



Universidade de Lisboa
Instituto Superior Técnico

An assessment Model to Sustainable Events Management

LiderA model Base and Cases Application

Elisabete Sofia Caetano Lobato

Extended Abstract of the Dissertation Submitted to obtain the Degree of Master of
Science in

Environmental Engineering

October 2014

ABSTRACT

Events mobilize people and resources and create environmental impact. Progressively environmental performance and sustainability is challenge events. Promoting sustainability in events allows also to establishing the creation of an environmentally responsible event and could provide economic and social benefits.

The thesis objective is to explore the sustainability in events and propose a assessment model. For that objective the work starting with a bibliographic review of the subject, going through the basic concepts of an event and its most important standards, the environmental management standards (ISO 14001:2012 and EMAS) and the event sustainability management standard (ISO 20121:2012), as well as other systems and existing approaches, which are in some way related with the subject, like the LiderA system.

Taking basis on this knowledge, a model was developed with the goal of evaluating events in relation to their sustainability performance level, consisting of 6 aspects, 21 areas and 30 criteria. This evaluation will then be classified in classes (which vary from A++ (high performance) and G (low performance)), and also by the application of an online survey to complete the performed analysis.

This sustainable event assessment model was applied to two case studies (Rock in Rio Lisbon 2014 and Arraial Verde) which represent two different kinds of events, in order to measure the applicability of the model to two events of different kinds, where the first one is associated with a performance class A+ and the second one class A. The approach used allows us to further highlight the ways in which to evaluate the seeking of sustainability and to identify the opportunities in which to improve.

Keywords: Events, Events Management, Sustainability Evaluation, Environmental Performance, LiderA System

1. INTRODUCTION

Sustainability is a process that aims to be achieved and that can be implemented in different branches of modern society. This work's purpose is to address sustainability within the tourism industry, particularly in the management of events.

"A sustainable event is one designed, organized and implemented in a way that minimizes potential negative impacts and leaves a beneficial legacy for the host community and all involved."(United Nations Environment Programme (UNEP) & United Nations Office at Nairobi (UNON), 2012)

Major events like the Olympics London 2012, or the Champions League Final, here in Portugal, mobilized millions of people. An event is not just the activity itself, one must also take into account a set of operations to assure its success. Due to the number of participants it is important to establish a plan where the events can take course in a sustainable way. There are different reasons why organizations should choose to promote a sustainable event, those relate not only to the environment but also to other main areas such as social motivations (e.g. health and human well-being for present and future generations) and financial and economic motives.

This dissertation looks to study the events under a sustainability perspective, i.e., it is intended to apply and improve the sustainability assessment for events in an operational way, in order to seek sustainability and be efficient, thus achieving better environmental, social and economic performances.

METHODOLOGY

In order to provide an analysis on sustainable events management, a state of the art analysis is done focusing on the basic concepts linked to events, like types, stakeholders or most common impacts. Next, several international management standards are addressed, like ISO 14001:2012, EMAS or ISO 20121:2012, as well as other systems and approaches related to the subject, including the LiderA system (LiderA, 2010; Pinheiro, 2013) and the model to evaluate event sustainability performance (Dias, 2013).

After the key elements of the sustainability were identified, follows the design of the model, consisting of aspects, areas and criteria, which evaluate the event in terms of its sustainability. This model was developed taking basis a previous propose model (Dias, 2013) with 72 criteria. One of the major concerns was to lower the number of criteria, by turning the 72 into a more reduce an operational number (achieve 30) and changing some of the evaluation threshold scores.

To assist the analysis of the subject, an online survey was set up, addressing some issues related to festivals and their sustainability. Once the model was completed, it was applied to two case studies in order to verify its applicability, namely to Rock in Rio Lisbon and Arraial Verde also in Lisbon. In the final is discussed the approach, which include the limitations, a few suggested recommendations and the final conclusions.

2. STATE OF THE ART – ENVIRONMENTAL PERFORMANCE AND SUSTAINABILITY IN EVENTS

Sustainable tourism is defined by the World Tourism Organization as:

“Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host community.”
(United Nations Environment Programme & World Tourism Organization, 2005)

There are many industries associated with tourism, one of which is the events industry. Music festivals are a common example of mass movement from tourists, and back in 1993, Saleh & Ryan, defined an event as a concentration of activities according a specific theme, and for a finite time period, thereby creating a massification of experiences that can appeal to tourists.

There are different ways to define events by their characteristics, such as number of participants, periodicity, scope and objective, or even by their impacts, among others. Many authors (Arcodia & Barker, 2003; Blowdin, Allen, O’Toole, Harris, & McDonnell, 2011; Van der Wagen, 2007) divide events in three different types, including cultural, sportive and business events. Others by their function (Getz, 2007) or their type (Blowdin et al., 2011).

For an event to take place, it’s essential to have an organizer and the public’s interest to participate in those activities. With this necessity in mind, the stakeholders’ relations towards the events must always take into account a set of negative and positive impacts (Blowdin et al., 2011).

Regarding the stages of an event, there are four main steps: conception, planning, operationalization and, finally, its evaluation (Almeida, 2009). The first step is to define and conceptualize the event; Even before the planning process, there needs to be a time for reflection and brainstorming, in order to

answer important questions, such as, what is intended with the event, for whom the event is aimed, the place, time, among others, and then only after proceed into planning and to more practical matters.

About the planning stage, some authors (Blowdin et al., 2011) defined the process in different steps. The main advantages of strategic thinking throughout the planning and execution of an event include, not only benefits for the community, both in economic and infrastructural benefits, but also the involvement of society, translated by improvements in the interactions existing between the visitors and the host community, as visitors and tourists may suffer the consequences of dissatisfaction of the community at the processes implemented (Quinn, 2009).

Another of the main aspects are the impacts events that result from it. Like any other type of undertaking or construction, an event is associated with an area occupation which implies impacts on landscape or environmental changes, but also others alterations regarding economics, social, political or cultural modifications (Andersson & Lundberg, 2013).

In order to prevent and minimize these impacts, organizations may need to take action and apply plans that not only may diminish the negative impacts but also maximize the potential of the events. The key areas in which environmental impacts are most likely to emerge were also identified. Those are procurement, waste and resource use, transport, energy, construction and temporary activities, water and greenhouse gas emissions (Ministry for the Environment of New Zealand, 2010).

3. MANAGEMENT AND CERTIFICATION MODELS OF SUSTAINABILITY – EXAMPLES OF GOOD PRACTICES FOR SUSTAINABLE EVENTS

The events industry, as already mentioned, is constantly growing. This implies more investments, infrastructure, and increased competition, among other needs, in order to make a competitive event nowadays. Therefore, the produced events must comply with sustainable standards, which will enhance potentials and decrease problems; and submitting to certification in order to stand out from other events. Thus, to obtain the inherent benefits of certification, such as the reduction of costs and resources associated with the activity, there is a need to apply policies and strategies.

The analysis starts with the ISO 14000 series, which is related to the environmental management, providing practical tools for companies and organizations to identify and manage their environmental impacts and also to continue the improvement of the environmental performance. It covers six areas: environmental systems management, environmental auditing, environmental performance evaluation, environmental labeling, environmental aspects in product standards and life cycle analysis of products (International Organization for Standardization, 2014).

The ISO 14001 Standard is usually applied to organizations. When it is applied to an event it might not always be efficient and easy to use, and therefore it is more feasible to use the standard ISO 20121 (discussed later on).

Alongside with the international system ISO 14001, there is EMAS (Environmental Managements Auditing Scheme) an European system, widely spread through Europe, based on the Deming cycle (Testa et al., 2013). The system works towards the continuous improvement cycle and an increase in environmental performance, due to its parameters of credibility (ensured by audits conducted by independent auditors) and transparency (guaranteed by environmental statements about the organizations' environmental performance) (Comissão Europeia, 2011).

Specifically applied to the event industry there exists the ISO 20121, the standard related to sustainable event management, and was published on June 2012. This standard's structure allows the identification of the environmental, economic and social negative impacts and provides a strategy to enhance the positive impacts by a strategic planning. To achieve these goals the standards act upon the four steps called PDCA, the "Plan-Do-Check-Act", always aiming to a continuous improvement.

Some examples of the events certified by the ISO 20121 are, among others, the Olympic and Paralympic Games – London 2012 (Commission for a sustainable London 2012, 2012); Events sponsored by the Coca-Cola Company (The Coca-Cola Company, 2012a) or the Eurovision song contest Malmö 2013 (Lazarte, 2013).

Besides the standards mentioned before, there are other approaches providing assistance to the demand of better environmental performance and sustainability in events, such as the case-by-case approach (like the individual event's sustainability plans) or the proprietary systems for different typologies, which include checklists and measures to improve the sustainability of the event. Those approaches are stated in the following table (Table 1).

Table 1 Supporting documents

Entidade	Tipo	Applicability	Limitations
(BCSD Portugal - Conselho Empresarial para o Desenvolvimento Sustentável, 2012)	Guia para Eventos Sustentáveis	Generic guidelines to organize a sustainable event	Too few presented areas; Limitations on the proposed measures
United Nations Environment Programme (UNEP) & United Nations Office at Nairobi (UNON), 2012	Sustainable Events Guide	Applicable measures to any type of events, including a checklist focused on evaluation and verification of events	Portuguese scope not considered
Ministry for the Environment of New Zealand, 2010	Major Event Greening Guide	Contributes to the success and environmental responsibility of an event, specifying an environmental strategy, action plan and suggesting good practices	Portuguese scope not considered; Measures are mostly environmental
Green Festival Alliance, 2011	The Power behind Festivals - A guide to sustainable power at outdoor events	Contributes with solutions to the energy field of study; Sustainable Energy	Only applicable to a certain type of event: Festivals
Canadian Tourism Humam Resource Council, 2009	Event Management - International Competency Standards	Compilation and international reference adjustment to all the different event management levels	Portuguese scope not considered; Applicable mostly in Canada
United Nations Environment Programme & World Tourism Organization, 2005	Making Tourism more Sustainable	Tourism sustainability; effective approaches to the development of strategies and policies in regards to a more sustainable tourism and the tools which support the policies	Related with sustainable tourism; References to sustainable events

Table 1 Supporting documents

Entidade	Tipo	Applicability	Limitations
Live Performance Australia, 2013	Design for Energy Efficiency	Instructive checklist focusing on the implementation of energy efficiency	Applicable only to outdoor events.
Denny, 2010	Sustainable water management for music festivals	Focuses on the importance of water in the organization of an event	Exclusive for measures related with water management; Applicable to only a very specific type of event: Music Festivals
Mortean & Leme, 2010	Guia Prático para Organização de Eventos Mais Sustentáveis	Guidelines to minimize the impact and make up the carbon emissions in events located in the São Carlos campus, São Paulo, Brazil.	Applicable only to events in the University of São Paulo, Brazil
Casa Mundo Brazil - Projectos Sustentáveis, 2014	Rock in Rio – ISO 20121 Sistemas de Gestão para sustentabilidade	Relationship between ISO 20121 and Rock n Rio; Examples of good practices for sustainability;	Applicable only to a type of event; Example of a particular festival
Rock in Rio, 2014 (Rock in Rio, 2014a, 2014b)	Plano de Sustentabilidade - Rock in Rio Lisboa 2014; Rock in Rio - Lisboa 2014 Princípios de desenvolvimento sustentável Declaração de propósitos e valores Política de Sustentabilidade do evento	Sustainability plan of the festival; measure to apply and examples of previous editions	Applicable only to a type of event; Example of a particular festival
The Coca-Cola Company, 2012 (The Coca-Cola Company, 2012a, 2012b)	London 2012 : A guide to ISO 20121 Sustainable Event Management For The Coca-Cola Company The Coca-Cola Company London 2012 – Sustainability Guide for suppliers	The extension of corporate sustainability into a sponsored event: Event planning and measures to achieve high sustainability standards	Applicable to a company and a specific product
Commission for a sustainable London 2012, 2013	Sustainable Development Strategy	Event analysis: Olympic games and Paralympic games of London 2012; Examples of strategies which include sustainable concerns	Applicable only to a type of event;
Linden, 2010	Sustainability in the event industry: comparison of guidelines and case studies	Generic analysis of the event industry; Case study analysis in different types of events;	Applicability of evaluations to different case studies; Data shortage;

There are two more systems worth mentioning: the LiderA system (LiderA, 2010) and the model to evaluate event sustainability performance (Dias, 2013), both which were the basis to the model being developed in the dissertation.

4. – PROPOSAL FOR AN EVALUATION MODEL FOR EVENT SUSTAINABILITY MANAGEMENT AND SUSTAINABILITY PROFILE OF FESTIVAL’S PARTICIPANTS

This model was based on the LiderA system (Pinheiro, 2011a) and the model for evaluating the performance of Sustainability Events (Dias, 2013), as well as under a iterative process allowing the development of criteria and thresholds to score the event, consisting of 6 aspects, 21 areas and 30 criteria.

The assessment is made, mostly, by prescriptive criteria (i.e. by assigning credits to good practices). The calibration of the thresholds took into account the most important impacts or improvements in the total set of thresholds on the criteria.

Initially, some criteria, for example, like number 6, regarding carbon management, number 7, related to water supply, or even criteria number 13, related to waste were evaluated by a value system, by comparison of the data related to the event under study and a reference value, collected from the bibliography. However, taking into account the diversity of events there is, a single value will never be suitable for all types. To solve the problem posed by the situation described, and also because many of the data and information to the rating value is not available, it was chosen not to consider any reference values for the model because the definition of a single value would not be applicable or adjustable to certain situations. Thus, for these criteria, it is possible to assign credits to good practices of the organization in the event, turning these criteria in prescriptive criteria.

The criteria are associated to areas, and those to aspects. To ensure a distinguishing factor between different areas, they were associated with the weights of the LiderA system’s areas. Although this is a subjective evaluation, it is possible to establish a relationship between the developed model and the LiderA system, which allows these assumptions.

This evaluation will then be classified in classes that vary from A++ (high performance) and G (low performance), as set on Figure 1. Table 2 summarizes the factors and percentages of improvement faced against class E. The sign (-) relates to a decrease in the performance when compared to the common practice.

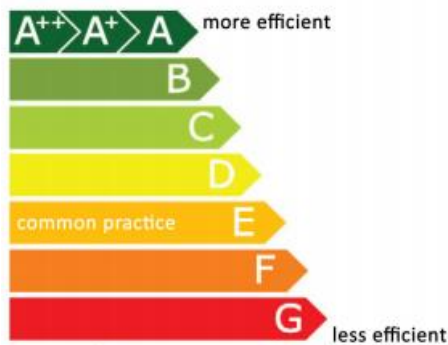


Figure 1 Performance levels (Pinheiro, 2011b)

Table 2 Factors of improvement over class E

Factor	Class	Percentage of improvement over class E(%)
10,00	A ⁺⁺]75-90]
4,00	A ⁺]50-75]
2,00	A]37,5-50]
1,60	B]25-37,5]
1,33	C]12,5-25]
1,14	D]0-12,5]
1,00	E	0
0,89	F	(-)]0-12,5]
0,80	G	(-)]12,5-25]

In order to assess the event, one should take into account the weights of the areas in which the criteria are included, as well as the ranking factor regarding the improvement factor obtained by comparison with the class E. The following expressions are intended to illustrate the different ways to calculate the weight of criteria in the area.

$$\text{Weight of the criteria in the area} = \left(\frac{\text{Improvement factor regarding class E}}{\text{Maximum improvement factor}} \right) * \text{area weight}$$

Weight of two criteria in the area

$$= \left(\frac{\text{Improvement factor 1st criteria} + \text{Improvement factor 2nd criteria}}{\text{Maximum improvement factor}} \right) * \text{area weight}$$

One must take into account all the improvement factors, for example, if the area contains three criteria, all three factor of improvement must be summed and the divided by the maximum improvement that will be 3*10 (A⁺⁺ class).

From this classification scheme it is possible to obtain the final classification of the event, which is equal to the sum of the weights of the criteria in the corresponding areas.

$$\text{Final Classification} = \sum \text{Weight of the criteria in the areas}$$

According to the value obtained in the previous sum, it is necessary to place it in one of the range of values to determine its class. The following table (Table 3) is part of the evaluation method of LiderA system, a system which formed the basis of this study as previously mentioned.

Table 3 Pounded Classes regarding global values.

Maximum <	Average Value	Minimum >=	Correspondent Classes
100%	90,0%	65,00%	A++
65,0%	40,0%	30,00%	A+
30,0%	20,0%	18,00%	A
18,0%	16,0%	14,50%	B
14,5%	13,0%	12,20%	C
12,2%	11,4%	10,70%	D
10,7%	10,0%	9,45%	E
9,5%	8,9%	8,45%	F
8,5%	8,0%	0,00%	G

Although this model may evaluate the sustainability performance of an event, the event is only fully sustainable, if the planning and operational standards of sustainability are followed and if its participants have a sustainable attitude in mind. Thus, it is intended to define the profile of the typical participant of a festival, that is, to understand what their environment and social concerns are and their point-of-view about the event. To collect this information, a survey was placed online, whose objective was to analyze the point-of-view of the Portuguese participants of festivals and evaluate the Rock in Rio Lisbon through a second set of questions applied only to its participants.

Thus, after determining the sustainability level of the event under study from the developed model, it was intended to seek a relationship between the classification obtained and the type of participant identified by checking how sustainability affects their participation.

5. APPLICATION OF THE MODEL AND CASE STUDIES; ANALYSIS OF FESTIVAL PARTICIPANTS'

SUSTAINABILITY PROFILE

To verify the applicability of the model, it was applied to two cases, namely Rock in Rio Lisbon 2014 and Arraial Verde. The results included a class A⁺ for the first and class A to the second. The following table includes the criteria used to assess the case studies and the results obtained.

Table 4 Evaluating of the case studies

Aspects	Area	Weight %	Criteria	Nº	Arraial Verde	Rock in Rio Lisbon 2014		
Local integration	Soil	4,00	Integration and Enhancement of the event location	1	B	0,59	A	0,80
			Implantation environmental optimization	2	C		A	
	Natural Ecosystems	4,00	Ecological valorization and preservation	3	G	0,32	B	0,64
	Landscape and Heritage	2,00	Landscape integration and valorization (including built heritage protection)	4	A ⁺	0,80	A	0,40
Resources	Energy	14,00	Energy systems	5	C	1,73	A	2,80
			Carbon management	6	D		A	
	Water	6,00	Water supply systems	7	D	0,68	E	0,60
	Materials	6,00	Products and Materials from responsible sources	8	C	0,80	C	0,80
	Food resources and Beverages (Catering)	4,00	Food production and access	9	A	0,80	A	0,80
Environmental Loads	Waste Water	4,00	Water supply systems	10	G	0,32	C	0,53
	Other Emissions	8,00	Management of Local Air Emissions	11	B	1,04	A	1,60
			Noise management	12	E		A	
	Waste	4,00	Waste management	13	A	0,80	A ⁺⁺	4,00
Services	Environmental Quality	3,00	Environmental Quality	14	A	0,60	A	0,60
	Process Quality	3,00	Process Quality	15	A	0,60	A ⁺	1,20
	Logistic Management	4,00	Workers and volunteers management	16	A ⁺	1,60	A ⁺	1,60
	Suppliers	3,00	Suppliers' management	17	B	0,48	A	0,60
	Sponsors and Partners	3,00	Sponsors and Partners' management	18	A	0,60	A ⁺⁺	3,00
Socio-Economic dynamic	Access	4,00	Access for all	19	B	1,12	A	0,80
			Efficient access	20	A ⁺		A	
	Green Economy	6,00	Economic attractiveness and local Eco dynamics	21	A ⁺	2,40	A ⁺	2,40
			Fair prices	22	A ⁺		A ⁺	
	Social Integration and interaction	8,00	Community interaction	23	B	1,44	A ⁺	3,20
Social responsibility			24	A	A ⁺			
Management Sustainable Use	Risks control	3,00	Protection of participants	25	A ⁺	1,20	A	1,80
			Natural risks	26	A ⁺		A ⁺⁺	
	Sustainable Management	5,00	Awareness	27	A ⁺⁺	2,16	A ⁺	3,00
			Maintenance and Management for Sustainability	28	C		A ⁺⁺	
			Governance and Monitoring	29	B		A ⁺	
	Marketing and innovation	2,00	Marketing and Innovation	30	A ⁺⁺	2,00	A ⁺⁺	2,00
					A	22,08	A ⁺	33,17

Regarding the inquiries, 109 answers were obtained and the results included valued information for the analysis in course. When asked if they knew if the festival they had participated before was sustainable, 49% of the inquired people said they didn't know if the events were sustainable, 30% said yes and 21% said no; Also the majority of respondents used private transportation to travel to the event site (37%); Regarding waste, 26% of the responses suggest that there are not enough waste containers in events, among other conclusions.

Specifically for the Rock in Rio section, 38 answers were taken into account. One of the main conclusions was about the valorization of the area, where 61% of the responses agreed the area improved because of the event; when asked about the use of public transport, the 25 responses indicated the use of public transport (66%). Of these, when asked about how it fitted the needs of the participants, it was found that 56% said they are adequate and 44% inadequate; among other conclusions regarding the social projects, eco-friendly marketing and relations between the event' sustainability and the public's participation.

6. RESULTS DISCUSSION

After applying the model to the case studies, the results indicated a rating of A for Arraial Verde and A⁺ to Rock in Rio, both placed in the most efficient level of scale. These results indicate a large concern in the search for sustainability and the measures applied in events.

The case studies were selected based on different types of events they represent, in order to test the applicability of the developed model and based on the availability of support from organizations, which provided important but not enough information to the analysis.

It can be argued that the methodology allows to draw conclusions, including which areas should be under the main concerns of organizations in upcoming edition: Arraial Verde should focus more on areas relating to ecosystems, energy, water and emissions; while Rock in Rio, which got outstanding results, should focus, according to the model results and the survey, in transport services (particularly for participants residing outside the municipality of Lisbon, in order to reduce private transport to the vicinity of the enclosure), sustainable marketing (which in the opinion of 42% of respondents is not eco-friendly), waters and ecosystems.

7. CONCLUSIONS

The sustainability of events is a growing area. In this thesis is proposed a readjust model to assess the sustainability management base in LiderA principles methodology. The defined methodology created a scheme of analysis of events, beginning in its theoretical characterization, followed by a more practical application that included the model and the application of surveys, eventually leading to its analysis by applying case studies.

The challenge in designing the model consists in the fact that the LiderA system is applied to construction and only have an preliminary propose to evaluate events made in other master thesis. Besides this, the model performance evaluation (Dias, 2013), although it was completely focused on events, was presented with a large number of criteria (72) for assessing events, this being one of its main limitations and also some the information needed is not usual available.

So the new model select and adjust criteria allow a reduction of the number of criteria, from 72 to 30, as well as reassessment and readjustment of them, namely thresholds and information to be use, creating a model more operational. New model proposed is applied and test in to cases with different dimensions, a large event Rock and Rio and a small one (Arraial Verde).

The obtained results indicate a broad concern in the search for sustainability and measures applied in events, however, it is established that any event may never be perfect. For example, each trip to the location of the event always entail impacts to the environment or that events conducted within residential zones can bring harm to its residents. What distinguishes one event from another, in terms of sustainability, are the applied measures, the eventual problems identified and the plans that are put into action. Each event is different and will therefore have associated measures of varying degrees but it is always possible to improve the performance, a situation that also applies to all the case studies.

Even that model is an evolution and show more operational and potential of applications there are a opportunities to improvement namely environmental performance levels in several aspects like energy, water, carbon and waste.

REFERENCES

- Almeida, C. de. (2009). Organização de Eventos O que é um Evento ? *Curso de Organização E Gestão de Eventos*.
- Andersson, T. D., & Lundberg, E. (2013). Commensurability and sustainability: Triple impact assessments of a tourism event. *Tourism Management*, 37, 99–109. doi:10.1016/j.tourman.2012.12.015
- Arcodia, C., & Barker, T. (2003). THE EMPLOYABILITY PROSPECTS OF GRADUATES IN EVENT, 1–15.
- BCSD Portugal - Conselho Empresarial para o Desenvolvimento Sustentável. (2012). *Guia para Eventos Sustentáveis - Versão para consulta Pública*.
- Blowdin, G., Allen, J., O’Toole, W., Harris, R., & McDonnell, I. (2011). *Events Management*. (G. Bowdin, D. Getz, & C. Lashley, Eds.) (Routledge.). New York: Butterworth-Heinemann.
- Canadian Tourism Human Resource Council. (2009). Event Management - International Competency Standards, 1–67.
- Casa Mundo Brazil - Projectos Sustentáveis. (2014). *ROCK IN RIO - ISO 20121 Sistemas de Gestão para Sudentabilidade*.
- Comissão Europeia. (2011). The EU Eco-Management and Audit Scheme (EMAS).
- Commission for a sustainable London 2012. (2012). Commission for a Sustainable London 2012 - Assuring sustainability across the london 2012 olympic and paralympic programme. Retrieved from <http://www.cslondon.org/>
- Commission for a sustainable London 2012. (2013). *Beyond 2012 – Outcomes*. London.
- Denny, S. (2010). SUSTAINABLE WATER MANAGEMENT FOR MUSIC FESTIVALS.

- Dias, M. (2013). *Contributo para modos de gestão de sustentabilidade de eventos*. Universidade Técnica de Lisboa.
- Getz, D. (2007). *Event Studies: Theory, research and policy for planned events*. (Elsevier Ltd., Ed.).
- Green Festival Alliance. (2011). THE POWER BEHIND FESTIVALS A guide to sustainable power at outdoor events.
- International Organization for Standardization. (2014). ISO, the International Organization for Standardization. Retrieved from www.iso.org
- Lazarte, M. (2013). ISO 20121 wins at Eurovision. Retrieved from http://www.iso.org/iso/home/news_index/news_archive/news.htm?Refid=Ref1789
- LiderA. (2010). LiderA - Apresentação Sumária. Retrieved from http://www.lidera.info/resources/LiderA_apresentacao_sumaria_2011_v1.pdf?phpMyAdmin=77d31a787ce126bb305b5b4b9dcec31c
- Linden, L. (2010). *Sustainability in the event industry : comparison of guidelines and case studies*. Yale University.
- Live Performance Australia. (2013). *Design for Energy Efficiency*.
- Ministry for the Environment of New Zealand. (2010). *MAJOR EVENT GREENING GUIDE*.
- Mortean, A. F., & Leme, P. C. S. (2010). *Guia Prático para Organização de Eventos Mais Sustentáveis* (EESC - USP). São Carlos - SP: EESC - USP.
- Pinheiro, M. D. (2011a). *LiderA Sistema Voluntário para a sustentabilidade dos ambientes construídos*. Lisboa.
- Pinheiro, M. D. (2011b). *LiderA Voluntary system for the sustainability of built environments*. Lisbon.
- Pinheiro, M. D. (2013). *LiderA | NORMA TURISMO Sistema Voluntário para a sustentabilidade dos ambientes contruídos*. Portugal. Retrieved from http://www.lidera.info/resources/Introducao_NormaTurismo_LiderA_2013.pdf
- Quinn, B. (2009). Festivals , events and tourism, 0–48.
- Rock in Rio. (2014a). *Plano de Sustentabilidade - Rock in Rio Lisboa 2014*. Lisboa.
- Rock in Rio. (2014b). *Rock in Rio - Lisboa 2014 Princípios de desenvolvimento sustentável Declaração de propósitos e valores Política de Sustentabilidade do evento*. Lisboa. Retrieved from http://rockinriolisboa.sapo.pt/wp-content/uploads/sites/5/2014/04/Rock-in-Rio-Lisboa-2014_Principios-Valores-e-Politica-de-Sustentabilidade.pdf?086d3c
- Saleh, F., & Ryan, C. (1993). Jazz and knitwear: Factors that attract tourists to festivals. *Tourism Management*, 14(4).
- Testa, F., Rizzi, F., Daddi, T., Gusmerotti, N. M., Frey, M., & Iraldo, F. (2013). EMAS and ISO 14001: the differences in effectively improving environmental performance. *Journal of Cleaner Production*, 68, 165–173. doi:10.1016/j.jclepro.2013.12.061

The Coca-Cola Company. (2012a). *London 2012 : A guide to ISO 20121 Sustainable Event Management For The Coca-Cola Company*. London.

The Coca-Cola Company. (2012b). THE COCA-COLA COMPANY LONDON 2012 SUSTAINABILITY GUIDE FOR SUPPLIERS SUPPORTING OUR SUPPLIERS TO BECOME MORE SUSTAINABLE.

United Nations Environment Programme (UNEP), & United Nations Office at Nairobi (UNON). (2012). *Sustainable Events Guide*.

United Nations Environment Programme, & World Tourism Organization. (2005). Making Tourism more Sustainable.

Van der Wagen, L. (2007). *Human Resources Management for Events - managing the event workforce* (Events Man.). Elsevier Ltd.