Are Sustainability Management Systems (SMS) really promising?

Javier Esquer-Peralta [a] [*], Luis Velazquez [a], and Nora Munguia [a]

[a] University of Sonora, Industrial Engineering Department.
Blvd. Rosales y Luis Encinas, C.P. 83000. Hermosillo, Sonora, México.
[*] e-mail: javierep@rtn.uson.mx

Abstract

The concepts of Sustainable Development (SD) and Management Systems (MS) are finding increasing acceptance in a variety of fields, including academy, politics, and non-governmental organizations. These concepts are also being used by the general population. This paper describes the perception of different experts by discussing about the usefulness of Sustainability Management Systems (SMS) as holistic systems that might integrate environmental, social, and economic elements. Fourteen interviews have been conducted with several experts around the world. Some of them are professionals in Sustainability issues in general, and some of them in environmental, health and safety (EHS) issues in particular. The results have shown that, although there is a continuous debate on the sustainability approach, several core elements can be addressed through Sustainability Management Systems (SMS).

1 Introduction

The current tendency towards developing a single Management System (MS) as a whole and the increased awareness of Sustainable Development (SD) has encouraged people and organizations to develop the idea of Sustainability Management Systems (SMS). In practice, there have been several approaches to this idea, but they have not always been supported [Esquer-Peralta, 2007]. However, consensus about the exact meaning on an SMS and the necessary elements required for it has not been reached yet since there are a lot of factors that may affect the perception of the users. In this sense there is not full agreement on both, the meaning of these concepts of SD and Sustainability, and on what they should include. For instance, according to Filho, [Filho, 1999] training, working experience, and political and economic context will influence people's own definition of SD. In addition, Prugh and Assadourian affirm that "Sustainable Development and Sustainability itself are about collective values and related choices and are therefore a political issue." [Prugh and Assadourian, 2003]. This paper is intended to highlight the explored thoughts from current professional individuals on Sustainability and Management Systems in order to illuminate the

Sustainability Management System (SMS) as a tool helping companies in their Sustainability performance. Interviews were designed from the information gathered in a collaborative effort by the authors by having as a basis the first phases of Dr. Javier Esquer-Peralta's ScD Thesis on Sustainability Management Systems (SMS) [Esquer-Peralta, 2007]. The interviews were conducted to those individuals, with different backgrounds, with more than four years of experience in Sustainability and also in Management Systems, essentially regarding the environment, health and safety (EHS) issues.

2 Methodology

The methodology developed for this phase was the following: initially, it is expected that a qualitative interview, conducted to a selected group of skilled professionals, can be a good tool for collecting useful information for a deep understanding of ideas [Rubin and Rubin, 2005]. Some of the limitations were the lack of budget and time; therefore, the research was intended to be focused in developing ideas rather than obtaining statistical information. In this sense, the sample was small because, as Weiss states, [Weiss, 1994] in a qualitative interview, "Each respondent is expected to provide a great deal of information."

Thus, a database was created to organize information of the potential experts to be interviewed. This database included fields like Name, Organization, and Contact information, among other data. A total of eighty two people were registered into the database. After screening and filtering options, twenty-four experts were invited through E-mail to participate in the project, from which only fourteen people agreed to do so (See Table 1). Nine of them are from different states along the U.S.A. and the remaining ones are from other countries around the world, mainly from Canada and Europe.

Table 1. Panel of Expert Participants

Type of the expert's activity – Geographic location	Area(s) of Expertise	Years of experience
Professor, researcher, and editor of an international journal – Tennessee, USA	Educator in environment, concepts, policies, education, technology, psychology, environmental science globally.	≈ 45
Professor and consultant – Massachusetts, USA	Specialty in process improvement strategies and program integration. Also Management System implementation, scoring of true performance using the Malcolm Baldrige model, development of facility-focused Sustainable Development programs.	≈ 35
Government – Louisiana, USA	Masters in Environmental Science, and also Quality and Environmental Compliance.	≈ 34
Director Communications & Training, Worldwide Environmental Affairs in a large company – New Jersey, USA	EHS, Communications, Training, Corporate Social Responsibility (CSR).	≈ 24
Consultant – Ireland	ISO 14000 and Environmental Management.	≈ 21
Professor and former Vice President for Environmental Health and Safety in a large company – Arizona, USA	Law, Economics, and Environmental Science.	≈ 20
Consultant – England	Environmental strategy and CSR.	≈ 20
Consultant – New York, USA	Strategic Services, specifically Sustainability management and CSR	≈ 20
Consultant – England	Management consultancy, risk Management Systems and process efficiency, and EHS performance.	≈ 20
Non-profit organization – New	Quality management and environmental management.	≈ 15

Mexico, USA		
Professor – Denmark	CSR, Environmental Management Systems (EMS), Environmental improvement, organizational changes, product-oriented measurements, and Integrated Management Systems (IMS).	≈ 13
Consultant – Michigan, USA	Environmental Policy, specifically water and energy policy.	≈ 10
Consultant – California, USA	Sustainable and environmental strategy, site assessments, and reporting and indicator systems.	≈ 5
Member of an association of professionals – Canada	Engineering training, civil engineering, Sustainability, promotion of green building systems.	≈ 4

Invitations were sent since March 21st, 2006. Once the experts expressed their approval to participate, the Questionnaire and the Informed Consent Letter were sent to them. Interviews were conducted, most of them by telephone, between March 30th and May 19th, 2006 from the Department of Work Environment at the University of Massachusetts-Lowell (UMass-Lowell). Only one interview was conducted in-person kind, and also one of the interviewees preferred to answer the questionnaire by E-mail rather than having a phone-call interview. The longest interview took about 58 minutes; the shortest interview took about 19 minutes. The average time for the interviews was about 37 minutes.

3 Results

During the interviewing process, among the participants there were both, ideas that were reasonably homogeneous and, on the other hand, ideas that were considerably different. Hence, the most significant insights of the participants have been extracted. As a way to present the results of the interviews in a reasonable form, they have been organized into the following general topics and sub-topics where the results show the expert's answers as "Selected Insights." There were some contributions that were very detailed, however, in most of the cases the pressure of the lack of time and, sometimes, the disposition of the interviewee did not allow for being specific in some of the addressed areas. As a result, many of the answers were, at some extent, general.

Topic 1. Usefulness of Management Systems (MS) for Sustainable Development (SD)

Sub-Topic	Selected Insights
About the concept of Sustainable Development	1. To effectively help companies, it is necessary to give them clear ideas on Sustainability philosophy. 2. It is necessary to talk about responsibilities of SD. That is to say, environmental responsibilities, social responsibilities, and economic responsibilities.
Management Systems in relation to SD	1. Once people are clear on defining SD then companies can set SD objectives that are measurable and deliverable in such a way that the MS would be supportive. 2. For MS, the next step is to focus, not only on the production processes, but on the life cycle of the company's products and activities.

Topic 2. Usefulness of a Sustainability Management System (SMS)

Sub-Topic	Selected Insights
Ideas on SMS	1. The system would be how you move from goals to implementation. 2. The SMS is also seen like a framework within which all the business actions flow from it in such a way that these actions can be checked against the goals in order to review and improve performance. 3. An SMS presents the idea of an organized thought with a single purpose, where the entire organization, whether it is large or small, is involved in the process.
About the name of the SMS	1. For a European company, if there is a Sustainability management program, they might understand it and be able to work with it. In many American companies the idea of Sustainability has very little appeal. 2. Terms like EMS, or others, are too narrow, "they have specific kinds of issues." An SMS "Is a lot larger than that, it makes it a lot bigger, makes them focus on meaning more than just meeting regulatory requirements."
People involved	1. Both internal and external stakeholders are essential. Primarily internal people responsible for using it, but you should get feedback from people that might potentially be affected from outside the company. 2. All employees should share values of Sustainability and have these considerations in mind. Therefore, the best approach is to make sure they are fully trained, and be aware that they are fully considered as stakeholder. 3. The biggest mistake in Management Systems is to tell employees all about Management Systems… They only need to know what they have to do.

Topic 3. Incentives and Barriers

Sub-Topic	Selected Insights
Incentives	1. It has to be built on knowledge and commitment and not focus on incentives. 2. Money. 3. Market signals. 4. Recognition.
Barriers	1. One of the barriers is the attitudinal one. 2. There are also some regulatory barriers. 3. Many times training is so confuse for employees. 4. The Return On Investment with Sustainability is not always obvious in the short-term.
Overcoming barriers	1. Examples of illustrative real cases may help to motivate. 2. It is necessary to train employees from their perspective. 3. To get top management to fully understand the risks and opportunities they face by not taking action.

Topic 4. Process for an SMS

Sub-Topic	Selected Insights
Integration of Management Systems	1. It is difficult because you have a solid mentality, you have bureaucratic empire, and you have individuals with interests who are not prepared to give up power. 2. Integration is possible since many companies have done so. But the biggest challenge to consider is the mental change. 3. A business needs a single system or real Sustainability of the business is not possible.
Product/ Service Management	1. If the purpose of the system requires some understanding of the product outside of the business, then it should be included in the system. 2. You cannot look at the company and say that it is working towards Sustainability if it hasn't addressed the impacts, social, economic, and environmental, of its products and services.
Plan-Do-Check-Act (PDCA) Process	1. Management System is more production level, you need long-term goals and that should be the demands for this. 2. In current conditions, PDCA cycle is nothing about real policy development, which is related to long-term commitment to community Sustainable Development. 3. You'd need to place much specific requirements in your PDCA model.
Comprehensive and practical	1. An SMS has to be realistic, integrative, and more consistent in terms of software and programs. 2. It would be easier to have a step-by-step program to make changes gradually. 3. If you are clear of the objectives, and the measures to achieve the objectives are clear, then the SMS could be comprehensive without being impractical.
Voluntary, Regulatory, or Certification-based	1. The SMS should remain voluntary but regulatory pushed, although not necessarily mandatory. 2. Sustainability Management cannot be achieved purely in the voluntary space. 3. It should be a voluntary approach and that is up to the organization to implement that.
Conflicts with regulations	1. Regulations not always make sense. 2. There are not many conflicts between regulations but where legal conflicts arise, the company must establish its own internal guidelines or decisions. 3. If an SMS is done correctly, the regulation should be completely irrelevant. 4. Having a common set of software may help.

Topic 5. The Role of the Performance-Based Approach

Sub-Topic	Selected Insights
Ideas on Performance-Based Approach	1. The concept is excellent. 2. Conformance and performance standards are needed. In this sense, this is like a Soccer game where conformance is the rules of the game and performance is how you play the game.
Driving changes	1. Senior management commitment is the main way to drive changes. 2. The biggest issue is more personal than the systems by themselves because people have to be receptive to the notion of change. 3. It needs to be developed top-down and bottom-up and it needs to involve people of all levels, so there is a real commitment; then beyond compliance is automatic.
Performance assessment	1. Having an external perspective is always helpful. 2. The best way is to figure out what it is that you want to assess and come up with metrics to do that. 3. The only way you can assess Sustainability Performance is if you get some sort of feedback from your stakeholders.

4 Conclusions

Indeed the concepts of Sustainable Development and Sustainability are still under constant debate, even for people that have been working on these areas for many years. Some of the participants may agree the essence of the terms of Sustainability or Sustainable Development but not necessarily agree with using these words since, for them, they may appear in some cases confusing or irrelevant.

In addition, there are two main arguments stating that Management Systems (MS) might not be useful for SD. First, Management Systems are very mechanistic and focused at floor or production level. And second, as mentioned before, companies might not understand the SD approach very well. Thus, as interviewees say, what is needed is to take advantage of the current Management Systems elements, mainly through the PDCA cycle, to integrate approaches (QMS, EMS, etc.) and incorporate more strategic elements by expanding the scope towards long-term thinking, by including also a more complete life cycle of product and services, and by integrating the participation of stakeholders even more. Consequently, once people are clear on defining SD then companies can set SD objectives that are measurable and deliverable in such a way that, as one of the participant said, "Management Systems would be supportive [for Sustainability]."

However, many of the experts have a roughly uniform opinion that the ultimate goal of improving environmental, social, and economic conditions in an integrative way should be considered. As one of the participant declared, integration has been possible in some ways "Since many companies have done so. But the biggest challenge to consider is the mental change." In this sense, a state of mind open to new paradigms is necessary for companies. In deed, most of them noted that it is possible to integrate different kinds of Management Systems into a single one under a Sustainability framework but it is important to be clear on what the concepts are and their implications for the organizational Sustainability performance in a way that continuous improvement can be measured and demonstrated. This may be achieved through metrics like Sustainability indicators.

Furthermore, a constant factor raised from most of the interviewees was the proper identification of stakeholders, internal and external, and their dynamic involvement and engagement into the SMS implemented by a company. Therefore, there should be a conscious analysis to identify internal stakeholders who are using the system, and also stakeholders that, as one interviewee noted, "Might potentially be affected [by it]."

A summary of the incentives for promoting and implementing SMS can be the following: having a clear understanding of the long-term benefits for the company,

a positive image, risk reduction in several areas, a proper demand from the market and also a reduction of time and effort by the simplification of the PDCA process.

On the other hand, obstacles for the SMS are: The attitude of people, the associated costs on doing new things, the apparent bureaucracy, workers overwhelmed by the amount of information, some regulations that might push companies to behave in a certain way that it is not sustainable, and the lack of pressure from the market and the society to demand essential changes in companies.

Consequently, some ways to overcome these barriers are: education and training by using the proper language for every person to be addressed, motivation through lessons learned from successful cases about best practices on Sustainability initiatives, implementation of reward initiatives, and developing special programs with shapers of the market, which may include trade associations or NGOs, in such a way that the demands from the market could be created.

Another consideration is that most of the experts think that SMS should be implemented voluntarily. However, some of the participants declared that the design of a proper legislation and a strategic government involvement can be very significant and supportive in its promotion and implementation.

As a final remark, Sustainability Management Systems (SMS) might not be a magical solution but they can really be a promising and potentially useful tool in helping companies in their Sustainability performance once it has been fully understood by senior leaders and properly implemented. All of this can happen in the way in which the philosophy of the balance between environmental efficiency, social equity and justice, and economic development be adopted as sustainability criteria and values within the programs and initiatives implemented by the companies by taking an orientation of long-term results.

5 References

Esquer-Peralta, Javier. 2007. Sustainability Management Systems (SMS): An Integrative Approach To Management Systems Towards Sustainable Development. Doctoral Thesis. University of Massachusetts-Lowell. Massachusetts.

Filho, Walter Leal. (May 1999). Dealing with misconceptions on the concept of sustainability. Presented at the Conference on Environmental Management Systems at Universities (EMSU 99). Lund, Sweden.

Prugh, Thomas and Assadourian, Erik. (September/October 2003). What Is Sustainability, Anyway?. WORLD WATCH Magazine. Worldwatch Institute. Washington, DC.

Rubin, Herbert J. and Rubin, Irene S. 2005. Qualitative Interviewing: The Art of Hearing Data. SAGE Publications. Second Edition. California.

Weiss, Robert S. 1994. Learning from strangers: The art and method of qualitative interview studies. The Free Press. New York.