energy, fertilizers, pesticides and other aspects of chemical use. Further, plastics, erosion and sedimentation, wildlife, water and socio-economic issues are central to sustainable development strategy, influenced by both intensive and subsistence farms across the catchment. They therefore recommend a concerted and proactive collective action by the groups representing common interests around the lake. These groups include; Lake Naivasha Riparian Association (LNRA), the Lake Naivasha Growers Group (LNGG) and the Kenya Flower Council (KFC).

Shumway (1999) in a report commissioned by the U.S. Agency for International Development's (USAID) Africa Bureau, in an attempt to help stem the loss of Africa's aquatic biodiversity, found that there is a need to improve institutional capacity, encourage appropriate economic and sectoral policies, involve the community, mimic natural disturbance regimes, assist with the establishment of critical aquatic reserves for the provision of both conservation and fisheries benefits. This, he concludes, will assist with the development of sustainable fisheries.

Fiksel *et al*., (1999), notes that leading companies in the U.S., Europe and Japan (such as Dupont and General Motors) have launched proactive programs to improve the environment and social performance of their products, processes, services, and facilities. Although the study is based upon their experience in developing and implementing performance processes for a variety of industrial clients including leaders in sustainability movement, the performance measurement process is based on the results of a multi-year program sponsored by the Electric Power Research Institute (EPRI). In the study it is noted that there are four fundamental principles that help companies address the challenges associated with measuring and representing sustainability. These principles include the dual perspective of resource consumption and value creation including economic, environmental and societal aspects; systematic consideration of each stage in the product life cycle; and the development of both leading and lagging indicators. In this regard, the current study seeks to connect the four principles to the establishment of EMS as a means to achieve sustainability.

According to Fiksel *et al.,* (1998), a sustainable organization is expected to strive to minimize resource consumption while maximizing value creation. These include functional performance, information content, customer satisfaction, environmental quality, economic value adding, business competency, human health and social welfare. Baker (1999) notes that the sustainability performance measurement is a process which consists of a series of steps that can be grouped into four phases namely Plan, Implement, Check and Review. Companies therefore apply these steps to track a broad range of activities, including environmental management, facility operations and technology development programs. Fiksel *et al* (1998) points out that it is vital to recognize that environmental problems are not only ecological in perspective but are also social problems caused directly or indirectly by the aggregate effects of human beings going about their everyday lives. This viewpoint strongly suggests that environmental problems are linked to issues of collective choice at various levels. Human beings, as key instigators of environmental change, will need to act collectively to develop cooperative solutions that can help control further environmental degradation that threatens quality of life, business sustainability, and the very life support system itself. The emerging research therefore finds itself drawing from the realm of classic collective choice theories developed at the intersection of political science and economics.

Swallow and Bromley (1995) studied the structure of governance, the types of institutions that govern behavior and the compatibility between governance, institutions and individual incentives in Lesotho and Senegal in relation with African rangelands sustainability. The study concluded that the extent of effectiveness of the common property regime depends upon the incentives and expectations of individuals expected to enforce the rules of the institutions or comply with their terms. At the time of their study, it was noted that most African governments lacked the organizational capacity and political will necessary to implement state property regimes,

official regulations on resource use, or individual property rights for rangeland resources. They recommended that governments define and enforce group rights to particular resources, then help to establish conditions in which internal dynamics yield efficient resource management outcomes. The study failed to distinguish the forms of environmental degradation that arose in view of the identified failure. This study will seek to fill the gap by assessing the role of stakeholders in combating environmental degradation brought about by the specific business activities and the initiatives being taken to address against them.

Turner *et al.,* (1990) observed that increasing human impact on the environment has led to broad and unique global environmental challenges that are characterized by complex technological, social and ecological systems interacting at variable spatial and temporal scales. An emerging scientific consensus is that these human-induced environmental impacts are problems that could impose enormous economic and ecological costs on human society and the biosphere thus affecting the sustainability of businesses. These findings were confirmed by Arrow *et al*., (1995) and Costanza *et al*., (1997). The current study seeks to connect human impact on the environment and the business sustainability together with business association who should get involved through their registration requirements.

3. Study Design and Methodology

The descriptive survey research design was chosen in order to pick behaviors which needed to be mitigated for purposes of enterprise performance sustainability. This was done in two tiers; secondary data on the movements of the variables over the last five years to establish the resource use over this period and how the same has influenced the sustainability of business performance; and a questionnaire administered to the chosen categories of stakeholders to represent all the major actors in the Lake Naivasha ecosystem. A check list was also designed to assess the business sustainability initiatives using the 7-Ps model.

3.1. Target Population

The target population for this study was the businesses that operate within the Lake Naivasha Ecosystem and companies that were picked are those that are accused of causing most of environmental degradation through their activities. The research sample frame was based on three categories of the population; the business owners/top managers, the employees and the different types of stakeholder (that is, flower farmers, fishermen and hoteliers) using purposive random sampling.

3.2 Sample Design and Sample Size

Enterprises that are accused of causing most of the environmental degradation were identified on the ground and these consisted of the target population. Purposive random sampling was used to select categories from a complete list of the target population in order to enable collection of data from a cross section of all the businesses that operate around the Lake Naivasha ecosystem for purposes of obtaining an all inclusive data set.

Purposive sampling was used to explore the range of different potential impacts like ensuring that the quota for managers in each business involved was selected from each department. The sample size represented the number of respondents who were selected through the use of purposive random sampling technique and issued with the questionnaires. Purposive enabled the researcher to firstly tie the selected sample to the research objectives; secondly it enabled the assumption that the best sampling strategy depends on the context in which one is working and the nature of the research objectives. In this regard, stakeholder sampling technique was applied to identify the stakeholders, get their opinions on environmental issues and determine how they feel these will affect their business performance. Sample stratification was used to identify and capture the opinions of a cross section of owners, senior managers and lower level management staff in regard to the company's environmental initiatives and their impact on the sustainable performance.

In order to determine the sample size, the following formula was used (Watson, 2001):

$$n = \frac{P[1 - P]/(A^2/Z^2 + \{P[1 - P]/N\})}{R}$$

Where: n = sample size required
N = estimated number of people in the population
P = estimated variance in population, as a decimal
A = precision desired, expressed as a decimal
Z = confidence level

R = estimated response rate, as a decimal

For purposes of this study, the estimated variance in the population is 0.3, the desired precision is 0.05 and the confidence level will be 95%. During the survey it was noted that most of the employees in both the farming and hospitality sectors are employed on part time basis while nearly all the actors in the fishery sector apart from the boat owners are engaged on temporary basis. For the purposes of the study, it was estimated that the total number of people in the population who are engaged on permanent basis is 550. The estimated response rate was estimated to be above 95% since the questionnaire was to be administered on the face to face interview basis. Based on the above understanding, the sample size was determined as follows:

$$n = \frac{0.3[1 - 0.3]/(0.05^2/1.96^2 + \{0.3[1 - 0.3]/500\})}{0.95} = 216$$

The sample size was rounded upwards to 220 for purposes of easy calculation. Based on the above sample size, the sampling frame was done from the target population consisting of farming and hospitality companies which employ more than 50 people on regular basis and the 50 fishermen who are registered to fish at the Lake Naivasha at any one time. The sample ratio was allocated to each category depending on the number of the targeted population as shown in Table 4.1. In order to give an equal distribution of the sample size to the identified population, we used a sample ratio calculated from the total population as shown in column three in Table 1. Based on the sampling frame in Table 1, the researcher chose three representatives (Owner/Senior Manager, Middle Level Manager and an additional number of respondents selected purposively) from each of the sampled businesses were chosen.

3.3 Data Collection Procedures and Instruments

Two different types of data sets were collected during the study. These included secondary and primary data.

Primary Data: This category of data was collected directly through observation and use of a checklist, questionnaire survey at the Lake Naivasha ecosystem and field reconnaissance to identify the general environmental situation of the ecosystem. These data included forms of degradation, number of enterprises that cause most of the degradation, enterprise performances, business environmental practices and initiatives, and the state of social capital. A variety of instruments such as questionnaire administered to individual respondents, focus group discussion, in depth interviews as well as observation checklists were used to collect this data. In formulating the questionnaire, both environmental initiatives and business performance sustainability issues were mixed up in order to avoid biased responses. Other tools used included interview guides, image recording equipment, focus groups, structured forms and other data collection tools that were deemed necessary during the field work. The data collected was then analyzed to get only the important information that would help answer the research questions. The various sources of primary data that was collected were presented in charts and graphs for easy interpretation.

Secondary Data: This category of data involved existing data which was found to be relevant to the study and was collected from previous study reports, articles, professional papers, flower business monitoring records, annual sales reports and agricultural reports, journals and from other relevant literature. The main sources for these data was from University and College Libraries, Ministry of Forestry and Wildlife, Ministry of Environment and Mineral resources, Ministry of Fisheries, Lake Naivasha Growers Group, The Flower Council of Kenya and Lake Naivasha Riperian Association. Other secondary data sources included the Water Resources Management Authority, National Environment Management Authority, Kenya Wildlife Service and consulting firms dealing with the environmental management in Kenya. These provided the general history and developments in the study area.

3.4 Research Instruments

The study used the questionnaire and the checklist as the main research instruments. However, other instruments used were; observation, image recording instruments and focus groups drawn from the stakeholders' monthly meetings. Further, direct observation was used to identify the types of environmental degradation at the Lake Naivasha ecosystem and photographs were taken to demonstrate the extent of the respective scenarios.

3.5 Use of Questionnaire

The questionnaire was found appropriate because the researcher was interested in what ratings would be given in each of the areas of environmental initiatives and business performance sustainability. The Likert scale was to be used which made the use of the questionnaire most appropriate. In addition, some of the people who were interviewed did not have expertise in the area being researched thus the need for face-to-face interactions. On the

basis of the objectives a questionnaire was developed consisting of eight (8) questions. The respondents were asked to rate statements in each of the eleven items on a four point Likert scale where, 1 = critical effect and 4 = No effect. In addition to the questions addressing the issues related to the research hypothesis, the respondents were also requested to provide information relating to the environmental protection strategy status, the reasons for initiating/not initiating environmental protection and the intention to establish a coherent environmental management system. Background information on their respective organizations was also requested.

4. Findings

The study findings were analyzed using discriminate analysis in order to determine the relationships between our dependent variable (i.e. business sustainability) and the independent variable (environmental initiatives) as identified in our conceptual framework. The analysis attempts to use the independent variables to distinguish among the groups or categories of dependent variables so that to determine which of them will enter our model.

As shown in tables 1, 2, 3, 4, 5, 6, 7 and 8, business initiatives will affect business sustainability around the Lake Naivasha ecosystem. It was established that environmental practices and initiatives influence business sustainability thus the null hypothesis was not rejected.

Table 1: Summary of Stepwise Discriminant Analysis Results (Source: Author, 2013)

Steps	Entered	Wilks' Lambda Value	Significance
1	H1	.656	0.000

Table 2: Canonical Discriminant Functions (Source: Author, 2013)

Function	Eigenvalues	% of Variance	Cumulative %	Canonical correlation	Wilk's lambda	Chi-square	Significance
1	0.524	100	100	0.586	0.656	57.293	0.000

Table 3: Analysis Case Processing Summary (Source: Author, 2013)

Unweighted Cases		N	Percent
Valid		139	69.2
Excluded	Missing or out-of-range group codes	0	.0
	At least one missing discriminating variable	62	30.8
	Both missing or out-of-range group codes and at least one missing discriminating variable	0	.0
	Total	62	30.8
Total		201	100.0

Table 4: Summary of Prior Probabilities for Groups (Source: Author, 2013)

Hypothesis	Business Sustainability	Prior	Cases used in Analysis	
			Unweighted	Weighted
H_0	Agree	0.676	96	96.000
H_1	Disagree	0.324	46	46.000
	Total	1.000	142	142.000

Table 5: Summary of Eigenvalues (Source: Author, 2013)

Function	Eigenvalues	% of Variance	Cumulative	Canonical correlation
Environmental Practices and Initiatives	0.524	100	100	0.586

Table 6: Summary of Wilk's Lambda (Source: Author, 2013)

Test of Functions	Wilk's Lambda	Chi-square	df	Sig.
Environmental Initiatives	0.656	57.293	8	0.000

Table 7: Summary of Functions at Group Centroids (Source: Author, 2013)

Variable	Function 1 (Agree)	Function 2 (Disagree)
Environmental Practices and Initiatives	-0.497	1.038

Table 8: Summary of the Classification Accuracy (Source: Author, 2013)

Variable	Prior Probabilities for Groups		Chance Accuracy Rate	Chance Rate Plus 25%	Cross-Validated Accuracy
	Agree	Disagree			
Environmental Practices and Initiatives	0.676	0.324	0.562	70.2	74.6

5. Conclusion

Business associations need to be involved in environmental initiatives through sensitization of their members and development of minimum practices and initiatives that should be assessed annually before renewal of membership. In order to meet the sustainability requirements, an environmental management system (EMS) implementation needs to be made a compulsory document and should be more comprehensive to include all the possible aspects subject to the local environment. This requires that environmental issues be included: across the entire life cycle of the product or service; institutionalization of establishing and diffusing continual innovation across product life cycle; and internalization of internal and external stakeholders' concerns at each stage of product life cycle. In designing EMS for sustainable consumption of resources three aspects that must be taken

into account are;. identification of environmental aspects; attributing significance to the identified environmental aspects; and expressing the intent of an organization towards the environment by delineating clearly areas directly affecting the natural capital. This forms the pillars of environmental policy thus: pollution prevention; continual improvement; commitment to legal compliance; dematerialization across the product life cycle; continual innovation for dematerialization; and commitment to compliance with stakeholders' expectations, not just regulators.

Further it is important to note that the EMS should be subjected to audit to determine the extent to which an organization has management system characteristics that allows appropriate measurement and monitoring of balance between socio-economic and self-interest and the sustainable consumption of available resources. The Management system audit for sustainable business performance should cover the following areas: critical environmental management system elements; essential quality management system elements; organizational adaptability which depends on the ability to take preventive actions capable of anticipating or enabling a future outcome and corrective action.

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