

Sustainable Supply Chain Management in Tourism

Xavier Font,* Richard Tapper, Karen Schwartz and Marianna Kornilaki
Leeds Metropolitan University, UK

ABSTRACT

Sustainable supply chain management (SSCM) encapsulates the trend to use purchasing policies and practices to facilitate sustainable development at the tourist destination. Most research has focused on environmental aspects of manufacturing, while other aspects of sustainability or the challenges for the service sector are largely ignored. Yet SSCM is particularly important for tour operators, as the product depends on the activities of suppliers, such as accommodation, transport and activities. Therefore, tour operators' contribution to sustainable tourism will be more effective through the definition and implementation of policies that acknowledge responsibility for the impacts of suppliers. Exploratory research of SSCM practices amongst tour operators generated a wide range of examples of good practice across the whole supply chain, and recommendations are made for more widespread engagement. Copyright © 2006 John Wiley & Sons, Ltd and ERP Environment.

Received 27 July 2005; revised 20 December 2005; accepted 24 January 2006

Keywords: tourism; tour operator; sustainable supply chain management

Concept of Sustainable Supply Chain Management

LITTLE EMPIRICALLY BASED RESEARCH HAS BEEN UNDERTAKEN TO DATE INTO TOUR OPERATORS' attitudes and actions towards sustainable management of their supply chains. Research on SSCM has so far focused on manufacturing rather than service sectors. This paper reviews evidence from exploratory research in the tourism industry of the potential and challenges for transferring concepts and experiences of SSCM from the manufacturing sector to the tourism industry. To do so, the paper first presents key issues of SSCM and then reviews a range of tourism experiences with suppliers.

SSCM adds sustainability to existing supply chain management processes, to consider environmental, social and economic impacts of business activities. There is no universal definition of SCM or its activities in the literature, due to its multi-disciplinary origins in purchasing and supply, logistics and transportation (Croom *et al.*, 2000). It is here defined as 'a philosophy of management that involves the management and integration of a set of selected key business processes from end user through

* Correspondence to: Xavier Font, Leeds Metropolitan University, UK. E-mail: X.Font@leedsmet.ac.uk

original suppliers, that provides products, services and information that add value for customers and other stakeholders through the collaborative efforts of supply chain members' (Ho *et al.*, 2002, p. 4422).

A number of key industry players from sectors as varied as automotive, electronics, business services and forestry sectors are increasingly adopting codes of conduct covering environmental aspects, human rights and working conditions not only for their direct employees, but for their suppliers and subcontractors (BSR, 2003). This set of initiatives falls under the concept of sustainable supply chain management (SSCM) (NEETF, 2001). Research on SSCM has primarily focused on environmental aspects of manufacturing industries (Green *et al.*, 1998; Handfield *et al.*, 2005; McIntyre *et al.*, 1998; Min and Galle, 2001; NEETF, 2001; Preuss, 2005; Rao, 2005; Young and Kielkiewicz-Young, 2001; Zhu and Sarkis, 2004; Zsidisin, 1998).

However, increasing awareness of corporate social responsibility requires equal consideration of socio-economic issues in managing the supply chain. The theories of SSCM start from the principle that in order for companies to ensure that their services and products are sustainable they need to ascertain whether every component or element of the product or service they buy from their suppliers is sustainable, forcing companies to engage not only in their downstream supply chain towards the consumer, but also their upstream chain towards producers (Lippmann, 1999; Lysons, 1996; Welford *et al.*, 1999). Sustainability is a debated concept, but is here defined as

. . . living and working in such a way that human society will be possible for generations to come – and translating that into the changes required of an individual organization – changes which maintain the organization's capacity for producing human benefits, and including the profitability needed for survival, while optimising the environmental balance of its operations' (Crosbie and Knight, 1995, p. 15).

There are many different factors (such as regulation, customer and environmentalist pressure, brand image, competitive advantage) that make organizations consider sustainability alongside the issues of price, quality, delivery and security when making purchasing and supply decisions. The same variables will also affect the design and implementation of related programmes by influencing the *integration* (number and variety of actions taken) and *intensity* (suppliers involved) of programme activity (BSR, 2003; Hutchinson and Hutchinson, 1997; Lippmann, 1999; Murray, 2000; NEETF, 2001; van Hoek, 1999).

Applications of SSCM

Over the past decades companies from various sectors have come up with different strategies and tools to influence their suppliers towards better environmental and social practices (BSR, 2003; Handfield *et al.*, 2005; NEETF, 2001). Such strategies include those used by leader companies such as B&Q (Green *et al.*, 1998), Xerox Ltd (McIntyre *et al.*, 1998) and the Body Shop (Welford, 1994). All these companies believe that no enterprise can exist independently, and the success of every enterprise depends on its supply chain partners (Crotts *et al.*, 1998; Lippmann, 1999; Lysons, 1996; NEETF, 2001).

The fundamental principle of SSCM rests on collaboration between companies and their suppliers, and their willingness to link their aims and essential operational processes to create unique, international, market satisfying resources that will satisfy their customers and help them gain competitive advantage (Davies and Chaill, 2000; NEETF, 2001). Through collaborative research and development, companies can develop more innovative, environmental products and services of higher quality with their suppliers' assistance (Lippmann, 1999; Tan, 2002).

Companies may also take more of a forced compliance strategy through setting performance standards and goals, relying more on the external market to instigate competition between suppliers, introducing legal agreements, penalizations or threats to withdraw business (Krause and Scannell, 2002; Monczka *et al.*, 1993). The nature of the strategy adopted (collaborative or forced compliance) depends upon factors such as the type of business, levels of competition and size and influence of buyer and supplier businesses (Krause, 1999).

The most basic action that a company can take is to develop its own environmental policy or any other document with which the company can communicate its environmental goals and expectations to its suppliers. Within these policies the company can include codes of conduct for its suppliers that cover issues such as restricted substances, workplace conditions, labour rights etc. (BSR, 2003; Davies and Chaill, 2000; GRI and TOI, 2002; Lippmann, 1999; NEETF, 2001).

The next common approach to SSCM is gathering information that indicates the suppliers' environmental compliance status, and on the existence and status of suppliers' environmental management systems (EMSs) and the type or quality of materials used by them (Lippmann, 1999; NEETF, 2001). Many companies have developed their own supplier assessment systems, for example the B&Q 'QUEST' system (Green *et al.*, 1998). Others have developed EMSs along the ISO 14001 style environmental classification methodology (BSR, 2003; NEETF, 2001; Welford, 1994).

Monitoring of the progress achieved and reports on the improved environmental performance by both companies and their suppliers is very important. Awards and recognition that acknowledge the supplier's environmental achievement are also crucial (NEETF, 2001). Additionally, companies may also organize supplier meetings, in which useful information can be exchanged and companies' expectations can be communicated. Following this pattern, General Motors organizes effective supplier meetings, where the aim is to work together to integrate environmental concerns into all business processes (Lippmann, 1999).

In order to promote their environmental goal of sustainability, companies such as B&Q, the Body Shop and Nike offer education, technical assistance and training to their suppliers in order that they can respond better to the companies' environmental requests (BSR, 2001; Green *et al.*, 1998; Lippmann, 1999). These companies use a mixture of seminars, workshops and other technical assistance to build their suppliers' commitment and ability to implement the companies' environmental requests effectively.

Tour Operations and SSCM

Tour operators provide holiday packages comprised principally of accommodation, transport, excursion/activity providers, ground handlers and food and craft production. A distinction is here made between mass-market and specialist operators. Mass-market operators typically sell standard beach holidays based in mainstream destinations, and specialist operators typically offer niche products based on specialized activities in less mainstream destinations. This distinction is becoming increasingly blurred as mass operators move into more niche markets, but it provides a useful frame of reference for research.

It can be argued that sustainability in tourism depends strongly on the development of better linkages between supply and demand. As intermediaries in the supply chain, tour operators are in a position to influence destination management on the supply side, and consumers on the demand side (Carey *et al.*, 1997; Klemm and Parkinson, 2001; Miller and Twining-Ward, 2005; Tapper, 2001). Operators have traditionally claimed to lack control over suppliers (Carey *et al.*, 1997; Middleton and Hawkins, 1998; Miller, 2001; Swarbrooke, 1999; Tearfund, 2001), and are said to not take a long term view of the sustainable development of destinations (Holden, 1996; Klemm and Parkinson, 2001; Tapper, 2001;

Welford *et al.*, 1999). However, there is a body of literature and evidence of industry practice that recognizes the responsibility of companies with purchasing power towards the well-being and sustainability of their suppliers (Kalisch, 2002; Moir, 2001).

This requires management of environmental, socio-economic and cultural issues through the supply chain. Environmental aspects include sustainable transport development and sustainable use of resources; reducing, minimizing and preventing pollution and waste (e.g. solid and liquid waste, emissions to air); conserving plants, animals, ecosystems and protected areas (biodiversity) and conserving landscapes, cultural and natural heritage. Socio-economic and cultural issues encompass a number of aspects, including contribution to the economic development and the well-being of local communities; preservation of cultural identity; respect for local communities' and indigenous peoples' rights (TOI and CELB, 2003).

Methodology

Exploratory research was conducted amongst mainly UK and some European tour operators to determine evidence of good practice in SSCM. Multi-stage sampling methods were used to locate examples of existing tourism supply chain initiatives from different parts of the world and at different points in the supply chain. The sample was identified through reviewing industry membership of organizations that encourage sustainable tourism organizations among members (including the Travel Foundation, the Tour Operators Initiative, the Association of Independent Tour Operators, the Federation of Tour Operators, Tourism Concern, responsibletravel.com, Green Hotelier, Green Travel Market, International Hotel and Environment Initiative, the German tour operator association 'Forum Anders Reisen' and the Dutch tour operator association 'ANVR').

Telephone interviews took place during November and December 2004 with mainly UK tour operators ($n = 17$) and a European tour operator ($n = 1$), tour operator associations supporting their members in implementing SSCM ($n = 3$) and worldwide NGOs engaged in tourism ($n = 4$). In addition to the interviews, a wide range of documentary information (company reports, websites and industry literature) was reviewed. This provided key information on good practices used through the supply chain, and interviews were not necessary since tour operators, as wholesalers of the product, could provide perspective of supplier activities. Further details of the sample interviewed and documentary information reviewed are given in Table 1.

The interviews took a semi-structured approach, necessary to reflect the unique experiences of each company. Themes were based on analysis of SSCM theory in the literature, and explored included company attitudes towards sustainability, actions and procedures taken to implement SSCM initiatives, and perceived benefits and challenges. While there is some subjectivity inherent in selecting cases, and an interview based research approach, it is not the aim to claim that these companies are representative of the whole population of tourism firms.

Findings: SSCM Experiences from the Tour Operating Industry

The range of examples found was substantial, starting from the increase in the proportions of local goods and services used in the tourism sector, to working on environmental and socio-cultural issues. While there are a wide range of good practices, few of these are specifically demanded by tour operators, even though these practices fit with their sustainability policies, and may also make an important contribution to certain aspects of tourism products.

	Telephone interview	Documentary information
Industry associations (one international, one UK, one German)	3	3
Mass UK tour operators (>250 000 international tourists per year) (>GBP 250 million pa)	1	1
Specialist UK tour operators (100–50 000 international tourists per year) (<GBP 50 million pa)	16	13
Mass European tour operators (>250 000 international tourists per year) (>GBP 250 million pa)	0	5
European specialist tour operators (100–50 000 international tourists per year) (<GBP 50 million pa)	1	2
Chain owned accommodation (five European, two Indian, two US, one Caribbean)	0	10
Independent accommodation (two Africa, one Australia, one France, one Thailand)	0	5
Destination activity suppliers (one Canada, one Caribbean, one Brazil, one Europe)	0	4
Non-governmental organizations (one US, one Africa, two Europe)	4	1
Airlines (>1 million international tourists per year)	0	2

Table 1. Sample according to interview or documentary information

Results are analysed across four key sectors of the tourism supply chain – accommodation, transport, ground handling and related activities, and food and crafts. Indication is given of commonly and less commonly used practices in analysing key trends, but numerical measurement is not appropriate to the exploratory nature of the research.

Accommodation

So far it is the mass operators that have been able to set sustainability programmes for their accommodation suppliers, whilst small operators state that they do not have the purchasing power to change behaviour. Many specialists prefer to use locally owned hotels, which they indicate meet their sustainability requirements, in which small properties, local food and contact with local hosts are a key part of the tourism product. Smaller accommodations generally take less action on environmental issues, but some owners, especially in more remote destinations, use solar and wind energy. The emphasis of sustainable tourism activities, particularly those of the mass operators interviewed, is on the environment, mainly focusing on the reduction of costs from energy, water and waste.

Some mass operators have developed environmental standards and assessments backed by training materials to assist and encourage improvements. Most programmes are in their early stages with low uptake levels and data is insufficient to show whether, prior to the development of these programmes, these were already well managed accommodation suppliers with high standards, although the expectation is that many already were. It may also be that selection of accommodation is so central to the activities of tour operators that some aspects of good practice, such as waste management, are implicitly evaluated during the selection process, through links with criteria, such as those for health and safety, which are more systematically evaluated. If so, it is likely to be relatively easy for tour operators to extend systematic evaluation to environmental practices, and the tour operator industry associations interviewed all use or are currently developing environmental checklists for accommodation, including one based on a health and safety model that its members are already implementing.

Further examples of addressing environmental aspects include programmes of environmental auditing and management in hotels, for example as promoted by the Red Sea Sustainable Tourism Initiative and the International Hotel and Environment Initiative. Examples of environmental initiatives include use of renewable energy technologies, energy saving devices such as light sensors and key card light switches, water saving devices, recycling wastewater for irrigation, waste management, and recycling

schemes set up by destination authorities. Many of these actions help to reduce operating costs as well as improving environmental performance. So far, limited attention has been given to the siting and design of accommodation to minimize environmental impacts.

Fewer activities are evident in relation to operators setting employment conditions and staff development. However, several hotel chains follow a policy of employing local people and running training programmes to put this into practice. Training is focused on delivering hygiene and hospitality to the highest international standards. This is said to lead to high staff morale, low labour turnover and exemplary service quality. There is also some evidence of large tour operators supporting the ECPAT Code of Conduct against Child Sex Tourism and delivering training modules to accommodation suppliers in pilot destinations, as well as including specific clauses in contracts.

Transport

Operators stated that they do not have the ability to influence the sustainability of air transport, although operators that own airlines commonly promote the fact that they run the newest aircraft fleets, with high load factors to ensure lower impacts per head. Because of the difficulties in reducing environmental costs, some tour operators use carbon offset schemes (e.g. Future Forests, Climate Care, C Level and Coolflying) which calculate carbon dioxide emissions from air transport and promote offsetting of these, generally through reforestation projects, or in some cases through investment in renewable energy supplies. Promotion of more sustainable forms of travel is rare, particularly in the airline-dependent UK as compared to Europe, where operators are able to more easily promote train travel.

Several specialists provide information on these schemes in brochures and websites, and encourage contributions by their customers on a voluntary basis. Other operators, usually at the higher end of the market and including specialists as well as mass operators, include contributions to these schemes in the price of the packages they sell. Industry experts stated that these programmes will not make a real difference to the problem of climate change, but can raise awareness and lead to more advanced proposals. There is limited evidence of airlines delivering sustainability messages through their in-flight presentations, such as magazines and videos, and it was suggested that the few examples available (such as destination-specific videos produced by the NGO Tourism Concern) could be replicated.

Operators stated that they have to be pragmatic and consider local realities in the use of local transport. For example, some specialists describe taking tours to remote regions where limited transport is available and it must be used even if it does not demonstrate good environmental performance. Operators are aware of the environmental impacts of these activities, but state that the costs must be balanced with the economic considerations for both local partners and the operator to secure financial income through service provision.

Ground Handlers, Representatives, Excursions and Activities

A number of examples of good practice on sustainability issues in this sector were identified, most of them from specialist operators where activities often depend on environmental quality and high degrees of cultural interaction. However, there are relatively few examples of ongoing impact assessments of activities. Several specialists emphasize the importance of selecting suppliers based on community and workforce issues, in-depth local knowledge and promoting visits to community projects or local tourism enterprises.

Many specialists also follow environmental policies regarding issues such as the disposal of litter and protection of fragile sites. Some have provided financial investment to assist ground handlers to improve the quality of services, or provide ground operators with some of the basic equipment needed for

specialist excursions. Perhaps the clearest example is the 40 trekking tour operators that are implementing policies on porters' rights and working conditions, based on the Porters' Rights Campaign that has been established by Tourism Concern, a UK NGO.

Mass operators report that they are often unwilling to deselect poorly managed products that are otherwise popular with customers. Most initiatives are focused on training on sustainability for operators' representatives, in terms of giving customer information on issues affecting the local environment and culture, and how to minimize negative impacts. While there is evidence of growing commitment to deselect companies with a poor record in human rights or animal welfare, these examples are few compared with the portfolio of excursions.

Food and Crafts

Few operators were found to have supply chain initiatives on the production and distribution of local sustainable food and crafts, but some work with local suppliers to promote local sourcing. For specialists, local sourcing is often a key part of the product, and it also features as part of a portfolio of tourist attractions for mass operators in excursions and promotion of local bars and restaurants. However, few examples were identified of operators considering the potential depletion of local food or the outcome of price rises for locals.

The larger, higher end hotels import significantly more, usually because of concerns that local producers may not be able to meet the standards they require. There are more direct production links with the seafood market than with any other due to the importance of freshness, followed by vegetables and herbs. Out of the fresh produce, meat is the most likely to be imported. However there are examples of resorts that have made conscious commitments to support local farming even in locations where soil, weather and skills would have not suggested possible successes. Most large hotels that have worked with local food producers have found it requires constant supervision and commitment, and success is often linked to championing of local sourcing by hotel chefs. It may also require training and technical support and investment in order to gather supplies from different producers that meet the quality and quantity required.

Purchase of local craft is often a key part of the holiday product for both specialist and mass operators. This improves economic linkages with local communities and businesses, supports conservation goals by offering alternative sources of livelihood, and maintains traditional arts and crafts. In addition to visiting workshops and retail outlets, examples were found of the retailing of local crafts in accommodations, and a resort organizing a co-operative for local women to market their handicrafts at nearby hotels.

Discussion

The key aspects identified in our research are that SSCM initiatives depend on good working relationships with suppliers, organizational cultures that are supportive of sustainability principles and organizational resources to invest in sustainability. Initiatives to date have focused more on setting environmental, rather than socio-economic criteria, and industry-wide approaches play an important role in encouraging and supporting implementation of SSCM.

Preliminary Conditions for SSCM

The principles embodied in the various actions and policies advocated for making tourism more sustainable are well summarized in the definition of fair trade tourism – a 'commitment to finding

positive and practical solutions for the tourism industry as well as consumers, local communities and destination governments, so as to benefit local communities through trade, in preference to aid' (Kalisch, 2002, p. 17). Fair trade principles are in essence a sub-component of socio-economic sustainability, and can be applied to investments, business benefits including wages and working conditions, direct tourist expenditure and use of natural resources (Lippmann, 1999; Tapper, 2001; TOI and CELB, 2003). In the case of SSCM in tourism, fair trade translates into three necessary conditions that must be met in the tour operator–supplier relationship: long-term partnership, fair pricing and a consistent volume of operations.

Many of the tour operators interviewed, and particularly specialists, reported that it is necessary to develop initiatives gradually and that results are based on solid working relationships that have been built up over time and reflect a mutual respect between both parties (Crofts *et al.*, 1998; Green *et al.*, 1998; Lippmann, 1999; Murray, 2000). Suppliers are more willing to adopt tour operator requirements when they have long term contracts that guarantee the return on investment (BSR, 2001; Crofts *et al.*, 1998; Green *et al.*, 1998; Lippmann, 1999; TOI and CELB, 2003), and for this reason alone a large part of promoting sustainability in supply chains depends on first ensuring the socio-economic sustainability of the suppliers. The move in the early 1990s towards 'guaranteed' accommodation contracts, in which operators would guarantee payment regardless of occupancy, was designed to secure accommodation and to mitigate financial risk, but in fact laid the foundations of a more sustainable supply chain partnership.

Challenges to implementing SSCM include supplier availability and capacities, time, expertise and financial resource availability (BSR, 2001; NEETF, 2001; Tan, 2002). SSCM works best for those companies where their organizational culture embraces sustainability (Tan, 2002), and in those situations where the tour operators have influence over their suppliers (Zsidisin and Siferd, 2001). Tour operators tend to require a steady and significant volume of operations with a supplier or destination if they are to make a significant contribution and expect changes in local operations, whether this is in terms of contracting local people or influencing decision-making of suppliers. A secure income stream, with stable contracts and foreseeable contracting conditions including prices, is paramount both to facilitate the necessary investments by the supplier and to cement the trust in the relationship. As projects require time for companies to build knowledge and develop relationships, supply chain initiatives are unlikely to produce measurable short-term, quick-fix results.

In line with SSCM theory, the benefits reported include gains from brand reputation, staff morale and retention, long-term business relationships with suppliers, retention of clients, increased revenue, reduced costs and improved operational efficiency, risk management, staying ahead of legislative requirements and protection of the core assets of the business (BSR, 2003; Handfield *et al.*, 2005; Murray, 2000; NEETF, 2001; Preuss, 2005; van Hoek, 1999). While these motivations are likely to have varying degrees of influence on individual businesses depending on company and product characteristics, this suggests that there is huge scope for good practices to be adopted by tourism businesses throughout the supply chain.

Miller (2001) found that consumerism is a key trigger in corporate social responsibility activities of tour operators. Although specialists in this study reported that consumers are increasingly interested, this is not reflected in a willingness to pay extra. Mass operators do not perceive significant market interest in sustainability. This underlines past studies that showed little evidence of widespread green consumerism in holiday choice (Font and Tribe, 2001; Middleton and Hawkins, 1998; Sharpley, 2001). However, it can be suggested that increased customer information on sustainability issues will increase awareness and over time possibly lead to increased concern, and willingness to pay, for sustainability initiatives.

Prevalence of Environmental over Socio-Economic Initiatives

Some specialists emphasized the importance of selecting suppliers based on community and workforce issues before environmental concerns, and industry associations are working on introducing criteria into purchasing policies to cover these issues, as also seen by Green *et al.* (1998). However, most initiatives focus on environmental issues. This may reflect the potential cost savings from environmental management, and that environmental impacts are more easily identifiable and measurable than social sustainability criteria (Font *et al.*, 2006).

More exemplary experiences are needed to cement the importance of economic linkages and working conditions, beyond headline figures of employment creation. As reported by BSR (2003), some operators have provided financial investment to assist suppliers to improve the quality of their services. While evidence of this was only found in this survey among specialist operators, it is a potential activity for all operators, particularly in the case of chain owned suppliers, where any perceived risk could be minimized.

Customer information on destination issues is more common among specialist operators, due to the nature of the product and perceived market interest. Although mass operators are beginning to provide sustainability related advice in company literature or in resort representative meetings, there is considerable opportunity to develop this communication. In the case of chain owned airlines in particular, there is opportunity to exploit the potential of in-flight magazines and videos on destination social sustainability issues.

The Benefits of Industry-Wide Approaches

Many operators stressed the importance of having access to learning processes covering the principles and methods of implementing SSCM, as a stimulus for integration of sustainability aspects into their work with suppliers. This is consistent with SSCM literature, which highlights the importance of cooperation, training, awareness raising and communications (BSR, 2003; Halme, 2001; Lippmann, 1999; NEETF, 2001). The most recent effort in this respect is a consortium of European tour operators and tour operator associations, who with funding from the EU LIFE programme are working with sustainable tourism and supply chain specialists on the 'Tourlink' project. This incorporates developing a common SSCM strategy for tour operators across Europe.

Together with the SSCM methodology from the United Nations Environment Programme-backed Tour Operators Initiative, and sustainability criteria established by associations of smaller independent tour operators in Europe, the establishment of the 'Tourlink' project is a major breakthrough. A key activity among tour operator associations is the development of checklists for suppliers, including one based on a health and safety model that its members are already implementing. While sustainability is not a regulatory requirement, the ability and motivation of operators to influence supplier sustainability will vary across businesses. However, industry associations are becoming a powerful channel for positive change through membership requirements, know-how and joint action platforms and peer pressure to move from the wide range but scattered cases of good practice found in this study to raising the bar for the tour operator sector overall.

Conclusion and Recommendations

The main challenge is to apply existing SSCM practices more widely in tourism. Quality is a key aspect of supplier selection by tour operators, but even though many sustainability issues have significant

Sector	Priority area for SSCM improvement
Accommodation	Environmental performance Employment conditions for staff and provision of training on sustainability issues Employment opportunities for local community residents Environmental infrastructure in the destination, especially for management of solid and liquid wastes Linkages with the local economy, especially for food supply, handicrafts and furniture Marketing of socially and environmental sustainable tourism packages and suppliers
Transport	Environmental performance of ground transport Use of airline communication to passengers on sustainability issues
Ground handlers, excursions and activities	Environmental performance Employment opportunities for local residents Training of local communities on product development and guiding Marketing of socially and environmentally sustainable tourism packages
Food and crafts	
• Bars and restaurants	Environmental performance Environmental infrastructure in the destination, especially for management of solid and liquid wastes
• Local food and craft producers and supplies	Sustainable production methods including production and training Quality, reliability and distribution Access to markets

Table 2. Priority SSCM initiatives by sector

effects on the quality of holidays experienced by tour operators' clients the tourism sector only rarely includes sustainability issues as part of the quality equation. Sustainability issues are most evident as a quality issue amongst specialist operators, while mass operators are at the very early stages of incorporating sustainability as a product quality issue, focusing mainly on environmental areas. Increased communication on the relationship of sustainability and quality in order to increase market awareness and demand is key to driving SSCM forward. Based on this research, it is recommended that supply chain actions are promoted by all tour operators, regardless of their geographic or product focus. Table 2 indicates priority areas for SSCM improvement in each sub-sector.

It is important to consider that it is easier for sustainability requirements to be implemented in accommodation than in other areas of the supply chain, while improvements in transport are the hardest, particularly air travel. Improvements in excursions and activities are where they are most obvious to tourists but not necessarily where they benefit the most local people, while sustainable production and consumption of local food and crafts will bring the greatest economic benefits to local people.

References

- BSR. 2001. Suppliers' perspectives on greening the supply chain: a report on suppliers' views on effective supply chain management strategies. Business for Social Responsibility Education Fund: San Francisco.
- BSR. 2003. *Supplier Environmental Management*. <http://www.bsr.org> [17 December 2003].
- Carey S, Gountas Y, Gilbert D. 1997. Tour operators and destination sustainability. *Tourism Management* 18(7): 425–431.
- Croom S, Romano P, Giannakis M. 2000. Supply chain management: an analytical framework for critical literature review. *European Journal of Purchasing and Supply Management* 6: 67–83.
- Crosbie L, Knight K. 1995. *Strategy for Sustainable Business*. Maidenhead: McGraw-Hill.

- Crotts J, Aziz A, Raschid A. 1998. Antecedents of supplier's commitment to wholesale buyers in the international travel trade. *Tourism Management* 19(2): 127–134.
- Davies T, Chaill S. 2000. *Environmental Implications of the Tourism Industry*, Discussion Paper 00-14. Resources for the Future: Washington, DC.
- Font X, Tapper R, Cochrane J. 2006. Competitive strategy in a global industry: tourism. *Handbook of Business Strategy*. Emerald Group Publishing Limited: Bradford; 51–55.
- Font X, Tribe J. 2001. Promoting green tourism: the future of environmental awards. *International Journal of Tourism Research* 3: 9–21.
- Global Reporting Initiative (GRI) and Tour Operators Initiative (TOI). 2002. *Tour Operators' Sector Supplement for Use with the GRI 2002 Sustainability Reporting Guidelines*. GRI–TOI: Paris.
- Green K, Morton B, New S. 1998. Green purchasing and supply policies: do they improve companies' environmental performance? *Supply Chain Management* 3(2): 89–95.
- Halme M. 2001. Learning for sustainable development in tourism networks. *Business Strategy and the Environment* 10(2): 100–114.
- Handfield R, Sroufe R, Walton S. 2005. Integrating environmental management and supply chain strategies. *Business Strategy and the Environment* 14: 1–19.
- Ho DC, Au KF, Newton E. 2002. Empirical research on supply chain management: a critical review and recommendations. *International Journal of Production Research* 40(17): 4415–4430.
- Holden A. 1996. A profile of UK outbound 'environmentally friendly' tour operators. *Tourism Management* 17(1): 60–64.
- Hutchinson A, Hutchinson F. 1997. *Environmental Business Management*. McGraw-Hill: Maidenhead.
- Kalisch A. 2002. *Corporate Futures: Consultation on Good Practice*. Tourism Concern: London.
- Klemm M, Parkinson L. 2001. UK tour operator strategies: causes and consequences. *International Journal of Tourism Research* 3: 367–375.
- Krause D. 1999. The antecedents of buying firms' efforts to improve suppliers. *Journal of Operations Management* 17: 205–224.
- Krause D, Scannell T. 2002. Supplier development practices: product- and service-based industry comparisons. *The Journal of Supply Chain Management* 38(2): 13–21.
- Lippmann S. 1999. Supply chain environmental management: elements for success. *Environmental Management* 6(2): 175–182.
- Lysons K. 1996. *Purchasing*, 4th edn. Pitman: London.
- McIntyre K, Smith H, Henham A, Pretlove J. 1998. Environmental performance indicators for integrated supply chains: the case of Xerox Ltd. *Supply Chain Management* 3(3): 149–156.
- Middleton V, Hawkins R. 1998. *Sustainable Tourism: a Marketing Perspective*. Butterworth Heinemann: Oxon.
- Miller G. 2001. Corporate responsibility in the UK tourism industry. *Tourism Management* 22: 589–598.
- Miller G, Twining-Ward L. 2005. *Monitoring for a Sustainable Tourism Transition: the Challenge of Developing and Using Indicators*. CABI: Oxfordshire.
- Min H, Galle W. 2001. Green purchasing practices of US firms. *International Journal of Operations and Production Management* 21(9): 1222–1238.
- Moir L. 2001. What do we mean by Corporate Social Responsibility. *Corporate Governance* 1(2): 16–22.
- Monczka RM, Trent RJ, Callahan TJ. 1993. Supply base strategies to maximize supplier performance. *International Journal of Physical Distribution and Logistics Management* 23(4): 42–54.
- Murray J. 2000. Effects of a green purchasing strategy: the case of Belfast City Council. *Supply Chain Management* 5(1): 37–44.
- National Environmental Education and Training Foundation (NEETF). 2001. *Going Green Upstream . . . the Promise of Supplier Environmental Management*. NEETF: Washington, DC.
- Preuss L. 2005. Rhetoric and reality of corporate greening: a view from the supply chain management function. *Business Strategy and the Environment* 14: 123–139.
- Rao P. 2005. The greening of suppliers – in the South East Asian context. *Journal of Cleaner Production* 13: 935–945.
- Sharpley R. 2001. The consumer behaviour context of ecolabelling. In *Tourism Ecolabelling: Certification and Promotion of Sustainable Management*, Font X, Buckley RC (eds). CABI: Oxfordshire; 41–56.
- Swarbrooke J. 1999. *Sustainable Tourism Management*. CABI: Oxfordshire.
- Tan K. 2002. Supply chain management: practices, concerns and performance issues. *The Journal of Supply Chain Management* Winter: 42–53.
- Tapper R. 2001. Tourism and socio-economic development: UK tour operators' business approaches in the context of the new international agenda. *International Journal of Tourism Research* 3: 351–366.
- Tearfund. 2001. *Tourism: Putting Ethics into Practice*. Tearfund: Middlesex.
- TOI and CELB. 2003. *Supply Chain Management for Tour Operators: a Handbook on Integrating Sustainability into the Tour Operators' Supply Chain Systems*. Tour Operators Initiative, Center for Environmental Leadership in Business: Paris.

- van Hoek R. 1999. From reversed logistics to green supply chains. *Supply Chain Management* 4(3): 129–134.
- Welford R. 1994. *Cases in Environmental Management and Business Strategy*. Pitman: London.
- Welford R, Ytterhus B, Eligh J. 1999. Tourism and sustainable development: an analysis of policy and guidelines for managing provision and consumption. *Sustainable Development* 7: 165–177.
- Young A, Kielkiewicz-Young A. 2001. Sustainable supply network management. *Corporate Environmental Strategy* 8(3): 260–268.
- Zhu Q, Sarkis J. 2004. Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of Operations Management* 22: 265–289.
- Zsidisin G. 1998. Purchasing's involvement in environmental issues: a multi-country perspective. *Industrial Management and Data Systems* 98(7): 313–320.
- Zsidisin GA, Siferd SP. 2001. Environmental purchasing: a framework for theory development. *European Journal of Purchasing and Supply Management* 7(1): 61–73.