

# **Environmentally sustainable events: a critical review of the literature**

Ms Chantal Dickson

*School of Tourism, the University of Queensland, Brisbane, Australia*

Dr Charles Arcodia

*School of Tourism, the University of Queensland, Brisbane, Australia*

## **Abstract:**

There has been much international focus on environmental protection and sustainability. Until very recently however, little attention has been paid to the impacts that planned events have on the natural and built environment. Events often involve the creation of new infrastructure; they can occur in environmentally-sensitive locations, require transport of attendees, goods and services and other scarce resources in large quantities. As society gains a greater understanding about these impacts, events are being challenged to become more accountable for their managerial decisions and to produce outcomes which are more sustainable on multiple criteria.

This paper firstly reviews the available literature on sustainability to provide context. Secondly, the literature on governance is considered as existing policy, leadership approaches and other resources provide guidance to the industry as to how to develop and produce events positive impacts on their host environments. Literature from academic, government and the event industry is analysed in order to provide a comprehensive summary and analysis of where the event industry is currently positioned. The key outcome of this paper is to set an agenda for continuing research which explores the nexus between sustainability, governance and events.

**Key words:** events, sustainability, governance

## **Introduction**

Over the last decade, environmental protection and the multitude of challenges it poses to society have become increasingly debated and in many ways becoming ever more complicated. Environment protection has shifted from being a matter of social and political conscience, to one of profound communal concern and international significance. Previously known as 'Global warming' or 'the Greenhouse effect', the phenomenon has been shown to be of such urgent concern not only because of the magnitude of changes to the natural environment but also the rapid rate of these changes.

The issue of sustainability is at the forefront of international dialogue and debate with pressure on both commercial operators of all sizes and from all industries, and private citizens to make adjustments to their daily lives which reduce negative impacts on the environment. The tourism sector and its contribution to climate change have become a focus of discussion and debate. More specifically, recently the event industry has attracted attention and there is now a move to make the industry more environmentally friendly. Events offer valuable economic, social, cultural and educational benefits, and potential growth in tourism for many international destinations.

Events, by their very nature, have an impact on their host environment. In recent times there has been a shift towards managing the waste generation and disposal processes at event which

result in minimal impacts to our environment. Common industry practice is to complete an environmental impact assessment (EIA) as part of the planning process for any event, and the importance, and need for this has recently become more significant not only from an environmental preservation perspective, but also from a corporate social responsibility and from a marketing and PR perspective. EIAs have been the only means by which event organisers can estimate what level of effect their event is going to have on the environment. More recently progress has been made in the development of newer tools for industry practitioners to utilise to make their events more sustainable.

The event industry is widely acknowledged as an industry with low barriers to entry. Further, there is a very diverse array of professional positions that have an event component as part of the position description. As such, there are a large number of people who are event managers and as such look to various sources for guidance on current event industry practices. These sources of guidance include government, professional industry associations and benchmarking against other events. From a government perspective, the depth and breadth of information varies from hemisphere to hemisphere, country to country and often between the different levels of government. Within Australia for example, there is limited information supplied to the industry at a federal level and few state governments have offered clear guidance on how to reduce environmental impact of an event by providing online reference materials free of charge.

The event industry has experienced extraordinary growth over the past decade in terms of the number, diversity and popularity of events on offer (Arcodia & Reid, 2004). As the number of events increase, there is a growing realisation that there is a need for event management professionals who are able to create, organise and manage events (Getz, 1997) utilising the most current methodologies and technologies in order to fulfil stakeholder needs. Although many events are managed successfully by dedicated volunteers, increasing competition across all sectors of the events industry is giving greater impetus to the need for more fully professionalised events with staff that are well educated, experienced professional event managers (Arcodia & Reid, 2004). The above factors, when coupled with the societal demand to produce events that are more environmentally conscious events has lead the industry to the point where practitioners are actively seeking guidance and support when it comes to producing events that have positive environmental impacts on the host destination. This guidance is sought from various stakeholder groups that provide governance to the event industry. These stakeholder groups can include government (at all levels), non-government organisations (NGOs), professional associations, the host community and sponsors. This paper firstly considers the current literature on sustainability and secondly, explores the literature that discusses governance, which ultimately result in both strong academic outcomes and practical skills development for event industry practitioners.

### **Sustainability**

The notion of sustainability was originally thought of as development that seeks to be continuous amid worries that existing development will be resource constrained by the carrying capacity of the earth's natural resources and eco-systems (Hopkins, 2002). Sharpley (2009, p.3) notes that sustainable development is a term that is widely used and recognised yet can be an indistinct term. Goldworthy (1998) notes that the term 'development' can be used in three senses: a process, the outcome of that process, and the activities that support the process, each of which embrace or may be considered from competing social, economic, political and environmental ideological perspectives.

Sustainable development has been variously envisaged in terms of vision expression (Lee, 1993), value change (Clark, 1989), moral development (Rolston, 1994), social reorganisation (Gore, 1992) or transformational process (Viederman, 1994) toward a desired future or better world (Gladwin, Kennelly and Krause, 1995). The term sustainable development was first used outside the domain of environmentalists and ecologists (Hopkins 2002) in the 1987 Brundtland Report to the UNWCED defining it in the following way:

”...Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

1. The concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
  2. The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs...”
- (Brudntland report)

More recently, the term “sustainability” has developed to encompass social and economic components and the environment. In general, academic literature on sustainable development, much attention has recently been given to the description of different perceptions of sustainable development (Hunter, 1997; Mitlin, 1992; Murdoch, 1993). For the sake of brevity, these are not able to be discussed here.

From a tourism-specific guise, which is an industry that shares many commonalities with the event industry, Steer and Wade-Gery (1993) identified a list of over 70 definitions of sustainable tourism development which highlights the complexity and ambiguity as a result of its focus being interpreted in a variety of ways (Lélé, 1991). Sustainable tourism is an overarching paradigm which incorporates a range of approaches to the tourism/environment system at destinations (Clarke, 1997), and focuses on balancing tourism development with community, habits and wider environmental concerns (Bramwell & Lane, 2008). Authors such as Hunter (1997) and Bramwell and Lane (2008) note that sustainable tourism is not limited simply to environmental sustainability, but also includes issues of social sustainability and economic sustainability. In a tourism context, the World Tourism Organisation (2001) offers the following definition:

“Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, and biological diversity and life support systems”.

The tourism and events industries are of a cognate nature with complex linkages and mutual dependency (Cooper, 1998), and events are often viewed as an integral component of tourism development, often used as a means of attracting visitors to a destination (Getz, 1989; McDonnell, 1999). As such, sustainable development strategies should also include dealing with the impact events have on the environment (Arcodia & Cohen, 2007). From the literature summarised above, it is clear that there are many ways to define sustainability. Although the basic elements of these definitions are the same (ie. the notion of meeting present needs whilst preserving opportunities for the future), there are enough subtle delineations to warrant the adoption of different definition by different industries. The event industry is still very much

in the developmental stages of dealing with issues of sustainability. This is demonstrated by the industry not creating a definition of its own. Although related strongly to tourism, leisure, hospitality and other service industries, the event industry does have its own specific issues that are unique to events and as such, stands to benefit from developing a definition of its own. This would provide leadership to all stakeholders of the event management industry.

### **Events and the triple bottom line**

According to Dwyer (2005) the most comprehensive approach to achieving sustainable operations is the Triple Bottom Line (TBL) approach. Pioneered by Elkington (1998), the TBL approach serves to focus corporations not just on the economic value they add, but also on the social and environmental value that they can add or indeed, destroy. The author describes the TBL approach in this way:

“...the term triple bottom line is used as a framework for measuring and reporting corporate performance against economic, social and environmental parameters....the terms is used to capture the whole set of values, issues and processes that companies must address in order to minimise any harm resulting from their activities and to create economic, social and environmental value. This involves being clear about the company’s purpose and taking into consideration the needs of all the company’s stakeholders.” (Elkington, 1998, p. 109).

There has been a growing trend in the literature to examine the relationship between sustainability and events however little has been conducted which examines the environmental aspects of sustainability. A large body of work investigating the social/socio-cultural impacts of events is available (Hall & Hodges, 1996; Sofield & Li 1998; Arcodia & Whitford, 2002; Fredline, Jago & Deery, 2002; Jago, Chalip, Brown, Mules & Ali, 2002, Shyllon, 2007) and the economic impacts of events is also well documented (Burgan & Mules, 2000; Dwyer, Mellor, Mistills & Mules, 2000a, 2000b; Lee & Taylor, 2005; Lee, 2006). Environmental impacts however, are rarely discussed (Carlsen, Getz, & Soutar, 2001). Studies that do include an environmental component tend to focus mainly on the negative impacts (Harris & Huyskens, 2001).

A recent work by Sherwood, Jago and Deery (2004) investigated the triple bottom line and its impact on the evaluation of special events. The authors argue that the evaluation of events is currently short sighted; that it is possible to compare two special events on the basis of economic impact and reveal similar results and as a consequence, it may prove difficult to differentiate between these events in terms of their sustainability (Sherwood et. al., 2004). This lack of environmental analysis could be attributed to special events (even mega or hallmark events) being held only once at a particular location (Sherwood, et.al., 2004). Thus any information gathered may be of little benefit in regards to the long-term social and environmental impacts, therefore precluding any evaluation concerning whether or not the event was sustainable (Sherwood et.al, 2004). Failure to incorporate environmental performance into the evaluation of events may result in ignoring the long-term contribution that an event makes to the host community. Clearly, a system is needed to allow events to appraise and document their progress towards sustainability.

Sherwood (2007) suggests the triple bottom line approach would broaden the evaluation criteria for events and bring the event industry in line with the wider business community. Moreover, the addition of such measures and their impact on the quality of life of the host community may provide information that assists event organisers to retain the licence to stage

an event, which is granted by the event stakeholders (Sherwood, 2007). A further benefit of a triple bottom line evaluation is that it will enable a comparison between a range of different events, which will aid tourism organisations and event stakeholders in the decision-making process about which events warrant support. This would result in events being managed in a more sustainable way.

### **Environmental Impact of Events**

The growing popularity of travelling to attend events (Boyd, 2002) has driven researchers to examine this form of tourism. There is a growing body of literature that is documenting the impact events have on their host environments. For example, festivals tend to involve a considerable number of visitors in a limited geographical space for relatively short periods of time, as maximising the number of visitors is often equated with high levels of success from an economic perspective (Kim et.al, 2007). This congestion leads to the possibility of environmental degradation of a host community. The long-term success of community based tourism such as festivals depends not only on maximising economic benefits (Kim et.al, 2007), but also on protecting the natural environment in which the tourist experience takes place (Johnson, Snepenger & Akis, 1994).

The progression of the Olympic Games from an event that caused massive negative environmental impacts to one which seeks to enhance the host destination is well documented in the literature. Timsheva (2001) analysed the environmental legacy of Olympic Games from Ancient Greece through to Sydney 2000 documenting how host destinations balance the pressure to deliver an event which fulfils the requirements to physically stage the event with the impacts this has on the environment in the destination. For example, the 1992 Winter Games in Albertville, France games were the first ever to have their opening ceremonies preceded by a protest march to complain about the Games' "...legacy of pollution and environmental injury" (Findling & Pelle, 1996 p. 318). Some communities voted to not be involved in the Games, placing the preservation of the environment and their quality of life ahead of promised economic gains (Timsheva, 2001). The fallout from this prompted the International Olympic Committee (IOC) to develop environmental criteria against which future bids could be evaluated. The environment became the third pillar added to the existing pillars of sport and culture and the Centennial Olympic Congress officially added the following to the Olympic Charter:

“...the Olympic Games are held in conditions which demonstrate a responsible concern for environmental issues and encourage the Olympic Movement to demonstrate a responsible concern for environmental issues, takes measures to reflect such concern in its activities and educates all those concerned that with the Olympic Movement as to the importance of sustainable development...” (IOC, 2004, Olympic Charter, Rule 2, p. 13)

It also prompted future Games to act responsibly and the 1994 Winter Games in Lillehammer, Norway were the first to try to prevent an ecologically negative legacy `by giving themselves a 'green profile' (NAOC, 1995). The 1996 Atlanta Games achieved a number of environmental successes and showcased several new approaches and technologies even though environmental leadership was not deemed a central objective of the organising committee (Moss, 1995). The organisers of the Atlanta Games were guided by a key principle: if not to improve, then not to worsen nature wherever possible (Timsheva, 2001). The Sydney 2000 Games offered the most comprehensive environmental plan, consisting of 100 commitments, covering the five key areas of energy conservation, water conservation,

waste avoidance and minimisation, pollution management and the protection of significant natural and cultural environments. The Games developed a management system called 'Environmental Focus' (Chernushenko, 1994) and implemented environmental guidelines based on the concepts of sustainable development, involving major stakeholder and sponsors in the process. Innovations included solar-powered homes and services for the Olympic Village, and roof-top water-siphoning systems for collecting and storing rain water. For an event of the size and scale of the Olympics, it would be virtually impossible for it to be entirely carbon neutral and free of environmental impact, however each attempt is an improvement and sustainable, direction. Dubbed the 'green games', Sydney 2000 was responsible for setting a new global Olympic standard (Holden, Mackenzie & VanWynsberghe, 2005) that each of the Games staged thereafter have worked hard to outshine. To date little has been published about the impacts of the 2008 Beijing Olympics in academic literature, however in popular media sources, the Games were lauded for their sustainable operations. The London 2012 Games has developed a comprehensive sustainability strategy that draws strongly on the triple bottom line approach. The effectiveness of this strategy will be evaluated post-games.

On a similar scale to that of the Olympics, Collins, Flynn, Munday and Roberts (2007) analysed the environmental consequences of the 2003/04 FA Cup Final using an ecological footprint analysis (EFA), which is an aggregated indicator of global ecological impact similar to the way in which GDP is used to represent dimensions of the financial economy. EFA has been widely criticised in academic discourse for reasons such as it does not allocate responsibilities of impact correctly (Macgregor et. al, 2004) and it does not accurately reflect the impacts of human consumption (Ferng, 2002). Collins et.al (2007) argue however, that it can be especially helpful in an event context. The event generated £2.2 million pounds to the region and was connected to 560 tonnes of GHG emissions. The authors found that the event clearly had a significant global ecological impact and identified visitor travel, food and drink consumption and waste as the most significant impacts. Infrastructure had a relatively small footprint because of the durability of materials used in its construction and the number of visitors that will use the venue over its estimated lifespan. This demonstrates the challenge events pose to regions and governing bodies as it is clear that the economic benefit of events can be extraordinarily large, as can the environmental impact which can generate consequences to negate the financial benefits.

From a non-sporting event perspective, the focus in the literature is on other sustainable development issues such as social sustainability and destination sustainability. Kim, Borges and Chon (2007) focussed on the impacts of personal environmental values on the motivation of film festival attendees. Using the New Environmental Paradigm (NEP), which investigates the public's view about nature and their relationship to it, the authors found that the challenge for the event and for the destination is to develop a competitive and sustainable festival that is in harmony with the environment and will serve the long-term viability of the city. Furthermore, there appeared to be a link between the theme of the festival (for example, environmental films), attendees' values and motivation to attend the festival. McKercher, Mei and Tse (2006) analysed the appeal of short duration festivals as tourist attractions from the perspective of sustainable development and highlight the need for the event and destination to grow and develop together as a reminder that attractions do not exist in isolation and must be considered as part of a system. This research needs to be taken a step further to incorporate the impact on the environment (if any) of cultural/non-sporting festivals to make the sustainability approach more holistic.

Jones, Pilgrim, Thompson and Macgregor (2008) assessed the environmental impacts of nine special events in Western Australia. The authors interviewed event organisers and hosts and explored areas of concern in relation to environmental management/risk, the availability of data relating to direct and indirect costs of managing potential environmental impacts/risks and the actual/perceived benefits of using an environmental checklist. The study revealed four key findings. Firstly, the development of an environmental checklist would potentially be of use to event hosts, who showed more interest than the event organisers interviewed. Secondly, the environmental concerns of both hosts and organisers focussed specifically on managing the environmental impacts of specific events, as opposed to being concerned about the overall environmental impacts of an event to the host region. Finally, a standardised environmental checklist would be of benefit to both parties as it could potentially save time during the approvals process, especially if it could be submitted to multiple authorities.

Lawnton and Weaver (2010) investigated sustainable ancillary resource management practices (SARM) in US birding festivals. According to Lawnton and Weaver (2010, p.3):

“...SARM includes auxiliary practices such as recycling, energy conservation and waste minimisation that involve the food, energy and infrastructure resources that support attendees and organisers...SARM can have substantial direct and indirect positive impacts on [events] and needs to be taken into account by festival organisers as a basic component of responsible and effective event management as well as attendee expectations and satisfaction...”

Their study questioned organisers of birding festivals in the USA and had a number of interesting findings. Firstly, some event organisers felt that SARM was a distraction from the focus on the wildlife, even though the environment the birds resided in was a vital part of the staging of the event. Further, a sense of responsibility was imperative for carrying out innovative SARM practices. Finally, because most birding festivals were organised by not-for-profit entities, it was perceived that neither the organisers nor the event would essentially gain anything for the time, effort and potentially the funds they invested in SARM practices.

Overall, this section of the literature shows that there has been progress in researching the environmental impact of events however focus is skewed more towards the economic arm of TBL evaluation. Research has focussed on ascertaining the perspectives of event organisers and to a certain extent, on host destinations (from the perspectives of destination marketing organisations DMO). Further, these investigations seem limited to identifying that these stakeholders acknowledge that their events do have negative impacts on the environment; however there seems to be few investigations into how these impacts are or could be managed, reduced or mitigated. Little consideration appears to have been given to the social impacts, especially from other stakeholder perspectives such as the host community and event attendee perspectives.

### **Climate Change and Events**

Weather and climate play important roles when planning events and can affect an event on a short-term basis or for the entire duration of the event. For example, rain during a conference at Hawaii may not negatively impact conference proceedings but may impact social activities (e.g. conference dinner, post-event tours) or cold, wet conditions for the duration of a fair or sporting event can reduce the overall attendance at the event. Jones, Scott and Abi Khaled (2006) studied the implications of climate change for outdoor special event planning in Canada and reached a series of conclusions. Firstly, climate variability does have an impact

on special events (through measures such as revenues, attendance and visitor satisfaction) and it is important for organisers to understand the extent to which visitation, quality of experience and event operations are sensitive to weather and climate (Jones et. al, 2006). This understanding can in turn help in the planning to minimise weather-related risks. Another challenge highlighted by the authors is the effect of climate change on events which are centred on certain naturally-occurring phenomena (such as the Annual Cordova Shorebird Festival in Alaska, which has been affected by a change in bird migratory patterns due to the change in climate) or environmental conditions (such as the Golden Rainbow Ice Fishing contest in Minnesota, which was cancelled in 2002 due to unsafe ice conditions). This impact could spell the demise of many events which rely on natural occurrences of this type or serious re-development aimed at progressing with the changes. Such changes could have major negative consequences for regions which have high economic dependency on the money which the event brings to the area.

From a non social science perspective, there has been work published which documents some more traditionally scientific impacts that events have on destinations. Kuo, Lee and Lai (2006) investigated the emission of polycyclic aromatic hydrocarbons and lead (which are associated with lung cancer) during one of the three most important folk custom festivals in Taiwan each year and found that the total amounts of these gases emitted from cookouts during the Festival were approximately 1.6 times higher than at other times of the year. Kulshrestha, Rao, Azhaguvel, and Kulshrestha (2004) explored the emissions and accumulation of metals in the atmosphere due to firecrackers and sparkles during the Diwali festival in India. On the day of the festival the concentrations of metal pollutants increased by 18 to 15 times. This is similar to Wang, Zhuang, Xu and An (2007) who also investigated the air pollution caused by the burning of fireworks and found that were over five times higher on festival days than normal days. These are again associated with serious health hazards due the increased air pollution and create a serious oxidisation effect which has a devastating impact on the environment. Although these papers do not make a clear link to climate change given the negativities generated are all gases and other airborne pollutants, it could be concluded that these effects would contribute to the consequences of climate change.

## **Governance**

The concept of governance is a complex one and is defined in a number of ways in the literature. Further, the term 'governance', as opposed to government is also becoming more common in industry and society and as such increasingly debated amongst scholars. Government According to Stoker (1998, p.17), government is typified by its ability to make decisions and its capacity to enforce them. In the traditional dictionary definition, the word governance is a synonym for government however literature reviews generally acknowledge that the term has a variety of different meanings and can be used in many different ways (Rohdes, 1996; Stoker, 1997; 1998). Rhodes, (1996, p.652-653) argues that "...governance signifies a change in the meaning of government, referring to a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed." In terms of a definition, the Commission on Global Governance (2005, p.2) defines governance as "...the sum of the many ways individuals and institutions, public and private, manage their common affairs...". Governance is generally agreed to refer to the development of governing styles in which boundaries between and within public and private sectors become blurred (Stoker, 1998). Further, Kooiman and Van Vliet, (1993, p. 64) note "...the governance concept points to the creation of a structure or an order which cannot be externally imposed but is the result of the interaction of a multiplicity of governing and each other influencing actors". According to McCauley (2008), the term governance expands the much restrictive

term of government to include a multitude of complex relationships between institutions and non-state stakeholders. New forms of bottom-up and horizontal multi-stakeholder understanding of governance have in the same way integrated the traditional top-down composition of government (McCauley, 2008; Kohler-Koch and Rittberger, 2006). Furthermore, it refers to the various institutional managerial configurations as well as a variety of procedures and outcomes (Berger, 2003). Gladsbergen and Driessen (2002) suggests that that the term governance represents the notion of steering, and can be seen as a shared responsibility of representatives from the state, the market and civil society dealing with societal problems. In terms of organisations, governance incorporates a series of research areas: networks, the inclusion of wider parts of society, multi-level government involvement, new public management and hierarchies (McCauley, 2008). One of the key considerations of this study is investigating the role that governing bodies play in policy creation, distribution and compliance. As mentioned earlier, stakeholder groups can include government (at all levels), non-government organisations (NGOs), professional associations, the host community and sponsors and as Sharpley (2009) notes

“...development may also be viewed more pragmatically as the plans, policies and activities of those organisations – governments, non-government organisations (NGOs), voluntary/third sector agencies and so on - that ‘do’ development or work to support or encourage social change.....”

When it comes to governance of an industry, consideration must also be given to the role policy plays in framing sustainable development. With respect governance and sustainable development, there have been many suggested models/frameworks proposed in recent times. Zeijl-Rozema, Corvers, Kemp and Martens (2008) note that different views on sustainable development may lead to different governance approaches. Further, they argue that the many perspectives on sustainable development can be mapped on the continuum between ecological sustainability and quality of life and the variety of modes of governance can be captured between hierarchical governance and deliberative governance. Within sustainable development, ecological sustainability is viewed as an issue of development within the ecological boundaries and carrying capacity of the planet which can be measured objectively and based on scientific evidence. The well being perspective conceptualises sustainable development as a quality of life issue as opposed to an environmental issue. it considers environment insofar as well-being either directly through life-supporting functions and amenities and indirectly through offering resources for the economic process and assimilating waste. This type of development therefore focuses on all three pillars of sustainable development and is contextually determined. It is often the result of societal preference and thus allows diverse opinions to co-exist. Hierarchical governance, they argue, is a top down approach and vertical relations between a lead stakeholder and other stakeholders in society. In this approach, the lead stakeholder is often government and is the central participant that decides and holds power. In this way, decisions are made by the lead stakeholder and there are vertical relations between lead stakeholder and others and planning and control are vital elements of the process. In contrast, deliberative governance are characterised by bottom up approaches and horizontal relations between all stakeholders. The core focus of this strategy is that all party (state, market and civil society) share control and operate on an equal footing in an open and deliberative way. In this style of governance, decisions are made by multiple stakeholders, horizontal relations exist between stakeholders and networks are managed. The framework also considers six characteristics that are not purely related to either governance or sustainable development but are expressions of governance for sustainable development. The implementation strategy, level of commitment, uncertainty, focus, technical fixes and the

monitoring and evaluation processes that are employed depends on both variables and the context within which they are applied.

O'Connor (2006) proposes a framework that expands the triple bottom line to a quadruple bottom line called the tetrahedral model of sustainability. The model argues that sustainability is an interrelationship between economics, social and natural systems organisation and that these need to be arbitrated by a political organisation (the 'fourth line') when differences and incompatibilities between these elements and their various stakeholders. This comes mainly in the form of policy.

Karlsson (2007) discusses the allocation of responsibility in multi level governance for sustainable development and compares three different principles: culpability, capacities and concern. The culpability principle means that the stakeholders who contribute to the problem and are thus 'culpable' in a causal and moral sense should take responsibility for the effects of their actions on others and seek to rectify the situation. The development of this principle relies on the causal links of a problem along the chain of causality including stakeholders and institutions (rules, social practices etc.) to be identified. Further the stakeholders can also be considered morally culpable in light of their own (reasonably required) awareness of their contributing role and their capacity to act differently. The capacity principle is based on the work of Barry (2005) that argues that stakeholders who have the capacity to address a problem more effectively or efficiently should assume the responsibility to do so even if they are not culpable for the problem. The application of this principle would suggest that it is possible to identify the necessary measure required to address the problem and which stakeholders possess the necessary resources to successfully execute them. Lastly, the concern principle means that the primary motivation for action is concern for those who suffer the impacts of the issue/outcome and presumes that the stakeholder is aware of the causal links and has some capacity to do something. In the case of environmental issues "...for many people, the limits of environmental degradation are reached only when they themselves experience environmental harm..." (Wapner, 1997, p.217) thus requiring a level of enlightenment and self interest. Further, Karlsson highlights that the argument to protect the environment for people's or states' own interest is commonplace citing Shrader-Frechette (1991, p.164) "...our ecological interdependence establishes a prudential basis for our obligation to help ourselves by helping them..."

Given the importance of events as components of tourism strategies of many destinations as well as of wider regional event strategies (Hall and Risher, 2004), it is obvious that events are of some policy significance (Roche, 2000; Higham & Hinch, 2003). A substantive body of work has been carried out with respect to the relationship between events (mainly festivals) and festival tourism (Quinn, 2006; O'Sullivan & Jackson, 2002, Cornelissen, nd) with the main outcomes of these studies highlighting the economic and social importance that festivals have to destinations. With respect events and governance, there has been some investigation into the role policy plays in facilitating development. As part of Whitford's (2009) research, it was identified that the triple bottom line should be the focus of events and indeed the policies developed to give events guidance as it facilitates social equity, environmental quality and economic prosperity. In terms of governance structures within the event industry an earlier study by Whitford (2004) found that event tourism policy in Australia tends to be mostly top-down with only a few high level stakeholders contributing to policy development.

In the absence of strong, clear policy guidance with respect to sustainable events, accreditation has become a popular way for events to achieve sustainability targets. Again, plenty of work has been completed about accreditation and the event industry (Harris & Jago, 2001; Carlsen, 2000, Royal & Jago, 1998), Arcodia and Cohen (2006; 2007) are the only authors to specifically investigate environmental accreditation and the event sector. To date there are no accreditation schemes created solely for the event industry. The authors study the Green Globe accreditation scheme and identify eight of the 25 program indicators as being suitable for events.

Stakeholders also play a key role in providing governance to the events industry. Whilst plenty of work has been conducted on how to identify and manage stakeholders such as Getz, Andersson and Larson (2007), stakeholder networks, leveraging and events (Chalip & McGuirly, 2004; Chalip & Leyns, 2002; O'Brien, 2006), the role of stakeholders in managing events (Reid and Arcodia, 2002a; Long, 2000), little attention has been paid to the governance role of stakeholders. Professional associations act as a conduit for information between the members and the wider community of the profession they represent. In an event management context, research has been pioneered by Arcodia and Reid (2002b) who have published a series of papers exploring the roles and responsibilities of professional event associations. In their study of the mission statements of professional event associations, they reported that over half of the mission statements evaluated placed importance on the exchange of information and on the association providing continuing educational opportunities to members. This emphasis is to improve professionalism, contribute to increased levels of satisfaction for both customers and professionals and help promote the services provided by the industry more widely (Arcodia & Reid, 2002). In their investigation into the educational role of professional event management associations, Arcodia and Reid (2003) concluded that professional event associations place a high importance on education and updating/up-skilling members which in turn should help the industry develop in a more strategic way. Other research conducted by Arcodia and Reid (2004) has highlighted the role of associations in developing a variety of services to form a major part of their strategic framework. The six most commonly occurring categories of services offered by professional associations were: educational services, communication services, business services, community services, advocacy services and buying power improvements (Arcodia & Reid, 2003). The environment or sustainable practice was not originally investigated by Arcodia and Reid in any of their studies.

### **Discussion and conclusion**

It is clear from the literature discussed above that there are many complex issues in the quest to make the event industry more environmentally friendly. Sustainability has been widely viewed as holding considerable promise as a vehicle for addressing the problems of negative tourism impacts and maintaining long-term viability; there is however, a long road to traverse (Liu 2003). The event industry is still developing the research relationship between events and the environment, and then act on these findings. As the focus of international attention continues to be on climate change, perhaps this will encourage researchers to investigate the many gaps in the literature with respect to sustainability. One of the biggest challenges will be to events which rely on stable and consistent weather patterns or reliable environmental conditions to run the event (e.g. ice fishing contests, impact of gas emissions from festivals). As the impact of climate change continues to be felt, events such as these will have to adapt to the changing environment in such a way that they will continue to exist. Researchers, practitioners and governments have to work together to help predict, plan and (if possible) overcome some of these challenges as a matter of urgency. It is important to note that

academic literature is only part of the sustainability debates; a more comprehensive insight into the status of the event industry and sustainability is provided when the governance literature is considered as well. The leadership the event industry receives is clearly under researched. Most studies focus on event manager/organiser opinions on topics unrelated to sustainability or governance issues. Further, little information seems to be available on the perspectives of other governance stakeholders such as sponsors, the host community and event attendees. From a policy and procedures perspective, again, little investigation has been carried out on sustainable event policies and practical reference materials provided by other governance stakeholders is very unsophisticated and often unusable. Having said this, there is a lot of discussion documented in the literature about the need for developing a tool, preferably one that is standardised but to date, no serious attempts have been documented.

The next step to progress the literature in this field is to investigate the interrelationships between sustainability, governance and the event industry. To date, only one study by Dickson and Arcodia (2009) has considered the role professional event associations play in promoting sustainable event practice by evaluating the information that associations make publicly available on their websites. The authors conclude that associations were only partially fulfilling their leadership role by providing some practical reference guides that although helpful and informative are often impractical. Further, the information is very basic and highly generalised and rarely reasonable or feasible. As stakeholders that play a key governance role, this lack of leadership needs to be investigated further.

Research into the perspectives of other key governance stakeholders also needs to be conducted in order to ascertain a clear and comprehensive picture of where the industry is currently positioned with respect to sustainable events, and where it needs to move towards in the future. Concomitantly, a more comprehensive literature review which includes government policy/resources, NGO perspectives and industry association materials (such as websites and association publications) is necessary to gauge more fully appropriate directions for the event industry. Consideration of sponsor, host community and event attendee perspectives should also be included. This research highlights the need for all event industry stakeholders to work together to establish well informed policies and procedures for the event industry.

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