Environmental management solutions for small and medium-sized enterprises in the tourism sector

Anne Maria Sparf [*]

ABSTRACT

The article presents results of a recent study that focused on how well environmental management solutions suit the needs of small and medium-sized enterprises (SMEs). The emphasis of the study was on tools available in the tourism industry. Research has indicated that SMEs generally need solutions that require little resources, are simple and easy to use and provide adequate support functions, as well as leading to improved competitiveness and eco-efficiency. The results of this study indicate that the Nordic Swan is suitable for larger hotels that are highly committed to improving their environmental performance. The international eco-label Green Globe 21 is recommended for other sectors of tourism.

Keywords: eco-labels, certification, environmental management, environmental performance, small and medium-sized enterprises, tourism.

ÁGRIP

Umhverfisstjórnun fyrir lítil og meðalstór fyrirtæki í ferðaþjónustu

Þessi grein fjallar um niðurstöður nýlegrar rannsóknar þar sem greint var hvaða umhverfisstjórnunarkerfi hentaði litlum og meðalstórum fyrirtækjum. Í rannsókninni voru skoðuð kerfi innan ferðaþjónustunnar. Rannsóknir hafa sýnt að lítil og meðalstór fyrirtæki þurfa lausnir sem fela í sér einföld úrræði, eru einföld í notkun og bjóða upp á góðan stuðning við notendur, ásamt því að leiða til bættrar samkeppnisstöðu og skilvirkni í umhverfismálum. Niðurstöður rannsóknarinnar eru þær helstar að norræni Svanurinn hentar best fyrir stærri hótel sem eru staðráðin í því að bæta frammistöðu sína í umhverfismálum. Mælt er með notkun alþjóðlega umhverfismerkisins Green Globe 21 fyrir aðrar greinar ferðaþjónustunnar.

Lykilorð: umhverfismerki, vottun, umhverfisstjórnun, frammistaða í umhverfismálum, lítil og meðalstór fyrirtæki, ferðaþjónusta.

INTRODUCTION

The environmental impacts of corporations have long been a concern. Recently attention has shifted to the contribution of small and medium-sized enterprises (SMEs).[1] Although each small business has an insignificant impact on the environment per se, a total contribution may certainly be highly relevant. How much of the total environmental impact is caused by SMEs is uncertain, although 70% is an often quoted figure (Hillary 2000a). Their contribution to total pollution is believed to be around 50% (Berends et al. 2000).

Therefore, a need for environmental management solutions[2] suitable for SMEs has arisen. Existing tools have often been accused of being too heavy and complicated for SME use (Wilson and Sasseville 1999). The research discussed in this article approached the issue from the point of view of the special characteristics and needs of SMEs; arguing that any solution designed to improve the environmental performance of SMEs should be based on the consideration of these features.

NEEDS OF THE SME SECTOR

Unfortunately, the majority of SMEs are still relatively untouched by environmental issues, including basic concepts such as waste minimization (Berends et al. 2000, 61). Many SMEs consider environmental

[*] Umhverfisráðgjöf Íslands, Bjarnarbraut 8, 310 Borgarnes; anne@environice.is

[1] The definition of the SME sector veries somewhat between companies, but most businesses with under 250 employees are considered to be SMEs (Commission of European Communities 1996). Typically over 90% of businesses in any given country can be categorised as SMEs (European Community 2003).

[2] Including both eco-labels and environmental management systems.

issues non-relevant to their business (Gerstenfeld and Roberts 2000) or alternatively, consider environmental issues important but see no benefits in improving their own environmental performance (Anglada 2000; Tilley 2000).

Small businesses generally lack expertise regarding environmental issues, and consequently find it difficult to identify their environmental aspects and measure their environmental impacts, let alone meet their legal requirements, resulting in little motivation to address environmental issues within the company (Fanshawe 2000; Gerstenfeld and Roberts 2000; Tilley 2000). In addition, SMEs seem to have little knowledge of the environmental management tools available (Hillary 2000b) and consequently relatively few companies have introduced practices to improve their environmental performance (Gerstenfeld and Roberts 2000).

Results of studies about the challenges facing SMEs strongly indicate that lack of resources (time, staff, financing etc.) is the greatest barrier for implementing environmental management (Hillary 2000b). In addition, a lack of understanding of environmental problems and risks, as well as the potential benefits of environmental improvements, inhibits implementation. In some cases, economic short term thinking (i.e. getting quick return on investments) and perceiving environmental improvements as peripheral to the core business might hinder development (Berends et al. 2000). To conclude, it would seem that human rather than financial resources are the major barrier. The smaller the company, the more significance of factors such as the lack of human resources and the multifunctional nature of staff (Hillary 2000b).

On the other hand, some SMEs embark on a journey towards eco-efficiency despite these barriers. The main drivers for improving environmental performance are either internal, external or both. Internal factors include goals of improved profitability and increased competitiveness as well as attracting new business. In many cases a strong internal commitment to environmental matters within management leads to environmental initiatives (Modahl and Thoresen 2002). Increasingly however, the pressure to change comes from the customers (Hillary 2000b). Many larger businesses now have at least some level of environmental programs or policies. Environmental management systems (EMS), such as ISO 14001, typically demand the use of environmentally friendly suppliers. In order to maintain their customers, SME suppliers must be able to prove their environmental credentials. Other benefits include an improved image and better relationships with stakeholders.

Due to their inherent characteristics SMEs need environmental management solutions that require little knowledge and time to implement, are inexpensive to purchase and run, and concentrate on the day-to-day running of a company while also allowing flexibility and being sensitive to the limitations of SMEs. Most importantly, such solutions should be simple and easy to use (Gerstenfeld and Roberts 2000).

Experts in the field disagree on the extent of support that SMEs need in implementing environmental management systems. However, it would seem that SMEs need some amount of external support (due to their lack of expertise), although they do not always realize it themselves (Sparf 2005). Many small businesses are reluctant to share their key figures and other sensitive information with outsiders. Ideally then, any tools designed for SMEs should provide adequate support functions as needed, for example assistance in addressing environmental aspects, as well as offering access to appropriate model cases, while still allowing companies to do things by themselves, if they have the needed capacity. Such tools should also be co-operative, locally based and easily accessible, yet based on best practices in the sector (Gerstenfeld and Roberts 2000). Figure 1 summarizes what characteristics an environmental management solution for SMEs should have (Sparf 2005).

METHODOLOGY

The research analyzed various environmental management solutions, using an evaluation framework based on the needs of SMEs, as established in Figure 1. The objective of the analysis was to assess how well the tools respond to these needs. The analysis was qualitative, so that each feature was given a score based on a set of questions that revealed the performance of the tool regarding that specific feature, as seen in Table 1. A tool was awarded points from 1 to 5 for a particular feature, with 5 representing excellent performance. Each factor was given the same weight in the analysis. Since the number of factors is five, it follows that the maximum score a tool could obtain is 25 (and the minimum 5).

The framework allows easy comparisons to be made between tools, as well as revealing the strengths and weaknesses of each tool. The outcome of each tool is presented in a radar chart, such as the one in Figure 2. A matrix chart can be used for easy comparison between tools (Table 2). This method also allows for comparing the chosen tools against an average performance, or a set standard.[3]

The greatest weakness of the evaluation framework lies in the analysis being qualitative. The scores are given as a result of a subjective judgment based on the questions presented in Table 1. On the other hand, this is a necessity, since accurate and reliable quantified data on the impacts of the tools is not available or it is classified. In addition, many of the factors, such as usability and support do not allow for the use of quantified measures.

RESULTS AND RECOMMENDATIONS

The research analyzed ten tools using the framework. Figures 3 to 7 illustrate the results of the analysis of four tools available in the Nordic countries. The tools are the European Union Flower for accommodation, the Nordic Swan for hotels, the Green Globe 21 Company Standard and TourBench. Table 3 shows the scope and type of each tool, the number of participants and the tourism sector for which the tool is available.

The Flower is the European Union eco-label (Europa 2004), based on a joint approach of stakeholders brought together in the European Union Eco-labeling Board. The EU flower for accommodation receives a total score of 14 of 25 in this evaluation (Sparf 2005). Implementation of the Flower scheme should lead to considerable cost savings and improved competitiveness. Although relatively effective in improving eco-efficiency, the system scores poorly on resource needs and usability (Figure 3). Despite fee reductions for SMEs, it is rather
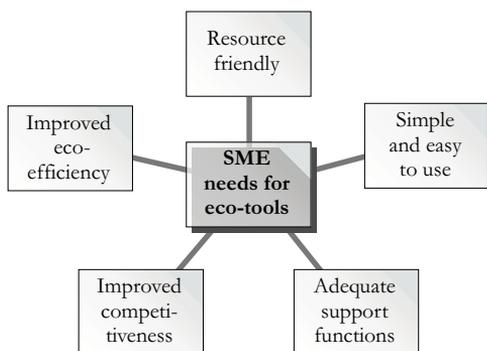
Figure 1 SME needs for environmental management solutions
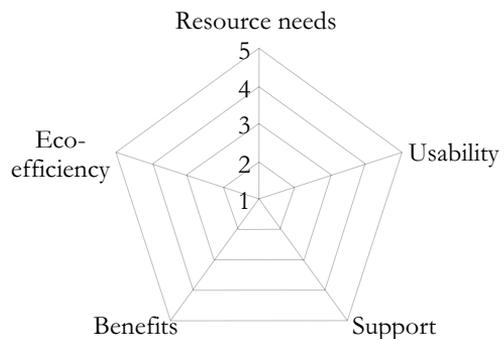
Figure 2 Radar chart for the results of the performance evaluation

---

[3] For example: The tool can be evaluated against the maximum score or a minimum acceptable score, depending on the need.

Table 1 Analytical questions for the evaluation of environmental management tools

FEATURES	QUESTIONS
I Resource needs	a. Are the costs related to the use of the tool low, medium or high?
	b. How much time does implementation of the tool require?
	c. Does implementation of the tool require special knowledge or skills?
II Usability	a. How user friendly and easy to implement is the tool?
	b. Is the tool easily accessible to SMEs?
	c. Can the tool be implemented in a flexible way? [*]
	d. Is the tool co-operative? [**]
	e. Is the tool available in the native language of the users?
	f. Is the tool continuously updated and improved?
III Support	a. Does the tool have a website and what is the quality of it?
	b. Is phone support available?
	c. Is support through email or a helpdesk available?
	d. To what degree is local support available?
	e. To what degree is other support available? [***]
	f. Are case studies available?
IV Benefits	a. Does the tool improve profitability by way of cost savings?
	b. Does implementation improve environmental image [****]?
	c. What is the level of credibility of the tool? [*****]
V Eco-efficiency	a. How well are relevant environmental aspects covered?
	b. How effective is the tool in reducing environmental impacts?
	c. Is environmental performance measured by key figures?

[*]   For example: Does the tool take national conditions into account, or does it allow companies to choose their level of commitment?

[**]   For example: Does the tool require co-operation between companies, or does it involve co-operation between the community and companies, or alternatively between a government institute and companies?

[***]   Such as brochures, user manuals, guides etc., printed material

[****]   Typically by means of a logo or certification that can be used for promotional purposes.

[*****] For example: Is conformity assessment based on self-assessment or third-party independent verification? How often is this done?

costly and time consuming to implement, as most SMEs would need to employ outside support (consulting services) in order to achieve certification. In addition, the tool is comprehensive and rather bureaucratic, resulting in low usability.

The Swan label (SIS Miljömärkning AB 2005) is the official Nordic eco-label, introduced by the Nordic Council of Ministers. The Nordic Swan for hotels (Figure 4) is an excellent tool with high performance requirements. Implementation should result in improved image, profitability and lowered costs. The total score this tool received was 16 of 25 (Sparf 2005). It is recommended for all hotels with a Scandinavian clientele that are committed to improving their business and environmental performance. Again, as with the EU Flower, it might not be suitable for the smaller hotels due to rather high resource needs, such as time, financing and expertise. In order to choose between the Nordic Swan and the EU Flower, hotels should acquaint themselves with the criteria in each, and choose the tool that fulfills their

Table 2 A method for comparing the performance of tools. X represents the score given for each feature.

	Resource needs	Usability	Support	Benefits	Eco-efficiency	TOTAL
Tool A	X	X	X	X	X	X
Tool B	X	X	X	X	X	X
Tool C	X	X	X	X	X	X
Tool D	X	X	X	X	X	X
Tool E	X	X	X	X	X	X
Average	X	X	X	X	X	X

environmental management and marketing needs best.

Green Globe 21 (GG21) is a global benchmarking and certification system for tourism and travel based on the principles of sustainable development. GG21 currently operates in 54 countries and is available for 26 sectors within tourism including for example tour operators, accommodation, car hire, restaurants, activities, airlines and farm stays (Green Globe21 2004). The tool is based on three steps (Affiliate, Benchmarking, and Certification, ABC) that lead to full certification. As seen in Figure 5, GG21 is a well-balanced tool that is well suited for SMEs. The total score it received in the evaluation was 17 (Sparf 2005). It is highly recommended for the tourism sector, especially for sectors that cannot apply for the Nordic Swan.

TourBench is a monitoring and benchmarking initiative for managing environmental impacts and costs in tourist accommodations (TourBench 2005). The tool is a web-based solution for measuring, monitoring and comparing the environmental performance of various sizes of accommodation services. The greatest strength of this tool is its simplicity, making it extremely user friendly (Figure 6). However, the tool is not a certification scheme, so it will provide little impact on the environmental image of participants. In addition, the level of improvement remains up to the participants, as there are no requirements to be fulfilled, only suggestion on how improvements can be achieved. The total score was 17 of 25 (Sparf 2005). This tool should benefit accommodation providers as a support tool in their environmental work, and is recommended as a first step towards certification.

Other tools evaluated include the European Union Eco-Management and Audit Scheme (EMAS), The Eco-

Table 3 Introduction of tools.

| Name of tool	Type of tool	Scope	Total number of companies	Tourism sector
EU Flower for accommodation	Public eco-label	European	28	Accommodation
Green Globe 21 Company Standard	Private eco-label	International	440	Multiple sectors within tourism
The Nordic Swan for hotels	Public eco-label	Scandinavian	115	Hotels
TourBench	Public	European	NA[*]	Accommodation

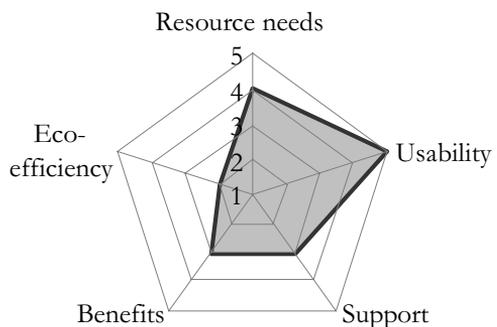*Initial registration process ongoing, benchmarking will start later on
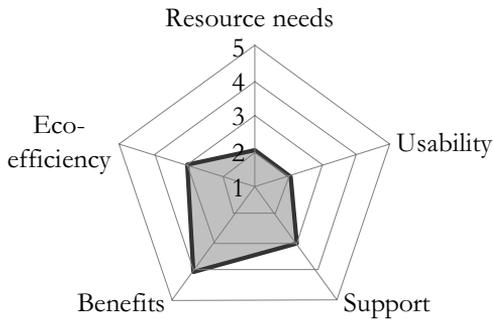
Figure 3 Performance of the EU Flower for accommodation.
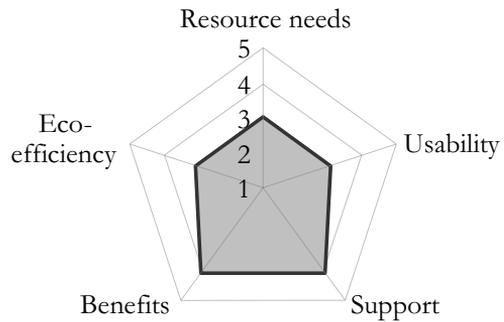
Figure 5 Performance of Green Globe 21.
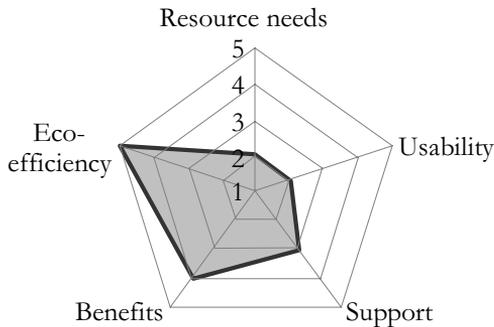
Figure 4 Performance of the Nordic Swan for hotels.


Figure 6 Performance of TourBench.

lighthouse scheme from Norway, The Green Tourism Business Scheme from the UK (GTBS), the Global Environmental Management Initiative's Primer for Benchmarking (GEMI), Enviro-Mark Ltd. from the UK, as well as Benchmark Hotel by the International Hotels Environmental Initiative, which resembles the new TourBench initiative. The GTBS, received the highest score of the ten tools analyzed so far, namely 20 out of 25 (Sparf 2005). Although not available in Iceland, the tool is worth a closer look, since it is an excellent example of a tool that was developed specifically with the needs of SMEs in mind, without sacrificing eco-efficiency or business benefits (Figure 7). Should Iceland decide to develop a certification scheme of its own some day, this approach would be recommended over others. However, within tourism it is likely to prove more efficient to use existing international certification schemes (Gíslason 2000). This is not to

say that other industries might not benefit from a national approach.

DISCUSSION AND IMPLICATIONS

The evaluation framework is intended as a tool for decision-makers in the public and private sector, to help them evaluate how well a given tool is suited for SMEs. The emphasis of this research was on the
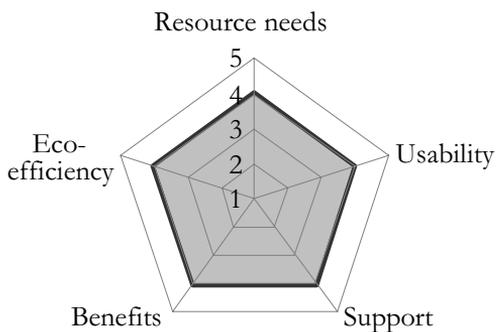
Figure 7 Performance of the Green Tourism Business Scheme.

tourism industry, but the framework is designed to work for any industry. The next step would be to analyze other tools within the tourism industry and those available for other industries. The framework could also be tested further by allowing users of the tools try out the analysis process answering from their point of view. These results could then be compared with the existing ones, to analyze the reliability of the method better. Another possible direction the framework could be taken to is giving the factors different weights depending on their importance, or by adding features, depending on the research need.

The research showed that existing eco-label schemes do not always adequately fulfill SME needs. Specifically, existing eco-label schemes should gather data on how much the environmental performance of participants actually improves as a consequence of certification, in order to provide reference data and allow comparisons to be made. Certification should offer several levels of commitment and be based on comparison against Best Practice. Consequently, environmental management tools in general, and cert-ification schemes specifically, would benefit from further research about their effects, namely whether and how much they improve eco-efficiency and to what degree they lead to cost savings, and what impact they have on the image of participants. Such research could have a significant impact on the credibility of various programs and tools.

It is the hope of the author that the Icelandic tourism industry can benefit from these results and use them to their advantage. At the current stage of events, it would be essential that tourism stakeholders, such as The Icelandic Travel Industry Association (SAF) or the Icelandic Tourism Board provide tourism companies with information and support regarding eco-labels and certification schemes, to encourage them to start environmental work. The problem lies partially in the lack of knowledge within the industry – SMEs simply feel overwhelmed by the sheer number of available tools. What they need is clear advice about which tools are best suited to them. It is likely that the situation is similar in other industries.

Berends et al. (2000) suggest using environmental graduate students as a cheap resource through work placement schemes to bridge the gap between existing staff who have company specific knowledge, and students who have the needed environmental knowledge. It would certainly be interesting to see whether such an approach would work in Iceland, for example. A joint effort between the University of Iceland and for example the Technological Institute of Iceland might accomplish this. Financing could ideally be arranged partially through government channels. It might also be possibly to apply for funding through the European Union or The Nordic Council of Ministers.

The Icelandic government has committed itself to sustainable development. In order for the nation to achieve this goal, more research and financing is needed. Specifically, additional support to the SME sector is needed, since their participation is crucial for the success of the national sustainability strategy. This support could come in the form of information and guidance but also as tax benefits/cuts or grants to companies embarking on journey to improve their environmental performance.

Acknowledgements

BIBLIOGRAPHY

Anglada, M.L. 2000: Small and medium-sized enterprises' perceptions of the environment – A study from Spain. *In:* R. Hillary (ed.), *Small and Medium-Sized Enterprises and the Environment.* Sheffield: Greenleaf Publishing. Pp61–74.

Berends, H., M. Morère, D. Smith, M. Jensen and M. Hilton 2000: *Report on SMEs and the Environment, For the European Commission, Directorate General Environment.*

Commission of European Communities 1996: Council recommendation of 3rd April 1996 concerning the definition of small and medium-sized enterprises. *Official Journal of the European Communities*, L107.39.

Europa 2004: *The European Union Eco-label.* http://europa.eu.int/comm/environment/emas/index_en.htm (Accessed 15/10/2005).

European Community 2003: *Business in Europe: Statistical Pocketbook.* Luxembourg: Office for Official Publications of the European Communities.

Fanshawe, T. 2000: The interrelationship between environmental regulators, small and medium-sized enterprises and environmental help organisations. *In:* R. Hillary (ed.), *Small and Medium-Sized Enterprises and the Environment.* Sheffield: Greenleaf Publishing. Pp244– 254.

Gerstenfeld, A. and H. Roberts 2000: Size matters: barriers and prospects for environmental management in small and medium-sized enterprises. *In:* R. Hillary (ed.), *Small and Medium-Sized Enterprises and the Environment.* Sheffield: Greenleaf Publishing. Pp106–118.

Gíslason, S. 2000: *Vistvæn vottun. Yfirlit yfir núverandi kerfi og tillögur um stefnu.* Reykjavík: Samtök ferðaþjónustunnar.

Green Globe21 2004: *Green Globe 21 Essentials.* http://www.greenglobe21.com/Documents/General/GG%20Essentials%2030%20June%202004.pdf (Accessed 15/10/2005).

Hillary, R. 2000a: Introduction. *In:* R. Hillary (ed.), *Small and Medium-Sized Enterprises and the Environment.* Sheffield: Greenleaf Publishing. Pp11–23.

Hillary, R. 2000b: *Small and Medium Sized Enterprises and Environmental Management Systems: Experience from Europe.* http://www.iwoe.unisg.ch/org/iwo/web.nsf/0/b0b82add9767ee47c1256a1c0047f928/$FILE/SGU_Hi.pdf (Accessed 15/10/2005).

Modahl, I.S. and J. Thoresen 2002: *Miljöarbeid i norske verksemder.* http://www.sto.no/ (Accessed 15/10/2005).

SIS Miljömärkning AB 2005: *Om Svanen.* Stockholm: SIS Miljömärkning AB.

Sparf, A.M. 2005: *Comparing environmental performance – Environmental benchmarking for SMEs in the Nordic tourism industry* (MS-dissertation). Reykjavík: University of Iceland.

Tilley, F. 2000: Small firms' environmental ethics. *In:* R. Hillary (ed.), *Small and Medium-Sized Enterprises and the Environment.* Sheffield: Greenleaf Publishing. Pp35–48.

TourBench 2005: *European Monitor and Benchmarking Initiative for the reduction of Environmental Impacts and Costs in Tourist Accommodations.* http://www.tourbench.com/ (Accessed 15/10/2005).

Wilson, W.G. and D.R. Sasseville 1999: *Sustaining environmental management success. Best business practices from industry leaders.* New York: John Wiley & Sons.