This paper discusses the role of the Environmental Management Systems (EMS) applied to the tourism sector. Among contemporary instruments, being used to encourage the movements of tourist companies towards sustainability, an important role have voluntary/market instruments. That is why this paper analyses the principles, tasks, good practice experiences advantages, disadvantages and perspectives of EMS. Special attention is devoted to the ISO 14000 standards, representing the most important international regulations for environmental management. The above standards are the base for implementation of EMS within tourism, and make it possible for companies to direct the course of their actions towards a full agreement with the international criteria. Although application of environmental management in tourism is a relatively recent phenomenon, the potentialities of the EMS are huge and they can significantly contribute to putting tourism on a sustainable path.

Keywords: environment, management, system, sustainability, tourism

JEL Classification: L83, M1, O1

INTRODUCTION

The systems of environmental management or eco-management systems (EMSs) are part of the overall management systems, comprising organizational structure, responsibilities, processes, procedures and resources for the development and implementation of environmental protection policy in a company/site. Their main function is to provide conditions for consideration of environment-related issues in the course of making business decisions at all levels of management.

EMSs requirements are based on the management philosophy known as the Deming Cycle, consisting of four points of sound management practice summarized as: Plan–Do–Check–Act (Collins, 2000). The key to
an EMS is to integrate environmental management within the whole management framework. Over recent years this philosophy has been developed into comprehensive EMSs models and certification methods that are available for mainstream industrial sectors. There are a number of textbooks (Gilbert, 1993; Hillary, 1997; Huybers & Bennett, 2003), manuals (TQM, 1996; Local Government Management Board, 1996), collections of case studies (Welford, 1994; Sheldon, 1997; Font, 2001, Rainford, 2008) and special reports (Llobera & Rebassa, 2001; Llull, 2005) to help organizations implement those systems.

A management system is a method of structuring and processing the day-to-day practices and plans of a company. An EMS specifically aims to identify and incorporate the management of environmental issues and consequences related to an organization’s operations ensuring that risks to the environment are identified and minimized (Welford, 1994). An EMS provides a systematic approach by which wider environmental issues as well as local concerns can be incorporated into long-term strategies and day-to-day operations of a site. The three principles that an EMS brings together are (Gilbert, 1993):

- everything done in business has some impact on the environment;
- management systems control what is done in business; and
- standards can be set for an EMS.

**Figure 1** Plan-Do-Check-Act concept as a base for EMS

![Plan-Do-Check-Act concept](image)

Much research carried out in environmental tourism, hospitality and recreation has concentrated on specific isolated topics. These include
identifying environmental impacts, methods to monitor them, actions to alleviate them and so on (Bromley, 1994; Bell, 1997). Yet the trend in environmental management is to ensure that companies acknowledge their responsibility to be proactive towards environmental management by writing their own agendas, rather than reactively meeting minimum legislation requirements (Font & Tribe, 2001; Brida et al., 2010). An Environmental Management System (EMS) provides the mechanisms to approach environmental management in a holistic way, by encompassing the full Plan–Do–Check–Act cycle.

By application of EMS an organization takes over the responsibility to continually improve its environmental performance, i.e., to achieve standards higher than law-induced ones. In this manner, the organization can achieve various advantages that primarily include improved reputation, satisfied investors and better access to capital. Also, improved relations with the state authorities, as one of the possible advantages, makes the procedure for obtaining approval and license much easier. Finally, adequate application of EMS can significantly contribute to better relations between the related organization and the local community.

Introducing EMS might seem an expensive and time-consuming at start. However, practice has shown that benefits in terms of effectiveness are long-term, particularly in energy and raw materials consumption, as well as in waste reduction and recycling, thereby contributing long-term savings.

ISO 14000 STANDARDS SERIES

The ISO 14000 Standards series are a set of standards providing businesses and other organizations with a comprehensive systematic approach of how to manage impacts on environment. This standards specifies requirements for environmental management in an organization so as to ensure a balance with the declared policy and objectives of environmental protection, as well as to meet law-induced regulations.

The awareness that environmental protection is primarily the responsibility of the management has indirectly led to the emergence of the ISO 14000 series, conceived of as standards for environmental management. The very process of adopting this series of standards is the responsibility of the International Standards Organization (ISO) which establishes a close cooperation with national standards organizations. Among the related standards, close attention deserves standards for environmental management systems (ISO 14001-14004) which are aimed at organizations, i.e., concerned with introduction, implementation and
The above standards make it possible for organizations to direct the course of their actions towards a full agreement with the internationally adopted criteria. Today, many countries specify different requirements concerning environmental protection. A uniform international set of standards prevents conflicts between different approaches to protection and interpretation of the notion of good practice in environmental management.

Many governments have realized that law-induced regulations for environmental protection, mandatory in character, i.e., based on the command-control principle, cannot lead to achievement of national objectives in environmental protection. Therefore, standards for environmental management have been introduced that are voluntary in character but have proved fully efficient and goal-directed. As such, they are seen as a complementary device in legislation.

Managers implementing an EMS will benefit from a user-friendly system of operation that builds on current site procedures and operations as well as correlation with established systems such as ISO 14001. This will allow them to introduce ongoing improvements to the management and to the performance of the recreational site. The economic benefits from this system may include more efficient working practices, reduced inputs and costs as well as the increased potential for grant acquisition and the development of a proactive stance towards future legislation. Work practices can be improved through the encouragement of a dynamic staff morale and proactive attitude towards change and the introduction of relevant stakeholders in appropriate decision-making processes (Karmakar, 2011; Tribe et al., 2000).

There are three possible manners in which an evaluation can be performed of the conformity to the ISO 14001 standard. First, internal evaluation can be done by the organization alone. However, business partners or other interested parties can demand that external verification of the conformity be done. In such cases, the organization initiates an external evaluation of its EMS conformity to the ISO 14001 standard with no intention to attempt an official certification. Finally, if the organization wants evaluation for the purpose of registration, such a type of evaluation is carried out by the official accreditation body. On the basis of the report the accreditation body provides on the EMS conformity to the ISO 14000 standards, the organization can be issued a certificate of the conformity by the responsible authority.
THE BASIC ELEMENTS, PROCEDURES AND TASKS OF EMS

For successful implementation of the concept of sustainable tourism, it is necessary to apply not only mandatory regulations prescribed by the state authorities but also some relevant market instruments that are voluntary in nature. The aim of the latter, including environmental management systems, is to provide self-regulation through the market, increased competition among environment-friendly companies, i.e., keeping out the companies that do not show environment-friendly behaviour.

Most recently an EMS for tourism, hospitality and recreation has been developed based on the generic International Standards ISO (Tribe et al., 2000). The structure of EMS in tourism, as well in other activities, is characterized by the process of permanent improvement which, in general, goes through five consecutive, cyclically recursive, phases (EC, 2001).

First, the commitment of management and their staff to the EMS is vital and should be expressed in the form of an environmental policy. Definition of environmental policy implies top-management’s taking responsibility to improve environmental management using all available activities: continual advancement, prevention of pollution, harmonization with legislature, open communication with the employees and the general public. A comprehensive policy should help to define a clear list of environmental aims which guide the company in the development of its EMS. The policy should show commitment to environmental issues not only specific to the site in question but on a local, national and global level (Rainford, 2008).

Second, the initial site (organization) review is an assessment of a site and an audit to establish its current position. This should establish the current environmental management culture and structure, analyse procedures in place for managing recreational and hospitality facilities, amenities and users, assess impacts on the environment (biodiversity, air, waters) and consider to what degree these activities comply with regulation. All visitors, knowingly or unknowingly, have an impact on the environment in an tourist site and the quality and attractiveness of nature and landscapes is in danger of becoming seriously degraded (Ceballos-Lascurain, 1996). The site review should list all the recreational and other tourist activities, formal and informal, taking place in the site. An assessment of environmental impacts from visitors such as damage to trees, litter, trampling, disturbance of wildlife, and air pollution should be
made and the wider local environment should be analysed for evidence of negative disturbance from visitors.

A detailed analysis of on-site environmental impacts both positive and negative should be carried out and catalogued (Bromley, 1994), and if possible linked to the recreational or other tourist activities first identified. This will assist in identifying objectives and aims and providing a comparison against performance during the auditing process to assess progress. Upon completion of the site review it should be possible to interpret the findings into a series of objectives and targets taking into account the need to comply with any legal or statutory requirements (Kiss & Shelton, 1997). The Hohe Tauern National Park in Austria, for example, is one of the most attractive parts of the eastern Alps. Since the opening of the border of the former eastern bloc of European countries at the end of 1980s, the numbers of Trabants and similar cars wanting to drive up the pass rose dramatically. There were considerable numbers of breakdowns and pollution levels increased. Such negative consequences of the increased tourist flows made the National park authority to work closely with other public companies in the related area, and to adopt a corporate environmental strategy, determining the targets and objectives that need to be realized (FNNPE, 1993).

The targets and objectives should be given an order of priority, be realistic in terms of results and be possible to measure. This third stage is referred to as the environmental program and involves the formulation of a strategy for achieving continued environmental performance via the day-to-day operations of the organization (LGMB, 1996; Tribe et al., 2000). The program will identify any changes to the current recreational and other tourist activities: for example, some activities may need zoning, limiting carrying capacity, screening from other activities, refurbishing the facilities and places where they take place, etc. The program for environmental performance improvement will outline the actions to minimize impacts and link them to targets, which will be revisited during the audit and review. Benidorm is, for example, littoral community in the province of Alicante (Spain), where the tourism influences on the environment are managed in the efficient way. An integral approach of tourism planning has contributed to the harmonization of tourism and environment of a specific area, as much as possible (EEA, 2003).

At the operational stage any shortcomings in the current environmental management structure identified at the initial site review should be rectified and a system put in place to enable the aims and objectives of the policy to be fulfilled. This includes systems for resource allocation, identification of human resource skills needed, definition of
roles and responsibilities and identification and provision of appropriate training (TQM, 1996). The ability of management to successfully guide and anticipate changes, motivating employees and maintaining their enthusiasm will have a major influence on whether the EMS will be a success in the long term. Application and sustenance of EMS in regular and extraordinary conditions, also implies great responsibility of management. Regular monitoring and measuring of operational activities should be carried out and the results recorded, either in written, statistical or photographic form (for example, the state of footpaths, the quality and visibility of signs, safety issues on mountain-biking trails).

Finally, the audit and review will ascertain whether the objectives of the environmental policy are being addressed, whether the performance achieved is an improvement on the initial measurement at the site review stage, and whether this meets the program targets. Feedback from stakeholders and changes in legislation should be identified, acknowledged and acted upon. From this review, new targets will be set for the next management cycle (Richins and Scarinci, 2009; Tribe et al., 2000). Self-evaluation on the part of management staff involves an analysis of the results and definition of objectives for improvement.

**Figure 2 EMS Flowchart**
THE GOOD PRACTICE EXPERIENCES OF EMS APPLICATION IN TOURISM

Systems such as ISO 14000 have been so far focused on large manufacturing organizations (Font, Tribe, 2000). As yet few small tourism and recreation companies/sites are using them to their full potential. Many of the environmental certification systems for tourism require companies to apply EMS to their operations. The Green Business Tourism Scheme, Committed to Green, Green Globe and, in the near future, the Blue Flag Campaign and the Seaside Awards are only some of the systems that use an EMS approach (Dodds and Butler, 2010; Font, 2001; Todd & Williams, 1996).

The first known act of implementation of environmental management in tourism dates back to 1997, when the Regional Government of the Balearic Islands initiated the ECOTUR program, attempting to achieve a better integration between tourism and environmental protection. It seems reasonable why this step was first made in this tourist area, given that the development of mass tourism in the 1970s/80s caused a severe degradation to the environment, threatening to permanently undermine the fundamental substance of its future development. At the same time, the market battle was slowly being lost with the competing tourist destinations in the Mediterranean and other regions (Llobera & Rebassa, 2001).

The implementation of the ECOTUR program was jointly financed by the Government of the Balearic Islands and the European Union, the resources of which were used by 126 hotels previously registered for participation in the program. The first significant results were noticed at the end of 2001. By then, all the participating hotels had already completed the internal evaluation, but more importantly, six of them had obtained official certificates for their environmental management systems, issued by the Spanish National Accreditation Team. This made the six hotels the leaders in the implementation of the environmental management systems in tourism and catering service business. They publicly expressed a clear dedication to sustainable improvement of environmental performance of business activities (Altaba & Ponsell, 2000). The six mentioned hotels belong to the type of large accommodation facilities (an average capacity of over 500 beds), which confirms the hypothesis that larger firms have a greater wish and more real capabilities to accept the environment friendly behaviour. Evident is, therefore, the explanation of why the application of environmental management systems began in large hotels.
Center Parks, also known as a pioneer in environmental management in tourism in Europe, has achieved ISO 14001 certification (Collins, 2000), but despite the fact that it is a large organization compared to the average tourism company, it is still very small compared to the majority of ISO 14001 applicants. Center Parks operates four villages in the UK, each is set in a forest environment, typically 400 acres in size and provide high quality accommodation in fully equipped villas, apartments and lodges, which are set amongst trees and streams. Each village offers an extensive range of sports and leisure activities plus numerous restaurants, bars and retail outlets and a superb Aqua Sana Spa facility. Woodland, water and a natural healthy environment are the essential elements of a Center Parks break. Each of Center Parks' UK Villages has its own individual Forest Management Plan which is reviewed and updated every 5 years to take into account the health and vitality of the forest. These plans and its periodic review form an integral part of the ISO 14001, Environmental Management System. The objective of the plans is to create and maintain a natural forest environment for guests and wildlife alike. Action for biodiversity conservation in the village is implemented through both forest and ecological monitoring reports, translated into day-to-day actions (http://www.centerparcs.co.uk/company/environment/index.jsp, accessed the 10th of October 2008).

It is, also, worth to emphasized a case study of the environmental management of a Forest Enterprise (FE) woodland park that examines to what extent the current management of this site would fulfill the requirements of an EMS (Font, 2001). FE is the single largest provider of forest land for recreation in Britain, as well as the largest timber producer. FE sites have over 50 million visitors per year and 3500 members of staff in total (Font, 2001). Furthermore, FE sites are managed in a standardized way (Tomkins, 1990), which means that the results of this study are applicable across the range of FE sites. FE is heavily committed to the provision of facilities for recreation as well as camping and caravanning sites and forest cabins. Some well-known FE sites include the Forest of Dean, the New Forest, Argyll, Glenmore, Sherwood and Kielder Forest Parks. The site chosen for this study is Alpha Woods, covering an area of 800 acre multi-purpose forest, providing a variety of recreational opportunities and supporting a diverse range of wildlife. Alpha Woods is, therefore, representative of many medium-sized FE properties, large enough to have a critical mass of recreational facilities but small enough to not have recreation as its main purpose.
The review of Alpha Woods reveals the strengths of a formalized management system applied to a relatively small site. Management practices have been developed over decades creating a steadfast, secure and reliable framework for managing UK forests, but one that reacts to changing circumstances rather than taking a proactive stance. The evidence of this research is that although slow to start, FE sites such as Alpha Woods are beginning to follow European governments instructions (Font at al., 2001) to set the frameworks for forest conservation and development of recreation upon these valuable resources.

**ADVANTAGES AND DISADVANTAGES OF THE EMS IN TOURISM**

EMSs are formal systems, with emphasis on a formal management cycle and the collation of evidence of environmental management and performance. Such systems have been so far focused on large manufacturing organizations, and few small tourism and recreation companies are using them to their full potential. This can be confirmed by findings of the study targeted to gain insight into environmental management implemented by micro and small tourism enterprises and explore levels of awareness and interest among owner-managers of micro and small tourism enterprises toward schemes aiming for the environmental improvement of business (Amposta, 2009; Rainford, 2008). The findings of the study suggest that owner-managers of micro and small tourism enterprises are implementing low levels of environmental management and have limited knowledge of what implementation of environmental management specifically involves, such as, how long it takes and how much it costs.

On the basis of these facts, it seems likely that a great obstacle to implement EMSs is related to financial costs of introduction and operation of environmental management systems. First type of costs can be marked as EMSs application costs (costs for internal evaluation, external verification and inspection). The increase in these costs has been noted in small businesses which are forced to hire external consultants in this respect. Second type of costs includes investment costs, necessary for a constant improvement of the environmental aspects of business activities. EMS implies investment in modern and high-quality technology which has been so far used in accordance with the financial capabilities of a given organization. Practice has shown that the return of the invested resources can be achieved in a reasonable period of time, due
to the significant increase in competitiveness of the given organization in the market.

Apart from financial costs are problems that can be solved in time, including the organizational inertia, continuum between the site review and the program of actions, the inadequate terminology and structure of the current management that does not fit exactly to the mainstream systems such as ISO 14001, keeping data a secret or an insufficient access to them. This is frequently accounted for as a fear of possible misinterpretation and abuse of once public information, as well as a potential threat to the company that has made its data public. Staff of organizations very often are not aware of the benefits of a formalized management system. It is rather easy to consider an EMS as an additional administrative burden, and therefore a top management team should create a method to empower staff and to involve them in the decision-making as well as realizing the system. EMS means that staff tend to work ‘in spite of’ rather than ‘thanks to’ systems (Font at all, 2001). However, it is reasonable to expect that, with the increase in environmental awareness and responsibility of all participants in the tourism process, problems of this type will decrease.

The advantages of EMS application are by far more important and numerous (Tribe at al., 2000; Font at al., 2001; Herremans, 2005). First, organizations/sites can benefit from using a logo denoting the accomplished accreditation of EMS. This can serve as recognition for a good business activity and that can, in turn, improve the image of the organization in the eyes of the public. This implies a considerable market advantage of the organization over enterprises without EMS or with an uncertified EMS. The marketing advantages of using a logo of the certified EMS are more transparent in services providing than industrial enterprises. As a services providing activity, tourism is characterized by a simultaneous production and consummation of services.

Second, state authorities, on their part, can make a positive discrimination in favour of the enterprises with a certified EMS. It is realistic to expect that this will become a dominant trend in the forthcoming period. A positive discrimination can take various forms: additional points for contracts and financial agreements between the private and public sector, an EMS certificate as an indicator of conformity to legislature, and a less complicated inspection procedure, etc.

Third, some steps towards environmental improvement have a direct positive effect on the profitability of an enterprise, such as through reduced energy expenditure, decreased usage of raw and other materials/inputs, reduced accumulation of waste and lower-level
pollution, etc. In this, it is essential that, in the communication on the market, tourism enterprises provide potential customers with adequate information about environmental improvements, leaving no space to the actual and potential clientele to interpret such improvements as a sign of a lower quality of services.

Certified EMS provides a valid foundation for making relevant decisions about the environment. This includes a complex knowledge of problems to be solved, as well as setting up a framework for accurate definition of objectives. This process goes through the phases of self-evaluation and self-criticism, by which various dysfunctions and ineffectiveness can be located inside a given enterprise. Periodical evaluation of EMS can reveal possible deviations and in conformity to legislature, thereby creating a good foundation for undertaking corrective measures before the problems have been detected by authorized bodies. In this way, penalties and sanctions are timely avoided and the possibility of environmental accidents is reduced. Generally, the application of EMS establishes and improves good relations between a tourism company and the state authorities: the administrative inspection proceeds faster, necessary permits are issued easier, etc.

A certified EMS is, also, a guarantee (and benefit at the same time) to third parties that no significant or hidden environmental risks will emerge in the cooperation with the enterprise. The third parties may include insurance companies, creditors, financial institutions, etc. In addition, the procedure of a new ownership over an enterprise with a certified EMS is significantly made easier, given potential buyers do not have to be concerned with hidden environmental risks or consequences of the policy advanced in the earlier period.

Finally, EMS has the effect of multiplication as well, contributing to the growing concern for environmental protection among suppliers of specific products/services that participate in the environmental management system of a given organization: ‘in order for a producer to be environment friendly, the inputs they use must meet environmental standards.’

**CHALLENGES**

Contemporary instruments used to encourage the movement of companies within the tourism sector towards sustainability includes: compulsory instruments and regulations (prohibiting certain activities, limiting the total volume of pollution produced, internalizing environmental costs, etc.) and voluntary instruments or market
instruments applied to the tourism sector (EMSs, Ecological labeling, Local Agenda 21, etc.).

Environmental Management Systems have been developed as a complement to product quality systems, and are likewise applied to the environmental performance of production processes. They are based on a commitment to ongoing improvement in the environmental behaviour of a company’s production processes, and should be: quantifiable, contrasted by external checks, supervised according to international regulations and qualified to award a seal of quality.

Management of environmental impacts is a key requisite to achieve sustainable tourism, and Environmental Management Systems provide the framework to assess, plan, act upon, control and monitor environmental management and performance. Although a large proportion of tourism and recreation sites, or hospitality enterprises, would be in a position to work towards an EMS, few of them are aware of what they need to do to implement such systems.

The current systems that are being implemented in many tourist sites/enterprises cannot be treated as EMS, but rather as a management system that includes environmental elements as well as others. The current systems usually include all activities on the site/company, but there are only few organizations implementing a holistic approach of management successfully utilized as environmental management. In that context, staff in tourism organizations/sites need to be aware of the benefits of a formalized management system.

As application of environmental management in tourism is a relatively recent phenomenon, it is still early to draw explicit conclusions about the depth of change in environmental behaviour that environmental management may induce in tourism companies and sites. However, it can be said without doubt that potentials of EMS are huge and that, in conjunction with traditional mandatory instruments (law-induced and other legal acts), they can significantly contribute to implementation of the concept of sustainable tourism. Sustainability is the vital combination of conviction and cooperation.

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