A MODEL OF ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) USING THE BALANCED SCORECARD (BSC)

Lucila Campos, Dr.[1]
(e-mail: lucila@ipesa.org.br)
Paulo Selig, Dr.[2]
Martha Ghizzo[3]

ABSTRACT

The objective of this article is to present an environmental management model whose main characteristic is to focus on the strategic vision in management systems. This characteristic makes this model important for those organizations where pollution prevention is becoming a survival factor. The article introduces a detailed competitive model, called SGADA (*Sistema de Gestão e Avaliação do Desempenho Ambiental* – Environmental Performance Evaluation and Management System), which focus on the environmental factors of sustainability. The model is being developed in software that can support companies, which intend to manage the environmental issues, associated with its activities.

The Environmental Management Systems, also named EMS, are usually adopted when organizations are already operating and seek to act directly on the activities carried out by those organizations. In the end of 1990s, EMS started being certified, providing organizations with a demonstration of their commitment to a continually improving relationship with the environment. The main environmental standard in use today is the International Standard ISO 14001, which is part of the ISO 14000 group, and is the only standard that can provide certification.

The importance of incorporating a strategic vision in management models and in the evaluation of environmental performance is based on the need to respond better to the changing demands of the market. The integration of environmental issues and strategic planning attempts to balance the importance given to environmental and business management.

The contribution of SGADA to the discussion of the organization's strategic issues comes when it uses a tool called Balanced Scorecard, better known as BSC, which includes strategic issues in the context of environmental management and performance. In general terms, the BSC is a management system based on indicators that encourage performance, providing the organization with a general overview of its current and future business. It seeks to turn the organization's mission, vision and strategy into unique goals and objectives, according to four perspectives: *financial, client, internal process* and *learning and growth*.

[1] Professor of Vale do Itajaí University, Santa Catarina, Brazil and Project Director of Institute IPESA
[2] Professor of Federal University of Santa Catarina, Brazil
[3] Owner of TLC Language Institute, Specialist in TEFL - Reading University - England

The SGADA implementation model has five overall phases, which are: *system planning; performance planning; implementation; verification;* and *critical analysis*.

The first phase of the SGADA has seven distinct stages. Of these seven stages, three were defined based on the strategic vision of BSC; they are: *mission and vision of the organization* (first stage); *organization strategies* (third stage); and *BSC perspective* (sixth stage). The other stages of this phase are: *structure and responsibilities* (second stage); *eco-organizational diagnosis* (fourth stage); *environmental aspects and impacts* (fifth stage); and *environmental policy* (seventh stage).

The second phase is called the performance planning. It has also seven stages: *organizational objectives; critical success factors; environmental objectives and goals; prior analysis; definition of legal requirements; management programs; and environmental performance indicators*. The objective of this phase is not only to manage the environmental impacts identified, but also evaluate the organization's performance.

The third phase of the SGADA is called implementation phase and consists of five stages: *training, awareness and competence, communication, control of documents and records, operational control* and *preparing for and responding to emergency*. This may be the phase with most emphasis in documentation, but unlike the more conventional implementation models, it focuses on performance rather than on standardization.

The fourth phase, called verification phase, has three different stages: *monitoring and measurements*; *environmental audits; and non-conformities and corrective and preventive actions*.

The fifth phase of the SGADA requires a critical analysis of the system, generating the next steps for the system's continued improvement.

SGADA's greatest benefit is that besides implementing an environmental system, it also discusses issues that are extremely important for the organization success, such as financial and human factors, among others.

The article intends to show that SGADA can support an organization in controlling its principal environmental aspects, minimizing the main impacts associated with its activities and following its resulting environmental performance through the performance indicators established, constantly seeking continued improvement that is integrated with organizational objectives and strategies.