UNDERSTANDING THE EVOLUTION OF ENVIRONMENTAL PRACTICES IN MEGA-SPORTING EVENTS: A CASE STUDY OF THE OLYMPIC GAMES

by

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(Under the Direction of Becca Leopkey)

ABSTRACT

Concern for protection of the natural environment is a growing issue within sport and mega-events. The Olympic Movement adopted green practices starting in the mid 1980s in order to reduce the environmental impact of the event. Little is known about the institutional history of the environmental movement within the Movement and which stakeholders are involved in supporting these environmental initiatives. This thesis uses content analysis in an attempt to understand the evolution of environmental practices within the Movement, identify the major stakeholders involved in organizing environmental practices, and define the roles of these major stakeholders. Findings suggest the Olympic Movement has utilized environmental, sustainability, and zero impact themes in their policies and practices. Major environmental stakeholders are organizers, regulators, non-governmental organizations, and sponsors. These environmental themes and stakeholder identities contribute to the sport management literature and will help future Olympic Games organizers approach understand environmental challenges they might face.

INDEX WORDS: environment, sustainability, Olympic Games, institutional theory, stakeholder theory

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DEDICATION

This thesis is dedicated to my mother, Amy. Despite being an All-American synchronized swimmer and Pan-American Games participant, she was never able to compete in the Olympic Games as it was not an Olympic sport during her career.

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First, and foremost, I would like to thank my family. They have loved me, supported me, and encouraged me throughout this entire graduate school journey thus far. Despite being the family black sheep, their encouragement for me to pursue my dreams is unwavering.

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LIST OF ABBREVIATIONS

CSR	Corporate Social Responsibility
IOC	International Olympic Committee
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
LEED	Leadership in Energy and Environmental Design
NGO	Non-governmental organization
OCOG	Organizing Committee for the Olympic Games
OGI	Olympic Games Impact
UN	United Nations
WHO	World Health Organization
WWF	World Wildlife Fund

CHAPTER 1

INTRODUCTION

There has been a growing tide of concern globally regarding anthropogenic climate change. As our society combats issues of rising temperatures, declining ice caps, a thinning ozone layer, deforestation, pollution, and resource deficiency, more attention is given to slowing or even reversing theses environmental trends. All industries, including sport, should be attempting to clean up their environmental practices so as to prevent further environmental harm. Sport organizations, especially highly visible ones like the International Olympic Committee (IOC), have prioritized environmental performance as part of their efforts to be socially responsible and combat these trends. Starting in the 1990s, environmental issues gained increasing levels of consideration with the voluntarily environmentally-friendly 1994 Lillehammer Winter Olympic Games (Chappelet, 2008). The IOC has since added legal guarantees for protection of the environment to the Olympic Charter. Environment has also been added as the third pillar of Olympism along with sport and culture thus reinforcing the level of importance the IOC has given this issue (Chappelet, 2008; Gold & Gold, 2013). Despite these requirements, the environmental initiatives used by host cities remain up to their respective organizing committees and local Games stakeholders (Stuart & Scassa, 2011). Moreover, an abundance of language has been used to describe environmental issues as they relate to the Olympics thereby increasing its complexity. Terms used in various contexts include: environment, sustainability, legacy, and green, to name a few (e.g., Gold & Gold, 2013; Holden,

MacKenzie & VanWynsberghe, 2008; Kearins & Pavlovich, 2002). Although research on the environmental movement and the Olympic Games exists (e.g., Chalkley & Essex, 1999; Chappelet, 2008; Gold & Gold, 2013; Holden et al, 2008; Preuss, 2013), its major focus has been on sustainability (e.g., Briese, 2001; Gold & Gold, 2013; Holden et al, 2008; Loland, 2006; VanWynsberghe, Derom, & Maurer, 2012), critiquing environmental standards (e.g. Chalkley & Essex, 1999; Elliott, 2007; Gaffney, 2013; Loland, 2006; Mark, Ravelli, & Sinclair-Williams, 2010; McCarthy & Synnott, 2012; Preuss, 2013), and residents' perceptions of environmental practices (e.g. Jin, Zhang, Ma, & Connaughton, 2011; Moreira, 2009; Raiborn & Joyner, 2006). As a result, major gaps continue to exist especially with regards to improving the current model of Olympic environmentalism and sustainability and understanding from where these standards were created. Considering the environmental movement has gained such importance in the field, little is known about the evolution and adoption of these practices over time by major Games stakeholders.

Purpose of the Study

The main research objective of this study is to understand the shifts in conceptualization and implementation of environmental practices in mega-events as this issue has become increasingly important to society. The Olympic Games will be used to study this phenomenon. With this knowledge in mind, we can begin to better understand mega-sporting event environmental trends with the intention of furthering the body of research in the field. More specifically, this research will analyze the environmental practices used by the major Games stakeholders involved in the organization of these events (e.g., the event owner, candidate cities, and hosts) and how these practices and stakeholders were adopted as legitimized standards within the field (i.e., the Olympic Movement). The research questions posed in this study are: 1)

what is the institutional history of environmental policies and practices within the Olympic Games? and 2) who are the major stakeholders in the environmental movement within the Games and what is their role in the planning and management of these practices into the Olympic Movement? Thus, this study will expand the body of knowledge on environmental issues within the Olympic Movement. It will describe the evolution of environmental practices, identify the major stakeholders in organizing environmental practices in events, and define the roles of the major stakeholders in institutionalizing these practices. Findings will contribute to the sport management literature on the environmental issues and the Olympic Games by outlining the evolution of environmental practices used in the Games.

This thesis follows what is commonly known as a paper-based format, and is composed of two academic papers. After considering the current body of literature available that relates to both papers in chapter one, the two papers will be presented in chapters two and three. These chapters are kept separate in order to appropriately address the greater purpose of this thesis and the two specific research questions posed, which focuses on the two issues of how environmental practices evolved in the Olympic Movement and who was involved in the evolution and implementation of these environmental practices. More specifically, chapter two focuses on the evolution and trend of environmental standards and practices in the Olympic Movement. Institutional theory considers how certain structures become adopted as norms within an institution and is used in this chapter as a framework (DiMaggio & Powell, 1983). Therefore, this chapter addresses how environmental practices became accepted as the norm within the Olympic Movement. Chapter three details the role of the central stakeholder (i.e., the IOC) and other major stakeholders (e.g., host cities, bid communities, and OCOGs) in the adoption of environmental practices and standards in the Olympic Movement. Stakeholder theory, utilized as

a framework in this chapter, considers the people and groups that impact an organization to achieve its objectives (Freeman, 1984). Thus, this chapter addresses the stakeholders who impacted the Olympic Movement's achievement of their environmental objectives. These articles, based on the two major questions identified previously, will include further review of literature, methodology, results, and discussions. Lastly, in chapter four, a conclusion will address and summarize findings of the research project and address the overarching question of this thesis. An outline of this thesis can be found in Figure 1, found at the end of this thesis.

But, first, in order to delve deeper into these research questions a review of the environmental movement, sustainability, and previous environmental research on the Olympic Games will be presented.

Understanding the Environmental Movement: In Brief

The roots of the modern environmental movement started with figures like Henry David Thoreau, the first director of the United States (US) Forest Service in Gifford Pinchot; and environmental preservation advocate John Muir, as well as the founding of the Sierra Club in 1982 and the creation of National Parks in the US in 1919 (Walls, 2014). At this time, the major environmental concern was preservation of the natural world. This movement was augmented through the 1900s as people began to focus on preservation of resources and issues of sustainability as well (Walls, 2014). In the 1960s and 1970s, major legislation emerged in the US with the intention of helping to preserve the environment as a result of the new movement created after the publishing of *Silent Spring* by Rachel Carson (Walls, 2014). This legislation included the *Clean Air Act of 1963*, the *Clean Water Act of 1972*, and the *Endangered Species Act of 1973*. This is, of course, a US-centric view of the environmental movement and is rather limited in its scope.

At a more international level, the United Nations (UN) has been a leader in creating many international policies on environmental issues. *Our Common Future*, sometimes referred to as the Brundtland Report, was published in 1987 and famously discussed environment and development as a single issue for a safe and shared future (World Commission, 1987). A year later in 1988, the Intergovernmental Panel on Climate Change (IPCC) was formed in order to create a clear perspective on scientific research regarding climate change and its environmental impacts. The IPCC's regularly released reports give an assessment of current scientific and technical knowledge as it relates to climate change (IPCC, 2015). In 1992, The UN created Agenda 21 as a product of the Earth Summit that year, which created a voluntary action plan for UN members regarding sustainable development for the future (UN Department, 2014). The Kyoto Protocol devised by the UN in 1997 commits signatories to certain binding emissions reduction standards and placed a higher burden of responsibility for those emissions reductions on developed nations (UN Framework, 2014). It was signed by 192 total parties initially, including the United States, who has since withdrawn (Walls, 2014). Since the publishing of the Brundtland Report, there has been an increased focus on sustainability, which encompasses environmentalism, but includes much more to its name (UN Economic, 2005). This has created confusion between the two terms 'environmentalism' and 'sustainability,' which will be clarified in the context of the event management literature.

Defining Sustainability in Event Management

Given that sustainability encompasses environmental practices, one can discuss sustainable event management while covering the environmental issues that may arise in event management. This is because long-term sustainability involves preservation of the environment, which is the heart of the environmental movement. It is suggested that there is an ethical and

legal responsibility to make events as environmentally friendly and sustainable as possible (Getz, 2005). The growth in the size of mega-events like the Olympic Games has led a drive to create more sustainable ones (Cavagnaro, Postma, & Neese, 2012). While mega-events, and sporting events in particular, can benefit local economies, they can potentially have negative impacts on host communities themselves (Cavagnaro et al, 2012). For example, events can lead to urban regeneration via the construction of new venues and transportation infrastructure, increased consumer spending, improved producer output to create materials needed for the event, greater employment (e.g. construction, transportation, business, facilities), and more investment in the city itself (Raj, Walters, & Rashid, 2013). Sport events bring tourists, media exposure, commercial appeal, and civic pride to the host city (Karadakis, Bopp, & Aicher, 2016). At the same time, sport events can destroy communities by displacing residents for the sake of holding the event itself through construction on their property or impacting their daily lives negatively (Cavagnaro et al, 2012). Sport events also bring overcrowding and can potentially lead to negative perceptions of the host city instead of positive ones (Karadakis et al, 2016). It is for this reason that claims of sustainability from sport events like the Olympics may be met with skepticism due to the large-scale nature of the event (Getz, 2007).

However, sustainability has been described as a term that is not well defined. It is often used to serve multiple purposes (e.g. environmental sustainability, economic sustainability, and social sustainability). Holden, MacKenzie, and VanWynsberghe (2008) described the term as too "malleable" and subject to many definitions (p. 887). Additionally, Gold and Gold (2013) suggested that sustainability is a filler term for post-Games visions of regional transformations. As such, sustainability is truly a word that can create confusion without an understanding of the context around its use.

This begs the questions: what is sustainability and what is a sustainable event? *Our Common Future* (1987), defines sustainability as meeting "the needs of the present without compromising the ability of future generations to meet their own needs" (p. 16). As it relates to the environment, sustainability could be considered maintenance of important environmental functions (Ekins, 2011). With these definitions in mind, one can suggest that a sustainable event is one that "impacts positively on people, planet, and profit, and thus contributes to fulfill the economic, socio-cultural, and environmental needs of the involved stakeholders, including the host community" (Cavagnaro et al, 2012, pp. 201-202). Sustainability in event management is perhaps best described as minimizing resource usage, reducing negative impacts from the event, and maximizing the benefits while still achieving the objective of the event itself. Alternatively, the positive outcomes should outweigh the costs (Getz, 2005). Concerns that should be considered for sporting events regarding sustainability include: air quality, water quality, pollution, land and water use, waste management, energy management, transportation, accommodations and facilities, as well as communication (Cavagnaro et al, 2012; Getz, 2005). It can be applied to issues like urban regeneration, public health, crime, and public image as well (Raj et al, 2013). Arguably, sustainably practices can also lead to money saved by reducing costs (Getz, 2005). Sustainability truly is a broad term and it covers more than just environmental issues.

With this better understanding of what a sustainable event is we can begin to construct a picture of why events ought to be sustainable. As established earlier, events have both positive and negative impacts on their host communities. Event organizers arguably ought to take advantage of the opportunity presented by the event to improve their community as part of their corporate social responsibility (CSR) (McWilliams & Siegel, 2001). Important to note regarding

CSR is that some see it as an imprecise term like sustainability. McWilliams and Siegel (2001) define CSR as "actions that appear to further some social good beyond the interests of the firm and that which is required by law" (p. 117). It suggests that businesses have obligations to society beyond their basic economic mandates (Cavagnaro et al, 2012). CSR is, in short, the efforts an organization makes to provide a good or service beyond the purview of their fundamental goals or the immediate mission of their organization. It could be argued that the IOC's efforts to require Games to be environmentally friendly, sustainable, and have a positive legacy are part of their CSR initiatives.

One concept linked to sustainability and the CSR literature is the idea of the Triple Bottom Line, which holds that businesses, or in this case: event managers, have a responsibility to meet economic, social, and environmental considerations in all of their practices (Getz, 2007). From the definition put forward by Cavagnaro et al (2012), the words people, planet, and profit emerge. Those are the three considerations of the Triple Bottom Line (Glavas & Mish, 2015). An event of any type or magnitude, in order to be sustainable, should meet the economic requirement to generate revenue in excess of costs, should pay workers a fair wage, and not harm the local community any more than it necessarily has to. If it does successfully meet the requirements of the Triple Bottom Line, then it could be considered sustainable.

While there are common themes on what sustainability means, there is potentially no reliable definition in the sport management literature. Sustainability has been applied to research regarding sport in a variety of manners (environmental, financial, and social sustainability), which reinforces this notion of sustainability serving multiple purposes (Fyall & Jago, 2009).

With this understanding of what sustainability and, by extension, environmentalism means for events from the above discussion, one can begin to consider one event in particular that may deserve to be focused upon given its prominence in global culture: the Olympic Games.

The Olympic Games, the Environment, and Sustainability

There is much research available that uses case studies of the Olympic Games as a whole, as well as specific editions of the Games, that addresses issues of the environment and sustainability. These will be highlighted in Table 1, if they were not discussed previously. Resultant themes from a review of the studies listed in Table 1 will be discussed below along with the gaps in the research.

Table 1
Research on the Olympic Games, Environment, and Sustainability

Source	Games	Notes
Beijing Organizing Committee for the Olympic Games. (2008). 2008 Beijing Olympic Games action plan: Construction of the ecological environment and urban infrastructure.	Beijing 2008	Official planning document on environmental engineering and pollution control.
Beijing Organizing Committee for the Olympic Games. (2008). Special plan for protection of the ecology and the environment.	Beijing 2008	Official environmental regulations issued by Beijing before hosting 2008 Olympic Games. Goals regarding reduction of water and air pollution are stated along with automobile emissions standards and plans for pollution reduction by industry.
Briese (2001). Sustaining Sydney: The 'green Olympics' from a global perspective.	Sydney 2000	The ability of hosting the 'green Games' to change ordinary citizens environmental behavior should not be underestimated, but the impact of such practices remains to be examined in the long term.
Chalkley & Essex (1999). Sydney 2000: The 'green Games'.	Sydney 2000	Questions legitimacy of Sydney's actual environmental plans prior to hosting the Games, but notes that Sydney's efforts in planning environmentally friendly Games might bring in a new era of urban sustainability.

Table Continues

Source	Games	Notes
Gaffney (2013). Between discourse and reality: The unsustainability of mega-event planning.	Rio de Janeiro 2016	Current model of urban planning as it relates to mega events is not sustainable due several reasons: it does not account for local stakeholders, it's short term, it violates true environmental sustainability, and it reduces social equity.
Gang (2013). On the role of green sports in ecological environment construction.	Beijing 2008, China in General	Proposes using sport, with its special place in society, to promote solutions to serious environmental issues facing China as well as promote future sustainable development.
Elliott (2007). Green vs. grey: A comparative energy analysis of two Olympic speed-skating ovals.	Calgary 1988 and Salt Lake City 2002	Examines energy efficiency of two speed-skating ovals, one pre adoption of environment as the third pillar of Olympism in Calgary, and one post adoption in Salt Lake City. Conclusion is that post adoption oval in Salt Lake City is more energy efficient, but not due to the adoption of the new environment pillar. Recommends improved environmental policy.
Jin, Zhang, Ma, & Connaughton (2011). Residents' perceptions of environmental impacts of the 2008 Beijing green Olympic Games.	Beijing 2008	Residents' environmental perceptions influenced their attitudes towards the Games and its Green Initiatives, which led to more support for those Green Initiatives. Effective environmental management may stimulate residents' attitudes, behavioral intentions, and actual behaviors regarding environmental initiatives at Olympic Games.
Kariel & Kariel (1988). Tourist developments in the Kananaskis Valley area, Alberta, Canada, and the impact of the 1988 Winter Olympic Games.	Calgary 1988	Noted economic development brought to Kananaskis Country in hosting alpine events at 1988 Calgary Winter Games, but fears that environmental impacts may harm wildlife.
Loland (2006). Olympic sport and the ideal of sustainable development.	General	IOC has environmental standards, but these do not promote environmentalism as much as reduce environmental impact of the Games themselves. Suggests changing sports to be more eco-friendly.
Mark, Ravelli, & Sinclair-Williams (2010). Health impact assessment of the 2012 London Olympic transport plans.	London 2012	Planning for the London Game's transportation included most visitors utilizing public transit, walking, and cycling. The London Game's transportation plan contributes to sustainability, but long term will lead to more automobile traffic in the East London area as people move into the vacated Olympic Village.

Table Continues

Source	Games	Notes
McCarthy & Synnott (2012). Regeneration and the role of the London 2012 Olympic and Paralympic Games.	London 2012	London Games will transform East London physically and socio-economically, but planners have failed to use opportunity to promote issues like renewable energy.
Moreira (2009). A mega-event inside the Great Wall of China: expectations and possible impacts of the Beijing 2008 Olympic Games.	Beijing 2008	China went to great lengths to hold a "Green Games." Residents and tourists were pleased with environmental protections in place during the run of the Games. It is suggested that China take advantage of the opportunity and implement long-term environmental reform.
Preuss (2013). The contribution of the FIFA World Cup and the Olympic Games to green economy.	General	Steps to green economy as led by international sport governing bodies (ISBGs): include environmental protection in charters, ensure promises made by candidate hosts are kept, and develop education programs on environmental issues. ISBGs should use their position as monopolies and require sustainable planning.
Raiborn & Joyner (2006). China: Going for the gold, silver, bronze …green?	Beijing 2008	China has undertaken many environmental reforms as part of its plan to host the 2008 Olympic Games. Residents perceive environmental issues to be of great importance. However, China should not be viewed as a global role model on environmental initiatives.
VanWynsberghe, Derom & Maurer (2012). Social leveraging of the 2010 Olympic Games: 'Sustainability' in a City of Vancouver initiative.	Vancouver 2010	Examines, using the case study of the sustainability in the Vancouver 2010 Olympic Games, how host cities' governments use the hosting of sporting mega-events to push policy objectives forward.

Three main themes emerged from this cursory review of the existing literature. First, there are several studies that assess residents' perceptions of the environmental performance of the Games or of the importance of pro-environmental practices in life (e.g. Jin et al, 2011; Moreira, 2009; Raiborn & Joyner, 2006). Second, there are also several studies which critique current models and standards of environmentalism and sustainability for Olympic Games as they relate to planning and execution of the Games (e.g. Chalkley & Essex, 1999; Gaffney, 2013; Loland, 2006; Mark et al, 2010; McCarthy & Synnott, 2012; Preuss, 2013). And, lastly, some

studies offer their own examples of good models to use for future planning purposes (e.g., Elliott, 2007; Loland, 2006; Preuss, 2013). There appears to be a gap in that there are few studies that suggest improvements to the current model of Olympic environmentalism and sustainability. Additionally, there is no link to residents' perceptions of what to improve.

While there appears to have been a considerable amount of research conducted on the issue of environmentalism and sustainability in the Olympic Movement, there are still many questions that remain unanswered or under researched. First, there seems to be a gap in addressing the origin of these environmental standards and practices within the field. Moreover, there is no research that attempts to explain how these practices became adopted or accepted as a norm within the Movement and which stakeholders were involved in this process. With this body of research, the themes, gaps, and questions in mind, we can progress into the actual articles presented in this thesis. Chapter two addresses the evolution of environmental practices in the Games and Chapter three discusses the major stakeholders involved in environmental practices in the Games. Within each article, there is a smaller review of literature, description of the methodology, and lastly the findings, discussion, and conclusions in which practical and theoretical contributions are presented. A final chapter presents a unifying discussion on chapters two and three as a conclusion to this thesis.

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CHAPTER 2

THE EVOLUTION OF ENVIRONMENTAL PRACTICES IN THE OLYMPIC GAMES

Since the publishing of the Brundtland Report in 1987, there has been increased concern for the impact of human activities on the natural environment (World Commission, 1987). As part of a duty to be socially responsible, corporations in all industries ought to consider their environmental impact as part of their system of functioning and management (Lindgreen, Swaen, & Johnston, 2008). Sport is no exception to this idea. Getz (2005) suggests that events are ethically and legally bound to be as environmentally-friendly and sustainable as possible. Sustainability is a term often associated with environmental practices. It is defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission, 1987, p. 16). One of the largest events in the sport industry, the Olympic Games, has been challenged to become more sustainable in the future due to its increased scale (Cavagnaro et al, 2012). Sustainability, as it relates to event management, is "[impacting] positively on people, planet, and profit, and thus [contributing] to fulfill the economic, socio-cultural, and environmental needs of all involved stakeholders, including the host community" (Cavagnaro et al, 2012, pp. 201-202). Thus, sustainability in the Olympic context, is arguably meeting the needs of all the involved stakeholders in hosting an edition of the Olympic Games. While sustainability in an Olympic context can be defined, there is no clear understanding of the evolution of environmental practices within the Olympic Movement. What lacks is an understanding of how and when environmental practices emerged in the Games and

how these shifted towards issues of sustainability and other environmental focuses. As well, there is a lack of understanding of how these environmental practices became accepted as norms (i.e., institutionalized) within the Olympic Movement. This paper attempts to identify those themes and trends in environmental practices in the Olympic Movement and how they have become institutionalized within into the Olympic Games.

With this information in mind, one can begin to consider the environmental history of the Olympic Games as it is currently known as well as Olympic environmental policy. This review of Olympic environmental history will be followed by an introduction and justification of institutional theory, which will be used to give perspective on the adoption of environmental practices as norms. An overview of the methodology, findings, discussion of those results, and conclusions will follow.

The Environment and the Olympics

Environmental History of the Olympic Games

The founder of the modern Olympic Movement, Pierre de Coubertin, recognized that hosting the Olympic Games offered the host city and country the opportunity for national regeneration (Gold & Gold, 2013). However, many of the first Olympic Games were not used for any political purposes or for promotion of social issues in general with the notable exception of the 1936 Berlin Nazi Olympics (Gold & Gold, 2013). Chappelet (2008) suggested that the history of the Olympic Games and the environment dates back to some of the earliest Winter Games. These Games arguably had more environmental impact than their summer counterparts, due to their greater reliance on outdoor environments and winter conditions; however, these Games were inadvertently more environmentally friendly than modern Games due to the small scale nature of the event itself. One of the first Games to raise environmental concerns were

those of the Lake Placid Winter Games in 1932. This was due to the clash between environmentalists seeking to protect the forests of New York from development and those who wished to host the Games (Chappelet, 2008). The second version of the Winter Games held in St. Moritz (first in 1928 and second in 1948) and Lake Placid (1980) were held to considerable success from an environmental perspective due to the fact that they reused facilities from Winter Olympic Games that had previously been held at those sites (Chappelet, 2008).

One of the earliest usages of the Olympics for beneficial purposes to the host country came with the 1936 Games held in Berlin as Germany tried to promote its national ideology. According to Gold and Gold (2013), organizers of the 1960 Games in Rome were the first to use the Games as an opportunity to promote urban regeneration. Sapporo, Japan in 1972 attempted to develop the city and region while still maintaining concern for its surrounding environment and its preservation. It was reportedly chosen as a site due to this commitment to protect its environment (Chappelet, 2008; Karamichas, 2013). After the conclusion of the Games in Sapporo, the ski runs were replanted with trees to minimize the permanent footprint of the event on the region (Chappelet, 2008). Banff, Alberta submitted a bid for these Games that was defeated at a local level by environmentalists seeking to protect the environment from destruction as a result of the Olympics (Chappelet, 2008). Just a few years later, Denver, Colorado declined an offer from the IOC to host the 1976 Winter Games. This came after a public referendum showed a lack of support from residents, which included concern for environmental destruction of the natural landscape (Moore, 2015).

Despite the success of the Sapporo Games, there was only one remarkable environmental success at the Olympics of the next two decades. In 1986, then-president of the IOC, Juan Antonio Samaranch, first brought up the idea of ‘environment’ being added as the third pillar of

Olympism (Karamichas, 2013). This was a symbolic statement at the time, since it was not formally added until a decade later. Otherwise, the 1984 Winter Olympics in Sarajevo were too consumed with political discourse, as they were the first Olympic Games to be held in a communist country, to have any regard for environmental issues (Chappelet, 2008). Additionally, the 1988 Calgary Winter Games' organizing committee was seen as too business-like in their nature for environmental issues to be addressed despite opposition from environmental groups. This likely stemmed from the fact that the 1976 Montreal Games were considered to be such a financial disaster that anything less than financial success at the Calgary Games would have been condemned in Canada (Chappelet, 2008). One of the outcomes that resulted from the Calgary Games was the standardization of building expensive indoor venues for events like speed skating that are incredibly cumbersome for new host cities to construct (Chappelet, 2008). At the same time, the 1988 Games in Seoul were heavily criticized for its environmental impact due to their destruction of important cultural heritage sites (Gold & Gold, 2013).

The Olympic Games of 1992 and 1996 in Barcelona and Atlanta, respectively, lacked concern for their environment due to the distance of the Games from the natural environments of the surrounding regions of the host cities. These cities emphasized economic development over environmental development or protection (Chappelet, 2008). However, the late 1980s and 1990s are where the concern for the environment and sustainability at the Olympics come to the forefront of the process. There were protests after the Albertville 1992 Winter Games for their environmental destruction even though they were promised to be environmentally conscious (Cantelon & Letters, 2000; Chappelet, 2008; Karamichas, 2013). Later, the host city of Lillehammer put incredible emphasis on environmental protection in their bid to host the Winter

Games in 1994 (Cantelon & Letters, 2000). Lillehammer was used as a chance by Norwegians to showcase their environmental policy, with its five goals, to the world. These goals were to:

> […] increase international awareness of ecological questions, to safeguard and develop the region's environmental qualities, to contribute to economic development and sustainable growth, to adapt the architecture and the land use to use the topography of the landscape, and to protect the quality of the environment and of life during the games. (Chappelet, 2008, p. 1892)

The environmental directives undertaken by Lillehammer were an example the IOC embraced and used to create future environmental policy (Cantelon & Letters, 2000). Both Chappelet (2008) and Cantelon and Letters (2000) identify this effort by Lillehammer as the potential origin of the modern green movement in the Olympic Games. But, Cantelon and Letters (2000) suggest that the IOC's environmental policies were a response to outside pressures following the Albertville 1992 Winter Games and not emerging from their own revelation of the value of the environment.

Backtracking to 1991, while the Lillehammer Games were still being planned, the IOC added to the Olympic Charter (i.e., the central governing document of the Movement) that Games organizers should show responsible concern for the environment in response to criticism over the ever-increasing scale of the Games (Gold & Gold, 2013). Next in planning to host would have been the Nagano 1998 Winter Games, whose environmental planning solely attempted to integrate respect for nature as part the organization of their Games (Chappelet, 2008). Cantelon and Letters (2000) suggest that these Games were the first to be held while the IOC had a clearly stated policy on environmental protection for an OCOG to follow.

As part of Sydney's 1993 bid for the right to host the Olympics in 2000 Greenpeace helped to create a 'Green Games' platform (Chappelet, 2008). This may have been, in part, driven by then IOC President Juan Antonio Samaranch previously declaring in 1986 that environmental issues would be considered as an important issue for all future host city bids (Kearins & Pavlovich, 2002). As part of Sydney's bid, environmental guidelines were incorporated into the government of New South Wales' new policy on environmental planning. The environmental issues to be addressed by the Sydney Games were: conservation of energy and water, minimization of wastes, controlling pollution, and protecting natural and cultural environments (Kearins & Pavlovich, 2002). It has been argued by Chappelet (2008) that those Sydney Games were the last edition where the host city voluntarily emphasized environmental concern as part of the bid: "The manual for cities wishing to host the games (sic) was modified accordingly. For the first time, candidates for 2002 were required to answer several questions on 'environmental protection'…" (p. 1982). Thus, according to Chappelet (2008), all Games held before the 2002 Winter Olympics that touted environmental protection had those issues driven by the host cities themselves instead of by official actions by the IOC. This clashes with the earlier suggestion from Cantelon and Letters (2000) that the 1998 Games were the first to have to address environmental protection. As such, this disconnect will be further explored in this paper.

Regardless of the disagreement between Cantelon and Letters's research and Chappelet's research, any potential lack of environmental policy from the IOC changed in 1994. In that year, the IOC added 'environment' as the third pillar of Olympism along with the original two: sport and culture (Gold & Gold, 2013). This would seem to suggest that the IOC viewed environmental issues as important enough at the time to give 'environment' equal standing with the IOC's other two pillars which ultimately symbolize what the Olympic Movement stands for.

In 1995, the IOC created a commission on sport and the environment that would hold conferences every two years (Chappelet, 2008). This commission's role is to advise the executive board of the IOC on policies and initiatives that the IOC and Olympic Movement should adopt regarding environmental protection and sustainability, a new concept at the time. The conferences bring together government officials, non-governmental organizations, industry experts, researchers, and the media to discuss the progress of environmental and sustainability initiatives in the Olympic Movement (IOC, 2014). It was also then required that all future candidate cities' bids had to include documentation that addressed environmental concerns (Gold & Gold, 2013). In 1996, the Olympic Charter was amended to include a 13th mission on sustainable development and respect for the environment (Chappelet, 2008; Gold & Gold, 2013). The purpose of this statute is to "encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require the Olympic Games be held accordingly" (IOC, 2013, p. 17). However, Kearins and Pavlovich (2002) argue that the IOC's role in making the Games more environmentally friendly is a symbolic one as they are the ultimate authority on the Games, but the IOC leaves the actual details of planning and environmental concerns up to the host cities themselves.

Further developments from the IOC included the adoption of Agenda 21 for the Olympic Movement in 1999, which, like the United Nation's Agenda 21 on sustainable development, outlined several principles on sustainable development that all organizations that are involved in the process of hosting the Olympic Games must recognize (Chappelet, 2008). Additionally, in 2000 the IOC created the Olympic Games Global Impact program (now shortened to Olympic Games Impact or OGI), which allows host cities to assess the success of their sustainable development ideas. The use of OGI is now mandatory for all candidate and selected host cities

through their proposal, planning, and execution of the Games (Chappelet, 2008). As a result of these policies, the 2002 Winter Olympics in Salt Lake City were the first to have gone through the bidding, planning, and execution process with the new documents on environmental protection. What Salt Lake City had included in its proposal was zero waste, net zero emissions, urban forest advocacy, and zero tolerance for environmental and safety compliance errors (Chappelet, 2008).

In 2003, Vancouver, British Columbia was selected to host the 2010 Winter Games, which were to be the first Games to be deemed sustainable (Holden et al, 2008). This was guided by the City of Vancouver's adoption of ten sustainability principles through which all policy was guided. These principles were based on the AA1000 AccountAbility principles on how to meet sustainable challenges, which focus on inclusivity, materiality, and responsiveness. (AccountAbility, 2008; VANOC, 2010). Vancouver's idea of sustainability was centered on financial, economic, and social sustainability, in addition to traditional environmental sustainability. Vancouver Games organizers also set a goal of zero waste (Holden et al, 2008). After the Vancouver bid in 2003 came the hosting of the 2004 Games in Athens. These Games also partnered with Greenpeace, as well as the World Wildlife Foundation, to audit their environmental practices (Greater London Authority, 2007). Following the 2004 Games in Athens came the bid period for the 2012 Games, which occurred in 2005. During this time, London was awarded the 2012 Games, which were to be held under the theme of: One Planet (Holden et al, 2008). Also in 2005, Beijing then promised that its 2008 Olympic Games (which had been bid on previously) would be the most environmentally friendly ever held (Holden et al, 2008). After their completion, China adopted a five-year plan in 2011 that included plans for addressing environmental concerns (Horton & Saunders, 2012). In 2006, Torino hosted a successful Winter

Games that included purchasing carbon offsets and innovations in reducing wastes, conserving water, and green design in buildings (Holden et al, 2008).

It was during the 2000s that the differences between environmentalism, going green, sustainability, and legacy begin to blur. According to Chappelet (2008), the concept of 'legacy' first appeared in the 1990s as part of the bidding and planning process for Atlanta's 1996 Games to show a return on investment and an allure for potential candidate cities, including Atlanta. Leopkey and Parent (2012a) argued that the concept of legacy within the Olympic context actually emerged in the 1980s. Legacy was also used in bid documents as part of the Sydney 2000 Olympic Games, the Athens 2004 Games, and other iterations of the Games held since. In 2003, the IOC again amended its Charter to include a 14th mission that focused on legacy (Chappelet, 2008). More specifically, it advocated for the promotion of "a positive legacy from the Olympic Games to the host cities and host countries" (IOC, 2013, p. 17). In 2006, the IOC released a code of conduct that required athletes to act as role models for environmentally friendly practices (Mallen, Hyatt, & Adams, 2010). For the London 2012 Games, legacy and sustainability were initially given equal standing, but sustainability eventually gave way to legacy as it was seen as a more important of the two issues (Gold & Gold, 2013).

Unfortunately, both legacy and sustainability are seen as incredibly vague terms, which are subject to much interpretation as to their meaning (Gold & Gold, 2013). Holden et al (2008) describe sustainability as a term that is too "malleable" (p. 887). Gold and Gold (2013) argue that legacy is vague and easily manipulated. Noted from earlier, they go as far as to say that both sustainability and legacy are filler terms for post-Games visions of regional transformations. However, one should not discount the value of the term legacy, as it refers to environmental issues, in particular. Legacy can cover many different themes that relate to the Olympic Games

that include, but are not limited to: environmental issues, sustainability, and urban rejuvenation (Leopkey & Parent, 2012b). Chappelet (2012) agrees that legacy is a term with broad reach in its definition and has been the term used to replace debates on long-term impacts of the Games. It is ultimately concluded that legacy is not something that is necessarily achieved in execution of the Games, but rather something for organizers to strive for like a dream (Chappelet, 2012).

Changes to Olympic policy on this subject are still being shaped as recently as August 2014 with the adoption of Agenda 2022 (IOC, 2015a). This lays out the path for the future of the Olympic Games with a list of forty recommendations. Of these, two address the issue of sustainability directly. Recommendation four (of the 40) is to "include sustainability in all aspects of the Olympic Games" (IOC, 2015a, p. 37). This includes encouraging the IOC to take a more active role in ensuring sustainability is included in the planning and staging on the Games via development of sustainability strategies, establishing good governance in organizing committees, and monitoring of post-Games legacy (IOC, 2015a). Recommendation five is to "include sustainability within the Olympic Movement's daily operations" (IOC, 2015a, p. 37). This differs from recommendation four in that it addresses IOC operations in their Lausanne, Switzerland headquarters as well as in their general operations instead of specific editions of the Games. This includes adoption of practices to reduce waste, streamline travel, offset emissions, engage their stakeholders, and create partnerships with other global organizations to achieve these objectives (IOC, 2015a).

Several gaps appear from this overview of Olympic history. It might be possible to host a sustainable Olympic Games while giving no consideration for the environment. Sustainability quickly appears in the terminology and literature surrounding the Olympic Games. Understanding why sustainability emerged and how it changed how host cities bid for their right

to host the Games warrants further study. As well, it would be critical to examine how host cities bid's change over time in their usage of terminology related to the environment and sustainability.

While the history of environmentalism and sustainability in the Olympics is relatively short compared to the lifetime of the modern Games, there has been much policy and action from the IOC, as well as host cities, in the short span of time in which these issues have come to the forefront. The usage and influence of such policy will be reviewed next.

Olympic Environmental Policy

Starting in 1991, with the addition of the requirement that the Olympic Games show concern for the environment into the Olympic Charter, the IOC slowly began to not only show more concern for environmental issues with the hosting of the Games, but also formalized their commitment into its mission and laws (Gold & Gold, 2013). The policies and actions of the IOC that have been previously discussed are summarized in Table 2.

A commitment to the environment can be found in the Olympic Charter in Article 2.13, which states that the IOC has a mission to: "encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require the Olympic Games be held accordingly" (IOC, 2013, p. 17). It can be seen that in addition to this commitment to the environment is a commitment to sustainability and legacy. The IOC has indicated that all of these issues are equally important by emphasizing them in new bids. Despite this, it is important to note that the host cities themselves are responsible for ensuring that the Games have a long lasting positive legacy as mandated by the IOC (Stuart & Scassa, 2011). Sustainability must be achieved in environmental terms as well as economic and social terms. Both of these requirements are enforced by the IOC through their use of coercive power, which

Table 2
Pre-Study IOC Environmental Policies and Actions

Year	Notes
1986	IOC President declares that environment ought to be the third pillar of Olympism.
1991	IOC adds to Olympic Charter that games should show concern for the environment.
1994	"Environment" added as third pillar of Olympism. IOC signs agreement on sport and the environment with United Nations Environment Program. IOC creates commission on Sport and Environment to hold conferences on the subject.
1995	Bids required to submit documents on environmental impact.
1996	Olympic Charter is amended to include mission on the environment.
1999	Creation and adoption of Agenda 21 for the Olympic Games based on UN's Agenda 21
2001	IOC creates Olympic Games Global Impact program.
2003	IOC amends Charter to include a mission to promote a positive legacy for host cities and countries.
2006	IOC releases code of conduct for athletes to act as environmental role models
2014	Adoption of Olympic Agenda 2020 on the future of the Games, which includes two recommendations on sustainability.

is, in this case, the ability of the IOC to make an organizing committee comply with IOC directives (Stuart & Scassa, 2011). However, despite these requirements by the IOC, there are no standards for how to achieve them. This leads to variance in the interpretations of sustainability and legacy by each of the host cities. Certain host cities might emphasize environmental sustainability, others economic sustainability, and perhaps the rest might emphasize social sustainability or another form of sustainability (Stuart & Scassa, 2011). It was previously mentioned that legacy and sustainability were loose terms subject to wide interpretation (Holden et al, 2008; Gold & Gold, 2013). Legacy also can be interpreted to cover a broad range of subjects. Legal guarantees for Olympic legacy cover many areas that include politics, economics, culture, finance, marketing, media, technology, environment, infrastructure, and security, to name a few (Stuart & Scassa, 2011). Olympic Games Organizing Committees (OCOGs) are only mandated by the IOC to preserve the positive legacy for two years beyond the conclusion of the Games. According to Stuart and Scassa (2011), the reality of environmental, sustainability, and

legacy issues post conclusion of the Games is often quite different from that presented in the bidding process, in that the reality is much less that what was promised.

Perhaps the biggest issue to arise from this is attempting to understand how each individual host city approaches environmentalism and sustainability in their own bids. For example, it would be necessary to understand if their visions share common goals and values or if they distinguishable. As well, an examination of if they all follow the mission and vision of the IOC in requiring such issues to be addressed or if they superficial rhetoric must be considered. These could be potential issues given that the IOC leaves such functional and organizational decisions up to each host city.

The IOC has, over this short period of time, utilized its power to create positive change within the Olympic Movement regarding environmentalism and sustainability, while still largely allowing host cities to determine what direction to take themselves. What remains to be examined are if there are trends in this environmental history of the Games. Ultimately, a better understanding of the evolution environmental and sustainability practices and policies, as well as their role in the institutionalization of the environmental movement in the Games is necessary.

Theoretical Framework

In order to better understand the origin, adoption, and evolution of such environmental practices in the Olympic Games, institutional theory will be utilized. Institutional theory is concerned with the study of formal structures of organizations within a particular field and why those organizations tend exhibit isomorphic tendencies (i.e., the adoption of similar or homogeneous structures) (DiMaggio & Powell, 1983; Fernando & Lawrence, 2014; Leopkey & Parent, 2012a; Washington & Patterson, 2011). Institutions themselves are formal structures that have achieved resiliency, which could be considered to be a certain staying power in our society

(Scott, 2013). Some institutional theorists contend that various organizations in the same field will slowly begin to look increasingly similar as their collective successes and failures, as well as pressure from society to exist in a certain structure, help to mold the organizations themselves into legitimized ones (DiMaggio & Powell, 1983). More specifically, organizations will adopt practices that have proven successful for other competing organizations in their field (Leopkey & Parent, 2012a) in addition to adopting practices that fit well into the values that their respective field holds. This is because society will perceive the organization and its practices as legitimate if they conform to accepted norms and standards. The legitimization of these institutions is what prolongs the existence of the organization (DiMaggio & Powell, 1983). If all organizations utilize only the most successful practices, then the organizations begin to look alike in both structure and practice (DiMaggio & Powell, 1983). In essence, various structures, processes, and values become engrained or institutionalized within the various organizations and the field. However, it is possible for certain rules or practices to become institutionalized into an organizations simply because they become rationalized myths rather than because they are actually proven to be the best practices (Meyer & Rowan, 1977). In this case, certain practices are institutionalized because they are the rule of an organization, but not because they actually meet any demands, increase efficiency, or increase effectiveness of an organization.

While isomorphism will be shown to be relevant to this research, it is also important to consider the three pressures (i.e., normative, coercive, and mimetic) that compel an organization to evolve. Pentifallo and VanWynsberghe (2012) argue that via isomorphic processes, Rio de Janeiro 2016's bid committee had proposed environmental and sustainability practices similar to, and slightly greater than, previous iterations of the Games. They credit bid committees with advancing environmentalism and sustainability in the Olympic Movement over the directives of

the IOC (Pentifallo & VanWynsberghe, 2012). The three pressures have been put forth in the literature as having an important effect on the institutionalization of a practice and they are: normative, coercive, and mimetic (DiMaggio & Powell, 1983). Normative pressures are social pressures that might cause an organization to conform to its social environment like meeting the needs of a host community (DiMaggio & Powell, 1983). The Lillehammer 1994 Winter Games environmental practices were arguably a response to normative pressure from protests after the Albertville 1992 Winter Games to create a more environmentally friendly Olympic Winter Games (Cantelon & Letters, 2000). Coercive pressures are considered to be formal regulations or informal expectations placed upon a particular organization like laws (DiMaggio & Powell, 1983). IOC environmental policies that require the Games to have environmental considerations are an example of a coercive pressure (Stuart & Scassa, 2011). Lastly, mimetic pressures occur when an organization imitates another in order to deal with an uncertainty (DiMaggio & Powell, 1983). An example of a mimetic pressure would be the IOC's creation of Agenda 21 for the Olympic Games, which mimics the UN's Agenda 21 policy (Chappelet, 2008). A combination of these pressures push organizations to evolve to fit within their social, political, and economic environment, and as a result isomorphism can occur at the organizational level, which ultimately helps to institutionalize an organization.

Washington and Patterson (2011) argued that the use of institutional theory is critical in research related to sport since it is useful in "theorizing the emergence, stability, or decline of sport related institutions" (p. 10). Further, Leopkey and Parent (2012a) use institutional theory in their analysis of how and when the usage of the term legacy came to exist within the Olympic Movement. It was argued that the concept of legacy emerged in response to pressures faced by bid and planning organizations when they needed justification for hosting the Games despite

rising costs and the lack of foreseeable long-term benefits. As such, institutional theory will provide a framework to further understand the process by which environmental practices become adopted and taken for granted norms within sporting events and particularly mega-events like the Olympic Games.

Methodology

Despite this body of research's breadth, there remain gaps in the literature and topics yet to be covered. The purpose of this study is to understand the evolution of environmental practices in mega-sporting events by using the Olympic Games as a case study. A case study design is preferable as it allows for in depth analysis of a particular event in the context of a larger social phenomenon (Yin, 2013). Moreover, it is also considered appropriate for analyzing and interpreting a set of decisions, why and how those decisions were made, and lastly what resulted from those decisions (Schramm, 1971). A qualitative research design using institutional theory and the sport event management literature was employed to frame the case focusing on the Olympic Games.

Institutional theory provides a basis for this study to understand how these practices become an accepted part of the Movement itself. Additionally, institutional theory provides a framework for examining the research questions at hand, which allows this information to further the body of knowledge on this subject in the sport event management literature. The following will provide more details regarding the case study setting, data access and collection, data analysis, and research quality.

Case Setting

The Olympic Games are considered the preeminent global sporting mega-event. The size, nature, scale and global reach reinforce this status (Holden et al, 2008). As such, the Olympic

Games, under the guise of the Olympic Movement, were selected for the purpose of this study due to their influence and impact on sport event planning and implementation practices including their approach to environmentalism and sustainability within the industry. The 2012 Olympic Games, held in London, were held under the theme of: One Planet. Both of the ideas of legacy and sustainability were considered in the planning and implementation of the event (Gold & Gold, 2013). Additionally, the London Games were seen as an opportunity to completely transform East London physically (i.e. environmentally) and socio-economically (McCarthy & Synnott, 2012). As an example of the size of the Olympic Games, the London 2012 Games consisted of over 10,500 athletes from 207 nations who competed in 26 sports with 39 featured disciplines (IOC, 2015b). The original Olympic Games, held in 1896 in Athens, Greece consisted of only 241 athletes from 14 nations who competed in 43 events (IOC, 2015c). This is a drastic change in the size of the event and its impact over the course of its history not only in terms of the number of athletes, but also the number of sports, venues, accommodations, and spectators. The Olympic Movement is surely one of the most appropriate cases to examine regarding mega-sporting events.

Data Collection

In order to best understand this phenomenon, a careful study of the environmental mandates and practices of the IOC and the bid documents of host cities in the entirety of the existence of the modern Olympic Movement was required. Given that all Olympic events thus far have already been held, it was not possible to attend and observe these events in person. As such, archival documents formed the basis of data collection for this project. These archival documents may consist of official letters, memos, communications, agendas, meeting minutes, administrative documents, formal studies and evaluations, newspaper clippings, service records,

organizational records, maps and charts, lists of names, survey data, and personal records (Yin, 2013). As it relates to this study, the archival documents included periodicals, official IOC and OCOG documents like meeting minutes, memos, reports, and records, as well as website information. These data sources are useful as they provide official standpoints of organizations, they helped corroborate information from other sources, and inferences were drawn from them (Yin, 2013).

For this particular investigation, over 100 different forms of archival documents were amassed from the IOC archives in Lausanne, Switzerland including bid documents from candidate cities and other aspiring host cities, IOC bid manuals from the 2000 Games until the 2018 Winter Games, bid reports from the 2002 Winter Games until 2018 Winter Games, newspaper articles, and other available media from the IOC, OCOG, and stakeholder websites. A specific focus began with the addition of environment as the third pillar of Olympism in 1994, all mandates, initiatives, organizations, and other activities from the IOC or the general Olympic Movement since were assessed (Gold & Gold, 2013). This included changes to the Olympic Charter, adoption and creation of Agenda 21 for the Olympic Movement and Agenda 2022, organization of the commission on sport and the environment, creation of the Olympic Games Impact (OGI) program and any other actions discovered (Chappelet, 2008; IOC, 2015a). Bid documents for all host cities were accessed and analyzed for their practices regarding environmental issues. These documents most accurately reflect the Olympic Movement since they are the actual policies and initiatives used by the IOC as well as the planned commitments coming from the host cities' organizing committees.

Limitations. One major consideration to make here is that the IOC does not release certain materials within predetermined timeframes of the Games they represent. The average

wait for materials from the IOC is twenty years from the event. As a result, materials on Lillehammer were just being released to the public at the time of this study. Although some materials covering the inner workings of the IOC, their committees, and correspondence are less prevalent at this time, more information regarding Games planning and implementation by other stakeholders was available. The limitations were overcome as the data necessary for completion of this study was available for collection from the IOC archives as well as from outside sources. Periodicals and website information were able to provide the data necessary for completion of the study when such data was not available in the archives.

Data Analysis

This study used content analysis as its primary method of analysis. All documents and archival materials were converted to a PDF format for efficient and accurate analysis if they did not exist in such a format already. All data were coded using ATLAS.ti 1.0 for Mac software for all references related to the environment, sustainability, green, or any other language discovered in the archival materials that related to themes and concepts found in the preliminary literature review. This software's coding capabilities allowed for highlighting of themes from the archival materials and interviews. It also allowed for easy retrieval of relevant coded data. Open coding is the first coding cycle and the first step in the data analysis process (Miles, Huberman, & Saldaña, 2014). Codes used were created through a combination of deductive and inductive processes. Such codes identify data as important and, via a second coding cycle, can be broken into smaller categories that group relevant data into more specific ideas or themes that are better grouped together (i.e. environment or sustainability, standards, projects, communities, and any other concepts deemed necessary to highlight) (Miles et al, 2014). As part of the second coding cycle, code networks were used to highlight patterns in the data that describe emerging trends that a

researcher should consider (e.g., use of environmental and sustainability language, environmental mandates and practices, environmental issues addressed, adoption of practices) (Miles et al, 2014). Next, from these codes emerged higher order themes that gave way to the various environmental themes identified by this study (e.g., environment, sustainability, and zero impact) (Miles et al, 2014). Lastly, data source triangulation was used to search for inconsistencies and support by comparing between the various archival materials (Miles et al, 2014). When inconsistencies existed, the data were revisited in order to ensure accuracy.

Data Saturation. Data saturation occurs when the researcher is no longer learning new information from the data collected (Siegle, 2015). At this point, there is no longer a need to collect more data. As a qualitative study, data analysis occurred throughout the collection process. All of the data collected for this study (i.e. every bid, IOC bid manual, IOC bid report, periodical, and other data) was analyzed. Any further data collected would also not result in a difference in the findings.

Research Quality

One must consider three different aspects of research quality: construct validity, external validity, and reliability (Yin, 2013). Construct validity addresses if the measurements used address the questions being asked by the study (Yin, 2013). The multiple forms of archival documents, when analyzed, provided data that appropriately answered the questions asked in this study. Additionally, findings between the sources were compared for accuracy. External validity refers to the generalizability of the findings to more broad topics (Yin, 2013). The findings from this research helped to contribute to the sport event management literature on the subject and will help future Olympic Games organizers by providing knowledge of the evolution of environmental practices in the Games. Lastly, reliability addresses the ability of other researchers

to repeat this study (Yin, 2013). The methodology for this study has been thoroughly researched and was well documented in order to allow for future researchers to repeat this study if compelled to do so. Additionally, this study follows methods used in previous studies of the Olympic Games (c.f. Leopkey & Parent, 2012a; Leopkey & Parent, 2012b), and was thoroughly discussed with members of the research committee. These three aspects of research quality, given their consideration in this study, allowed for good quality research to have been conducted.

Results

While the global environmental movement began in full force in the early 1900s, the Olympic Movement began to recognize the importance of the environment. However, once it did recognize the important of environmental protection, the Olympic Movement took many appropriate steps to recognize and guarantee that environment was an important issue within the context of the Games. Early environmental reports in bids were short and simple, however bids became longer and more detailed as time progressed. A variety of different approaches were taken by OCOGs in their environmental efforts, which led to the development of emergent themes of environmental history in the Games: environment, sustainability, and zero impact. Each are presented in more detail below.

Environment in the Games

The environment always received consideration in early Olympic bids, but not in the modern sense of environmental protection. Early Olympic bids addressed issues of climate and meteorology in their documentation. Charts displaying average temperatures and precipitation levels for any given time of year were also common. For example, in the Squaw Valley 1960 bid, their meteorology section stated:

> Squaw Valley as the most reliable conditions of any winter sports area in the world. Average snowfall for the last sixty years has been 1,143 cm. per season. There has never been a year when the requirements of the Winter Games could not have been met. (Squaw Valley Organizing Committee, 1955, p. 17)

This was meant to ensure that Winter Games were held in cold, snowy climates that could adequately meet the needs of alpine winter sports. Likewise, the Summer Games needed to be held in warm enough climates so that outdoor sports could be held in comfortable circumstances. To say that environment was never a consideration for the Olympic Games would be false, because it was necessary to consider the local environment as part of the hosting processes. However it does appear that the modern connotation of protecting the environment was not an issue that early bids addressed. That did change starting in the 1970s, but it wasn't until the 1980s that large scale environmental change began to occur.

It was during the 1980s that the planning process began for the 1994 Winter Olympic Games, which were ultimately awarded to the small city of Lillehammer, Norway. These Winter Games were credited by most literature as being the first Games to tackle environment as an issue head on (Chappelet, 2008; Karamichas, 2013). This is true; however, there was more to these Lillehammer Games than previously discussed. In the bid submitted to the IOC, there was no direct mention of environment or any environmental protection. In fact, the bid touted that the games would be compact in their presence:

> Lillehammer's natural surroundings make it possible to concentrate all the events within a very limited area. First, all athletes, coaches and managers will be assembled in one village in the heart of the Olympic area. Secondly, a number of sports arenas and other

> facilities will lie within walking distance of the Olympic Village. (Lillehammer Organizing Committee, 1985, p. 19)

The Lillehammer Organizing Committee wanted all of the events to take place in a confined location centered in the city of Lillehammer instead of allowing the various events to be spread around the region. Environment was only championed by Lillehammer after protests occurred as a result of the environmental destruction caused by the 1992 Albertville Winter Games. These Games were held just two years before Lillehammer's Games as a result of the IOC decision to move Winter Games to the even years between Summer Games. It seems that no other bids for these 1994 Winter Games (e.g., Anchorage's 1994 bid) included any plans regarding environment although the bids did include information on meteorology and climate, which followed the trend from previous bids.

Moving forward, while Atlanta's bid did not mention environment beyond the typical meteorology and climate requirements, there were environmental plans presented after the bid. An Olympic Environmental Support Group was created by the Atlanta Committee for the Olympic Games (ACOG) in 1991. Later, perhaps as a response to the environmental movement gathering with the IOC's actions and the recent Lillehammer efforts, ACOG presented a document to the IOC in 1995 with an outline for their environmental plans. In this document from Atlanta were plans to address venue construction and post-Games use, energy and resource usage, land use and planning, transportation, and waste management (Atlanta, 1995). Regarding venue use, the document stated their mission was to "construct new facilities that will have no long-term negative impact on the community or environment" (Atlanta, 1995, p. 8). Notably, in this document, it was suggested that Atlanta planted thousands of trees in the city and had plans in place for venues to be used after the conclusion of the Games so that their construction would

not be a waste of valuable resources. Regarding trees, ACOG stated that: "Trees Atlanta is also carrying out another program to plant trees in Olympic neighborhoods impacted by the Olympic Games. Specially grown urban tolerant shade trees have been donated to this project by an international forest products company" (Atlanta, 1995, p. 20). Atlanta's efforts, while not notable, were present and cannot be ignored in the context of Olympic environmental history. ACOG did attempt to address environment. After these 1994 and 1996 Games, the Movement itself changed completely with regard to its environmental impact policies.

Regardless of the lack of a mandate from the IOC for the 1998 Winter Games to address environment, bids from Aosta, Italy and Nagano, Japan (the winner and eventual host) included sections that address their environmental impact. Aosta had the stronger bid of the two candidates. In their bid, they stated that Games must positively integrate sport and nature. Aosta also stressed that environmental protection is not an option, but a "must" (Aosta Organizing Committee, 1989, p. 105). They included evaluations on the environmental impact of their Games as well as a proposed budget of 14 billion Lira or roughly US$8.1 million (Aosta Organizing Committee, 1989). The Nagano bid was weaker from an environmental standpoint and only proposed that the Games should seek to protect the natural environment (Organizing Committee, 1989). Comments from their bid are reflected below:

> A mountain range of stunning beauty, appropriately called the Japan Alps, stretches across Nagano, its peaks soaring to heights of 3,000 metres.
>
> In an average year, the sites proposed for the Nordic and Alpine skiing events record snows of 1.0 to 3.0 metres in depth. The powder snow covering the slopes is the type considered ideal by competitors.

> Nagano is giving the most careful consideration to the layout of the Olympic sites and facilities to make the most of and protect the magnificent natural environment of this pristine mountain setting. These efforts take into account the smallest details, employing meticulous surveys by experts, ensuring the consent of the local people, and utilising the latest technologies. (Organizing Committee, 1989, p. 16)

Regardless of the environmental strengths of the bid, Nagano was ultimately awarded the Games for 1998.

The bids for the 2000 Games were quite impressive from an environmental standpoint. The bid manual itself stated that the Games should be exemplary in their protection of the environment and required several themes to be addressed as part of the bids (IOC, 1992). These themes are presented below:

- 5.1 Supply and official guarantee from the competent authorities that all work necessary for the organization of the Games will comply with local, regional, and national regulations regarding town and country planning and protection of the environment.
- 5.2 Indicate whether impact studies have been carried out with a view to the harmonious and natural integration of the Olympic Games into the environment and whether they have been established by official bodies or bodies recognized and authorities and scientifically competent.
- 5.3 State whether the ecological organizations in your city, your region or your country have been informed or consulted. If this is the case, state their opinions and attitudes regarding your candidature. Indicate the size of these organizations and the extent, which they are representative.

- 5.4 Indicate the efforts to be undertaken regarding transport (particularly with a view to minimizing atmospheric pollution).
- 5.5 State the concept of waste and water treatment, plus the energy management particularly for the Olympic village or villages, the competition sties, the MPC, IBC and other Olympic sites.
- 5.6 Indicate whether advanced technology will be developed in the area of environmental protection and, if so, describe such.
- 5.7 Supply plans for the use of installations and buildings and for the recycling of material and equipment after the Olympic Games.
- 5.8 Indicate whether an awareness programme has been created by the candidature Commission on the subject of environmental protection. (IOC, 1992, p. 29)

Sydney was the eventual winner of the bid. Another candidate city of note was Beijing. In their bid, Beijing's addressed all of the environmental concerns that the bid manual required for them to address (i.e., governmental guarantees, impact studies, work with organizations, and the rest of the themes provided earlier), which amounted to an effort to address major environmental issues the city was currently facing with regard to air and water quality. Additionally, it was mentioned as a legacy of the Beijing Games that the city become the center of the Chinese Olympic Movement, so that the construction of venues not be a waste of resources (Beijing, 1991).

Several years later were the 2008 Beijing Games. Environment was a serious issue for the 2008 bids yet again – particularly Beijing's. In their bid manual for this edition of the Games, the IOC encouraged cooperation and collaboration with multiple agencies to achieve environmental

goals and they encouraged the restoration of derelict areas as part of environmental projects (IOC, 1999). From their bid manual for 2008:

> Environmental protection is an area where Candidates Cities often experience tough public scrutiny and opposition and it is essential that, from the earliest stages of planning, a dialogue of co-operation is established with the governmental and non-governmental organisations in this respect. (IOC, 1999, p. 39)

This section simply reiterates the fact that the OCOGs cannot go through organizing environmental efforts alone; they must work with others to be successful.

Two bids particularly stood out for these Games: Toronto and Beijing. Toronto, like Lillehammer in 1994, proposed creation of a compact Olympic Park (Toronto, 1999). Beijing emphasized a green Olympics as a theme of their bid as well as being the first cost-effective and environmentally responsible Olympics (Beijing, 1999). Additionally, they wanted to hold what was, in their mind, the greenest ever Olympics: "the bid committee claims the Beijing and OCOG environmental plans and actions will leave "the greatest Olympic Games environmental legacy ever" (IOC, 2001, p. 62). Part of the strength of the Beijing bid was that they also included a budget for environmental projects and plans for legacy (Beijing, 1999). Environmental projects for previous Games had been costly burdens and Beijing wanted to reverse that trend.

These were the most important findings in relation to the environmental theme of the Olympic Movement: climate protection, compact Games, the Atlanta statement, Nagano's environmental language, the 2000 Games environmental mandates from the IOC, and the Beijing 2008 Games promise to be the greatest ever Olympic environmental legacy. Up to this point, the IOC and most candidate host cities focused their efforts environmental protection. Language on

the topic of sustainability, while present in some bids (e.g., Manchester's 2000 bid), it was largely not common during this time period. All Games after these included sustainability as part of their bid.

Sustainability in the Games

After the environmental movement gained standing within the Olympic Games, there was a shift in focus from simple environmental protection in the Games to the inclusion of sustainability into environmental planning as well. Some bids did address issues of sustainability starting as early as 1992. However, it is in preparation of the 2004 Games that all bids begin to focus on sustainability in addition to environmental protection that was likely the result of introduced IOC policies that showed a commitment to sustainable development (IOC, 1995).

Manchester's 2000 bid emphasized sustainable development as part of its overall legacy: "Most of the proposed installations for the Millennium Games already have an identified afteruse (sic), either as a purpose-built sports facility for educational, community, training and competition purposes or for a commercially driven use" (Manchester, 1991, Infrastructure Afteruse and Recycling Strategy). Later, in 1995 for the Atlanta Olympics, ACOG presented their environmental strategy to the IOC that included: "construct new facilities that will have no long term negative impact on the community or environment" (Atlanta, 1995, p. 8).

Jumping forward, for the 2004 Games, the bid manual had several changes compared to previous editions. More specifically, the IOC included language that showed a commitment to sustainable development. This is reflected below:

> The Olympic Movement is fully committed to sustainable development and endeavors to contribute to the protection of the natural environment. The IOC is anxious that the

> Games should be an exemplary event in this respect. To this effect, the IOC adopts environmentally sound policies, programs and practices. (IOC, 1995, p. 44)

There were several other additions made by the IOC in this bid manual that created new topics for OCOGs to address in their bids: facility reuse, biodiversity considerations, minimization of non-renewable resource usage, and minimization of emissions and pollution. The IOC also newly required that candidate cities include: maps and charts of their city and environment, a survey of the local environmental situation, an action plan regarding environmental concerns, plans for protection of the environment and other cultural heritage sites, as well as any special features or comments that are specific to each city (IOC, 1995). Additionally, in the opening remarks of the environmental section, the IOC explicitly stated that responsibility for environmental projects lies with the host cities themselves and not the IOC (IOC, 1995).

Athens, Greece was finally awarded the right to host the 2004 Games, which marked their first time hosting since the inaugural modern Games back in 1896. They focused part of their environmental efforts on usage of solar, wind, and other sustainable energies like geothermal: “solar energy, wind energy, and other alternative energy sources will be used on a large scale to heat water and provide electric lighting and air conditioning. Buildings will be designed with energy saving and bioclimatic considerations in mind” (Athens, 1995, p. 60). However, the other bids also presented several firsts for the environmental movement in the Games. An example is the Lille bid, which included a focus on their own Agenda 21 as part of their environmental and sustainability efforts: “the city of Lille and Lille urban community have both signed the Aalborg charter concerning the application by cities of the principles of sustainable development defined at the 1992 Rio de Janeiro conference” (Lille, 1995, p. 74). It

appears that the bid cycle for the 2004 Games was an important one with several changes and new concepts coming from both the IOC and from the bid cities during that time.

Bids for the 2006 Winter Games were perhaps the first to fully embrace the concept of sustainability as both Torino and Sion mentioned sustainability as a goal for their Games (Sion, 1997; Torino, 1997). Bids for these Winter Games also had to contend with more changes from the IOC in their bid manual. While there were several changes to the bid manual, only one is a major consideration for the environmental movement. This was the addition of a requirement for a description of the public authorities' environmental management system as well as how the organizing committee fits itself into this system (IOC, 1997). From the bid cities standpoint, there were some notable stances taken. Sion and Turin both mentioned a desire to increase sustainable development in their cities (Sion, 1997; Torino, 1997). Torino also mentioned a desire to leave a green legacy via re-use of venues in the post-Games period and renewal of derelict areas:

> All permanent constructions will be carefully sited in suitable surroundings and will be planned with future re-use for the public in mind. In the case of temporary structures, environmental restoration programmes will be set up to return the surrounding area to its original state after the Games. (Torino, 1997, p. 72)

Helsinki mentioned a special desire to create measuring techniques for calculating the ecological footprint of their Games: "one available measure of sustainable development at the Olympic Games could be the so-called ecological footprint, i.e. the overall impact on the environment. Special attention will be given at the 2006 Olympic Winter Games to how the Games succeed in making savings in the consumption of energy and natural resources" (Helsinki, 1997, p .74). It is

clear with these Games that as the IOC pushed environment as part of their agenda, that host cities responded by stepping up their own environmental planning.

A quantifiable evaluation of the strength of each candidate city's environmental bid first made its appearance in the bids for the 2010 Winter Games. The IOC wanted to create a metric that would easily evaluate the strength of each bid with regard to its environmental impact. This was obvious in bid reports as they included tables with grades for each bid cities environmental proposals. Table 3 presents the environmental conditions and impact evaluations from the 2010 Winter Olympic Games bid report as an example.

Table 3
2010 Winter Olympic Games bid report environmental conditions and impact evaluations

Applicant City	Minimum Grade	Maximum Grade
Vancouver	6.7	8.5
Sarajevo	4.8	6.7
Jaca	5.5	7.5
Salzburg	7.8	9.0
PyeongChang	5.5	7.5
Harbin	4.0	6.3
Bern	7.5	9.0
Andorra la Vella	5.2	7.5

These grades essentially allow the IOC to claim that one environmental bid is stronger than another (i.e. Salzburg's grades are stronger on average than those of Harbin). However, the IOC evaluates the bid based on the strength of the whole bid and not just the specific environmental section. In the first usage of these environmental impact evaluations, the bids with the strongest evaluations, Bern and Salzburg, were not the winning bid as the Games were awarded to Vancouver (IOC, 2003a). Regardless, Bern, Salzburg, and Vancouver all had strong environmental impact evaluations overall.

The bid manual itself for these 2010 Olympic Winter Games included new requirements of identifying and engaging stakeholders in the environmental initiatives as well as the Games as

a whole (IOC, 2001). In this round of bidding, several bids identified sustainability as a major theme for their environmental proposals (PyeongChang, 2001; Salzburg, 2001; VANOC, 2001). Vancouver wanted to create the 'sustainable Games.' This meant, in their eyes, issues beyond the environment (VANOC, 2001). For example, the city wanted to create an inclusive and socio-economically equal Games that would benefit all citizens regardless of their socio-economic status (VANOC, 2001).

London, the winning bid for 2012, wanted to work with the WWF's theme of 'One Planet Living' (London, 2003). They created their own Olympic theme and called it 'Towards a One Planet Olympics' (London, 2003). Sustainability was central to their bid:

> Sustainable development is integral to every aspect of London's 2012 vision for the Games; from the earliest preparations through delivery to a lasting post-Games legacy that will benefit sport, the community and the environment as a whole. This builds on the spirit of the Olympic Movement's Agenda 21… (London, 2003, p. 75)

This statement shows their commitment to the concept of a sustainable Olympic Games, but London set out some goals in their bid as well:

> The goals are to support he delivery of the Games and to create a legacy that will set new standards for sustainable development in the community by improving health, environment, and quality of life…
>
> - Low carbon games. To showcase how Olympic Games are adapting to a world increasingly affected by climate change.
> - Zero waste games. Minimising waste, maximising recovery and recycling and developing clean waste-to-energy systems.

- Conserving biodiversity. Enhancing urban greenspaces and bringing nature closer to people.
- Promoting environmental awareness and partnerships. Engaging people within their own environments and communities through dialogue, practical projects and a wide range of sport and cultural activities. (London, 2003, p. 75)

It was evident that the London OCOG wanted to become a champion of sustainability in their edition of the Games. As well, the London Organizing Committee sought to redevelop a derelict area into the Olympic Park (London, 2003). In addition to their commitment to sustainability, the emergence of the next environmental theme, zero impact, can be seen in London's commitment to low carbon and zero waste. London certainly set a high standard for all future environmental and sustainability efforts.

In 2014, the IOC presented Olympic Agenda 2020, which is a strategy document outlining the future of the Games (IOC, 2015a). Agenda 2020 included 40 recommendations for the future of the Games with two recommendations focused on sustainability: "Recommendation 4: include sustainability in all aspects of the Olympic Games; and Recommendation 5: include sustainability within the Olympic Movement's daily operations" (IOC, 2015a, p. 12). Important to note is that Agenda 2020 was created in 2014, the year of the Winter Games, but not during the bid process for the 2014 Winter Games, which happened in the decade prior to 2014. For those 2014 Winter Games, Sochi was the winning bid and their bid focused on sustainability. In their bid, Sochi's organizing committee stated: "all Olympic developments will proceed with a commitment to environmental consciousness, sensitivity, and sustainability" (Sochi, 2005, p. 65). The Sochi sustainability objectives included: inclusiveness, economic viability, and environmental consciousness (Sochi, 2005). In addition to these promises, they mentioned

making all developers pay environmental fees as part of their bids for Olympic projects, putting environmental stipulations into all contracts, and attempting to meet standards for sustainability as set by the World Health Organization (Sochi, 2005). One can see in this bid, that Sochi approached sustainability as an issue of more than simple environmental protection. It has expanded to include other larger social issues as well. Lastly, in 2015, IOC President Thomas Bach called on all bids for the 2024 Olympic Games to commit to sustainable development (Morgan, 2015).

The concept of sustainability has begun to grow in its meaning to issues beyond simple environmental sustainability, as it includes health, quality of life, public safety, and economic goals. This is an important step for the Olympic Movement to take. It is at this moment that there begins another evolution in the Olympic environmental movement: the transition to zero.

Zero Impact in the Games

With the next round of bidding on the 2012 Games, came more change in environmental planning. Environmental mandates appear to have been changing as the world and the Games evolved. It is at this time that the theme of zero impact in the Games began to emerge prominently. The IOC bid manuals requires incredibly detailed five-year studies of ambient air and water quality as part of the bid documents for each candidate city (IOC, 2003b). Several trends across the bids emerged. International Organization for Standardization (ISO) standards appear again as multiple bids seek to find metrics for measuring the value of their environmental work. Water quality is addressed for open water events like canoeing, kayaking, sailing, and triathlon. Most cities also tried to include detailed budgets for environmental projects. Each city, again, brought their own special projects to the table. London's zero impact efforts of carbon neutrality and zero waste were discussed previously (London, 2003). But, one other bid worth

mentioning in regards to zero impact was Paris, who promised zero-emissions (Paris, 2003). From the Paris bid book:

> Faced with the issue of global warming, Paris 2012 intends to host the first Games with an overall neutral greenhouse gas emissions balance. The CO_2 emissions balance will take into account emissions from air traffic generated by the Games. The concept calls for three measures:
>
> - Significant reduction of greenhouse gas emissions through venue clustering, priority use of public transport, energy saving measures, and operation 'Green Stadium';
> - Offsetting greenhouse gas emissions by producing renewable energy resources, "zero-emissions" at the Olympic Village, and operation 'Solar Stadium';
> - Offsetting greenhouse gas emissions through a voluntary energy-saving programme in which the Ile-de-France residents will be encouraged to participate. (Paris, 2003, p. 99)

To summarize Paris' efforts, they recognized the significant environmental impact of hosting the Olympics and were attempting to host an event where the net emissions were zero. Ultimately, Paris was not awarded the rights to host the Games and this zero emissions plan was never put into action. For these 2012 bids overall, once again, the IOC stepped up their requirements and criticisms while candidate cities elevated their proposals. This trend continued to surface in future editions of the Games. But, the important change to notice is the beginning of ideas of zero-emissions and, in the future, carbon neutrality, since these practices are different from environmental protection and sustainability.

Changes were made in the bid manual for the 2014 Winter Games as was consistent with the zero impact theme. Specific air measurements were now required for carbon monoxide, PM 10, sulfur dioxide, and nitrogen dioxide (IOC, 2005a). The Kyoto Protocol on greenhouse gas emissions reduction was mentioned prominently in the IOC evaluation of all bids (IOC, 2007a). The IOC also expressed increased concern for rising global temperatures and the effects on snowfall (IOC, 2007a). These changes support the notion that the IOC wanted to see the impact of the Games reduced with a specific interest being shown in emissions and lowering emissions output.

Moving forward to the 2016 Games, there were additions to the bid process which included required descriptions of management tools and compliance standards for each bid city as well as plans for minimization of impact and energy needs (IOC, 2007b). Changes from bids were notable in this edition of the Games. For example, Tokyo proposed a Games that would be carbon-minus in their impact:

> Tokyo plans an Olympic "carbon-minus" (reduced emissions) programme involving new technology and renewable energy plans, and will mainly use existing or temporary venues to reduce environmental impact. It will also implement further water purification measures and use zero or low-emissions vehicles. (IOC, 2009a, p. 57)

Tokyo's commitment to a carbon-minus Games was a new proposition from a candidate city; however, Tokyo was not awarded the bid for the 2016 Games. In another candidate's bid, Chicago included plans for decreased emissions and carbon neutrality. Per the IOC bid report:

> Even though the USA has not ratified the Kyoto Protocol, the City of Chicago has a commitment to achieve reductions in greenhouse gas emissions in line with the

> Protocol… Chicago is committed to having carbon-neutral Games, and environmental legacies would include the introduction of sustainable technologies. (IOC, 2009a, p. 56)

Important to note from this text is that the IOC mentioned the lack of Kyoto Protocol recognition by the United States, which was previously mentioned in their reports for New York City's 2012 bid (IOC 2005b: IOC, 2009a).

The winning bid for the 2016 Games came from Rio de Janeiro. They had four environmental focus areas in their bid: water conservation, renewable energy, carbon neutrality, and waste management and social responsibility (Rio de Janeiro, 2007). Their bid addressed the sustainability theme as well as zero impact with a sustainability plan that was meant to ensure the health of people, planet, and prosperity. In regards to zero impact, Rio proposed a goal of carbon neutrality for the Games:

> Emissions generated by Games preparations and operations will be neutralized through the reforestation of over 3 million trees in strategic rain forest areas out of the 24 million trees to be planted in the state before 2016… It includes the Atlantic Forest protection campaign. Zero Illegal Deforestation, to reinforce the official green recovery targets in the Pedra Branca and Tijuca buffer zones surrounding the venues and in the mangroves at the Barra lakes. (Rio de Janeiro, 2007, p. 97)

Rio de Janeiro's ambitious carbon neutrality plan to achieve a zero impact result comes in the form of this ambitious tree planting plan to recover what will be destroyed for the hosting the of the Games. One can, again, observe that several bids included mentions of zero impact goals in the form of zero emissions and carbon neutrality (e.g., Tokyo's 2016 bid, Chicago's 2016 bid, and Rio de Janeiro's 2016 bid).

The bid manual for the 2018 edition of the Games requires descriptions of green building certifications planned for use in construction or renovation (IOC, 2009b). The winning bid came from PyeongChang, which proposed a compact and carbon neutral Winter Games (PyeongChang, 2009). Their bid touted their Olympics as being the next generation of environmental standards at the Games by referring to them as the "Green Olympics and Paralympics for the Next Generation" (PyeongChang, 2009, p. 78). They have also been nicknamed the Low Carbon Olympics. Ultimately, their goal is to be the first oxygen-plus Winter Games ever. More specifically, the OCOG aims to:

- Adapting to climate change: Through carbon neutralization and energy surplus
- Maintaining a healthy ecosystem and biodiversity: Through minimising our environmental footprint
- Preserving water resources and retaining water quality levels: Through non-point source pollution control and smart use
- Achieving zero waste: Through minimising waste and wide-scale recycling
- Realising sustainable regional development: Through building low carbon green growth businesses and a model city
- Promoting environmental awareness: Through education and eco-experience programmes. (PyeongChang, 2009, p. 89)

One can see that their zero impact goals include: zero waste, net zero energy use or creation of a surplus, zero emissions, and zero wasteful water use (PyeongChang, 2009). This is another strong example of the Games moving towards a zero-emissions standard as part of their environmental practices.

One of the most recent bids to be awarded are the 2020 Games, which were given to Tokyo. In their bid, Tokyo mentioned that they wanted to provide a positive legacy and that they intend to study the London 2012 sustainability strategy as part of their plan (Tokyo, 2011). The proposal reflected a zero waste with a model based on 5 R's: reduce, reuse, recycle, recover energy, and restore the urban nature (Tokyo, 2011). As for the next bid to be awarded, the 2024 Games, IOC President Thomas Bach declared that the Games will have to implement a carbon management and reduction plan for the event (Morgan, 2015).

This history of environmentalism in the Olympic Games is clearly a long, detailed, and complex series of events that have led to what we know as the modern version of the Olympic Games. The environmental movement appears to have passed through three themes thus far. It started with a focus on simple environmental protection and environment as an issue to manage, but shifted in the late 1990s towards sustainability with the idea of creating an event that is more beneficial and less destructive for the host cities. Thus, sustainability encompasses more than just environmental protection since it covers economic, health, and social justice issues. Later, in the late 2000s, there was the inclusion of zero impact and carbon neutrality with the idea of creating an event that is ultimately a net benefit to host communities or at least not a net loss. With this shift, environment became viewed as an opportunity rather than a problem. This history is summarized in Table 4. It is important to distinguish that these themes are not mutually exclusive. The simple environment theme is truly at the core of every bid. However, sustainability and zero impact are included in other bids and, sometimes, all three are present (e.g., Rio de Janeiro's 2016 bid and Tokyo's 2020 bid). An issue worth pointing out is that not all organizing committees completed impact assessments or even contacted any environmental organizations before submission of their bids and the most complete and grand environmental

Table 4
Post-Study Significant Olympic Movement Environmental Policies and Actions

Year	Notes
1986	IOC President declares that environment ought to be the third pillar of Olympism.
1988	Lillehammer awarded rights to host 1994 Winter Olympic Games, which became first environmental Games.
1991	Emergence of environmental theme in the Movement. IOC adds to Olympic Charter that games should show concern for the environment.
1992	IOC signs Earth Pledge committing to make the Earth a safe place for future generations.
1993	Sydney awarded the right to host the 2000 Olympic "Green Games."
1994	"Environment" added as third pillar of Olympism. IOC signs agreement on sport and the environment with United Nations Environment Program. IOC creates commission on Sport and Environment to hold conferences on the subject. 1994 Winter Olympics held in Lillehammer.
1995	Atlanta submits a late document on environmental planning.
1996	Emergence of sustainability theme within the Movement. Olympic Charter is amended to include mission on the environment, which includes mention of sustainability.
1999	Creation and adoption of Agenda 21 for the Olympic Games based on UN's Agenda 21. Turin awarded rights to host first sustainable Winter Games in 2006.
2000	Sydney "Green Games" held.
2001	IOC creates Olympic Games Global Impact program (OGI).
2003	IOC amends Charter to include a mission to promote a positive legacy for host cities and countries. Vancouver awarded rights to host 2010 Winter Games: the first Games to use OGI.
2005	Emergence of zero impact theme in the Movement. London awarded rights to host the 2012 Games under the theme 'One Planet.'
2006	IOC releases code of conduct for athletes to act as environmental role models
2009	Rio de Janeiro awarded rights to host the first carbon neutral Games in 2016.
2011	PyeongChang awarded rights to host the first oxygen plus Winter Games in 2018.
2014	Adoption of Olympic Agenda 2020 on the future of the Games, which includes two recommendations on sustainability.

bids are not always the ones that end up winning. The implications of this environmental history of the Games as well as its relevance for future research will be discussed more thoroughly in the discussion section that follows.

Discussion

Much environmental history has been learned as a result of analyzing IOC documents, bid books, and periodicals. There are themes in this history of simple environmental protection, sustainability, and eventually zero impact standards. These themes help to better present an environmental history of the Olympic Games as one can now see trends in the type of planning and practices for the Games.

Chappelet (2008) mentioned that the Atlanta 1996 Games did not include any planning regarding the environment. Evidence suggests that while the bid for Atlanta did not include any environmental language other than the typical meteorological data, they did actually present a document on environmental planning to the IOC in 1995 (Atlanta, 1995). Whether this document presented genuine efforts to protect the environment by Atlanta or was a reaction to the growing environmental movement is not yet known. This appears to be an example of isomorphism occurring within the Olympic Movement as Atlanta's environmental planning evolved to be comparable with other bids at the time. With Lillehammer's Games and the increased presence of environmentalism within the Movement via policies and directives from the IOC, Atlanta appeared to have been compelled to have their Games adapt to the current trend. Atlanta experienced normative pressures (e.g., forces from the growing environmental movement around them in the Olympic Games) and coercive pressures (e.g., IOC policies and actions) from the IOC and from the Olympic Movement with regard to environmental planning (DiMaggio & Powell, 1983). While Pentifallo & VanWynsberghe (2012) discussed Rio de Janeiro's isomorphism in its environmental policy, it is possible that this action by Atlanta shows an earlier example of isomorphism or early adoption within the Olympic Movement. Atlanta's late presentation of its statement on the environment supports the notion that isomorphism exists

within institutions since they were adapting to the environmental situation around them and attempting to homogenize their Olympic planning (DiMaggio & Powell, 1983).

A peculiarity that followed the Atlanta Games comes in the form of the 1998 Winter Games in Nagano and the 2000 Games, which were held in Sydney. Cantelon and Letters (2000) suggested that they might have been required to include planning for environment in their bids, yet Chappelet (2008) suggests they were voluntarily engaging in environmental planning. The first edition of bids of required environmental planning would have been presented before 1995, which is the year in which the IOC awarded the Games to Salt Lake City (Chappelet, 2008). However, this requirement must have come much sooner. The 1998 Winter Olympics were awarded to Nagano in 1991, and both Nagano and Aosta included environmental impact statements in their bids whereas other candidates did not (Aosta, 1989; Organizing, 1989). The Manual for Cities Bidding for the Olympic Games in 2000 was published in 1992, which included several environmental themes that candidate cities were required to address (IOC, 1992). This was before the Bid Manual for the 2002 Winter Games was published. As such, all of the bids for the 2000 Games included lengthy documentation of their environmental impact. Also, while these Games were held in 2000, the planning process would have begun well before Lillehammer hosted their Olympic Games in 1994 and before the IOC enacted its formal requirements for environment. It would seem the data suggest support for Cantelon and Letters' suggestion of when bids were required to address environment. While it cannot be confirmed that the 1998 Winter Games bids were required to address environment, the data do support the notion that the 2000 Games were required to submit documentation on their environmental impact. Thus, Sydney's inclusion of extensive environmental planning for its Olympic Games in

2000 was not voluntary, but actually a reaction to coercive pressure from the IOC (DiMaggio & Powell, 1983).

Also occurring in 1996, along with the Atlanta Games, was a formal change from the IOC. An additional mission was added to the Charter that focused on environment (Gold & Gold, 2013). This is found in article 2.13, which states that the IOC has a mission to: "encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require the Olympic Games be held accordingly" (IOC, 2013, p. 17). This is the first time that sustainability makes a presence in the environmental movement within the Games and it marks a change in the environmental practices by the Olympic Movement. The IOC created and adopted its own version of Agenda 21 in 1999, which was based on the UN's Agenda 21 (Chappelet, 2008). This agreement addresses sustainable development for the future. After this time, and beginning with bids for the 2004 Games and the Torino 2006 Winter Games, most bids discussed sustainability along with general environmental protection. The planning process for each of these Games would have started in the mid 1990s at the latest, which coincides with the IOC making these changes to its Charter. While environmental issues were discussed as a part of sustainability, sustainability was still a much broader an inclusive term. For example, Vancouver 2010's use of sustainability was more than just environmental protection, but it also meant equality for its stakeholders (VANOC, 2001). Regardless of this shift in focus from the Movement, the old environmental mandates from the IOC remained as part of the bid books. Aside from the coercive pressure form the IOC, these mandates had already become institutionalized within the Games via mimetic and normative pressures (DiMaggio & Powell, 1983). OCOGs were mimicking each other's environmental plans as the mandates largely

remained the same and with environmentalism growing globally, it was beneficial to these OCOGs to address environment.

The last major environmental theme to emerge was the growth of the zero impact trend. This emerged around 2005 when London was awarded the rights to the 2012 Games, which were held under the theme 'One Planet' (London, 2003). Similar to the sustainability theme, all environmental mandates remained in the bid manuals along with the sustainable development mandates. But, the environmental documentation required continued growing. This is because the IOC became more concerned with air and water quality and its OGI program. More bids after this point make the point to achieve zero emissions, zero waste, carbon neutrality, oxygen plus, or any combination of these (e.g., IOC, 2009a, London, 2003; PyeongChang, 2009; Rio de Janeiro, 2007). Again, we see inclusion of previously institutionalized practices in these bids as they evolve which makes each bid seem more homogenous. This trend supports the work of Pentifallo & VanWynsberghe (2012) when they suggested that Rio de Janeiro was an example of isomorphism within the Games due to their adoption of similar environmental practices to other previous Games and bids. It seems that the Movement as a whole is responding to normative pressure to adopt stronger environmental practices to hold a Games that fits the idea of what level of environmental impact is socially acceptable. This would support the work done on institutional theory by DiMaggio and Powell (1983). What makes this important in the context of the Olympic Movement is that it appears that in order for a bid to remain relevant from an environmental standpoint, it has to at least address all of the same concerns as the other bids in its cycle, which makes all the bids more homogenous. In order to stand out in regards to environmental planning, bid organizers should consider inclusion of an environmental project that is ahead of the current trends in the Olympic Movement.

While environmentalism in Olympic Movement is constantly evolving, the environmental and sustainable mandates from the IOC have remained largely consistent. If change occurs, it is because the mandates have grown. This means that most bids will continue to look more homogenous as they have all had to respond to the same sets of mandates (i.e., normative and coercive pressures). Potential candidate cities are looking at previous host cities' environmental proposals and adopting the successful practices into their own bids which is partially driving growth in the environmental mandates in the Games (Pentifallo & VanWynsberghe, 2012). OCOGs have been responding to normative pressures from society, coercive pressures from the IOC, and mimetic pressures from each other (DiMaggio & Powell, 1983). Regardless of the cause of these changes, this evolution of the environmental movement within the Games has contributed to making the Games a more environmentally responsible event overall.

Conclusion

The primary purpose of this study was to explore the evolution of environmental practices within the context of the Olympic Games and how environmental protection came to be considered part of the norm in the Olympic Movement. As the Olympics are a mega-event, they have a large impact on the communities who are hosting the event. Given the growing global concern for environmental protection and degradation, this study comes at a relevant time for sport and the environmental movement. The period of time considered for study was the whole of the modern Olympic Movement; however, considerable emphasis was placed on the period starting in the 1980s until the present. As a result of this study, three environmental themes are identified in relation to the Olympic Movement: environment, sustainability, and zero impact.

Simple environmental protection was the first theme to emerge in the Olympic Games in regard to environmentalism. The 1994 Lillehammer Winter Games were the first to fully embrace environmental protection as part of their hosting duties. The editions of the Games that followed, all attempted to address environmental impact of their Games as well, but these were voluntary (Atlanta, 1995; Organizing, 1989). The 2000 Sydney Olympic Games were possibly the first to be required to address environment as part of their bid (IOC, 1992). Now, all bids are required to address environmental impact. This suggests that environment has been a continuous theme within the Games from the 1990s onward. While the bid requirements are becoming more complex with the addition of each new demand, environmental issues required in the 2000 Games are largely still present in the most recent bid manuals (IOC, 1992; IOC, 2009b). It seems that a bid cannot address sustainability or zero impact without first addressing basic environmental protection. Thus, environment can be considered the core theme, as its presence is what the other two themes build from in their demands.

Sustainability became a very important issue to address in addition to environmental protection after emerging in the mid 1990s. Here, the IOC attempts to address issues of meeting the needs of the current Games without sacrificing the needs of future generations living in the host community. In several bids (e.g., Vancouver's 2010 bid, London's 2012 bid, and Sochi's 2014 bid) sustainability was meant to address issues beyond simple environmental protection. The ideas of economic fairness, public health, and quality of life became central to bids' environmental statements in addition to environmental protection. Agenda 21 for the Olympic Movement and Agenda 2020 were some of the driving forces behind creating a more sustainable Olympic Games. Since Agenda 2020 was created in 2014, it appears that sustainability is a

theme that will remain in many future Games bids. From this sustainability theme emerged the next theme on absolute reduction of impact.

The third major theme found in this study was the goal of a zero impact Games. Many host cities touted goals of zero emissions, zero wastes, carbon neutrality, and oxygen plus Games (e.g., London's 2012 bid, Rio de Janeiro's 2016 bid, PyeongChang's 2018 bid). These zero impact goals can be found in in addition to the environmental protection and sustainability goals of a host city. Thus, this is another building block, like sustainability, that cities use to strengthen their environmental proposals in their bids. As well, the inclusion of the previous themes helps to strengthen the idea that environmental protection is an issue to be associated with the Games. While the first bid requirements were quite simple, the most recent bid requirements are detailed and require much effort from a host city to cover all of the necessary information (IOC, 1992; IOC, 2009b). Important to note is that unlike environment and sustainability, zero impact is not required to be addressed by the IOC. These Games are opting to achieve zero impact goals in addition to their required environmental and sustainability goals.

In institutional theory DiMaggio and Powell (1983) suggest that via isomorphic process, organizations in a similar environment will begin to look the same. It appears that isomorphism is occurring within the Olympic Movement's environmental practices. Each subsequent bid builds on the previous ones and slowly institutionalizes those borrowed practices into the greater movement. The idea here is that as these environmental themes emerged in the Olympic Movement, they built upon the previous ones, which cemented the previous themes' places into the Games. These bids are responding to normative pressures from society, coercive pressures from the IOC, and mimetic pressures from each other in order to have their efforts viewed as legitimate and effective. As a result of this, they have achieved what Scott (2013) described as a

certain staying power. They are legitimized and accepted by their society. Environment and sustainability are now considered a formal part of the environmental bid process. Thus, they are institutionalized within the Movement. This research supports the work of Pentifallo and VanWynsberghe (2012), who proposed that isomorphism was occurring in the environmental movement in the Games. This study shows that isomorphism is, in fact, occurring within the Olympic Movement, which provides support for the basic premises of the theory, that successful organizations in a similar environment become homogenous in their structure and practices (DiMaggio & Powell, 1983). This isomorphism that can be found in the Olympic environmental movement has been beneficial to the Games as they strive for a more environmentally responsible Olympics. This is important for future Olympic organizers since it shows that they ought to address, at the least, all of the environmental themes the IOC requires in their bids. If organizers want to have a successful environmental bid, they should look for the next successful project to have become the norm in the future.

There is room for future study on this subject. It is possible that because Lillehammer and the 1998 bids from Nagano and Aosta included environmental language, that Atlanta was attempting to homogenize itself within the trend in presenting its environmental statement to the IOC. In this case, Atlanta might have experienced mimetic pressures from the other active OCOGs at the time on top of coercive pressure from the IOC. This is an area in which future research could be conducted to determine the authenticity of Atlanta's environmental efforts and whether organization learning occurred between Atlanta, the IOC, and other COOGs. It would be beneficial to interview members of the Atlanta Organizing Committee to answer these questions. In addition to this Atlanta case, it would be beneficial to research if organizational learning occurred between other OCOGs and the IOC. Understanding what types of knowledge are

shared, if at all, between these organizations might provide a clearer understanding of how these environmental trends in the Games evolved.

Themes in the environmental history of the Olympic Games include basic environmental protection, sustainability, and, most recently, a focus on zero impact. The environmental movement in the Olympic Games appears to bow to normative, coercive, and mimetic pressures from multiple groups which led to isomorphism amongst the various bids. This case of the environmental movement within the Olympic Games contributes to the sport management literature on the subject of the Olympic Games and environmental planning within mega-sport events. Future organizers of the Olympic Games ought to consider the past trends in environmental planning in the Games and look for opportunities to be ahead of these trends in the future in order to strengthen their bids and hold a more environmentally sensitive event.

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CHAPTER 3

STAKEHOLDER IDENTIFICATION AND ROLE IN ADOPTION OF ENVIRONMENT

There has been increased concern with regard to the impact of human activities on the environment since the publishing of the Brundtland Report in 1987 (World Commission, 1987). The idea of corporate social responsibility (CSR) suggests that all industries, including sport, ought to reflect on how their function and management impacts the environment in order to behave in the manner that is best for society (Lindgreen, Swaen, & Johnston, 2008). Events are ethically and legally compelled to be held in the most environmentally friendly and sustainable manner possible (Getz, 2005). It is important to note that sustainability is often connected with environmentalism. Sustainability is described as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission, 1987, p. 16). The Olympic Games have been challenged to become more sustainable in future editions of the Games due to their ever increasing size and their position within the sport industry as one of the premier events in the world (Cavagnaro et al, 2012). Events ought to be sustainable as well. Cavagnaro et al (2012) have defined sustainability in event management as "[impacting] positively on people, planet, and profit, and thus [contributing] to fulfill the economic, socio-cultural, and environmental needs of all involved stakeholders, including the host community" (pp. 201-202). In other words, a sustainable Olympic Games would involve meeting the needs of all stakeholders who are involved in the hosting of the Games. Interestingly however, the identification of the stakeholders involved in the environmental and sustainability aspects of the

Olympic Games has been under researched. As a result, there is also little known on who these stakeholders are as well as the role of those stakeholders in making environmental protection and management part of the norm of Olympic Games organization. The purpose of this paper attempts to bridge this gap in the literature by determining which stakeholders helped the IOC and OCOGs integrate environmental practices into the planning and implementation of the Games, and of those stakeholders that are involved in this process, what are their roles?

Given this information, this study considers the environmental history of the Olympic Games as well as stakeholder, which will both be used to provide theoretical perspective on this study. Following the review of literature, methodological issues, results, discussions, and conclusions will be discussed.

Environmental Management in the Olympic Games

When creating the modern Olympic Movement in the 1890s, Pierre de Coubertin understood that hosting the Olympic Games was an opportunity for a host city and country to revitalize itself and its public image (Gold & Gold, 2013). Yet, the first several editions of the Olympic Games were not used for the promotion of urban renewal, environmental preservation, or political promotion except for the 1936 Berlin Nazi Games (Gold & Gold, 2013). One scholar, Chappelet (2008), suggested that environmental initiatives in the Olympic Games start with some of the earliest Winter Games. Since these events were held in outdoor environments that depended on winter conditions, they arguably did have a greater environmental impact. However, the size of the Winter Games was much smaller than their summer counterpart, which suggests an inadvertently more environmentally friendly event since they were small in scale. Previous literature suggests that the late 1980s and early 1990s are when that the modern environmental movement began in the Games (Chappelet, 2008). After the Albertville Winter

Games in 1992, protests coerced Lillehammer, in its 1994 Winter Games planning, to hold what is suggested to be the first environmentally friendly Olympic Games (Chappelet, 2008; Karamichas, 2013). Norwegians used the Lillehammer Games as an opportunity to display their strong environmental policy to the world (Chappelet, 2008).

In 1985, while the Lillehammer Games were being planned, then IOC president Juan Antonio Samaranch suggested that environment ought to become the third pillar of Olympism (Karamichas, 2013; Kearins & Pavlovich, 2002). As a result, the IOC amended its Charter in 1991 to suggest that the Games should show a responsible concern for the environment. This was in response to criticism that the size of the Games was constantly increasing (Gold & Gold, 2013). Sydney, Australia submitted a bid for the 2000 Games in 1993 that touted a 'Green Games' theme for the event. Sydney's organizing committee worked closely with Greenpeace to create this green plan for their Games (Chappelet, 2008). Sydney's bid guidelines on environment were incorporated into policy from the New South Wales' government (Kearins & Pavlovich, 2002). Until this time, there had been little environmental policy from the IOC and interaction amongst the OCOGs and environmental stakeholders.

This changed in 1994. Environment was added as the third pillar of Olympism (Gold & Gold, 2013). The Lillehammer Games were held at this time as well. A year later, the IOC created a commission on Sport and the Environment. This commission's role was to hold conferences on the subject, advise the IOC executive board on environmental issues, and publish Olympic environmental reports (Chappelet, 2008). At this time, future cities looking to host the Olympics were required to submit environmental impact reports as part of their initial bids (Gold & Gold, 2013). Then, in 1996, an amendment was made to the Olympic Charter, which added a mission to commit to sustainable development and environmental protection (Chappelet, 2008;

Gold & Gold, 2013). But, the IOC's policy on environment is largely symbolic in nature as they are not the group that organizes an individual Olympic Games. The Organizing Committees are the groups that actually plan and host an Olympic Games. Thus, the environmental decisions made are up to the OCOG, its respective host community, and other stakeholders (Kearins & Pavlovich, 2002). As well, host cities and OCOGs are responsible for ensuring that their Olympic Games leave a positive legacy for up to two years following the hosting of the event. This responsibility is actually a mandate from the IOC (Stuart & Scassa, 2011).

The IOC did not stop with its environmental policy at this point. They adopted an Agenda 21 for the Olympic Movement in 1999, which outlined values on sustainable development that all Olympic organizations must hold (Chappelet, 2008). Later, in 2000, the Olympic Games Impact program was created which allowed the IOC and OCOGs to measure the success of proposals on sustainable development and its use is now mandatory for all host cities (Chappelet, 2008). As a result of these policies, all Olympic bids are required to submit documentation on environmental impact and planning as part of the bid as well as carry out the proposals during the Games themselves. As well, the IOC requires that the OCOGs work with certain actors to achieve their environmental goals (Chappelet, 2008).

Vancouver proposed a sustainable Games for 2010 that was based on the AA1000 AccountAbility principles on sustainable challenges (AccountAbility, 2008; VANOC, 2010). Vancouver set a goal on sustainability that was focused on more than just environment. Financial, economic, and social sustainability were included in their bid as well (Holden et al, 2008). According to the Greater London Authority (2007), these Vancouver Winter Games partnered with Greenpeace and the World Wildlife Foundation in order to achieve their sustainability goals. During the planning process for these Vancouver Winter Olympics, the IOC

amended its charter again in 2003 to include a mission on promoting a positive legacy from the Games (IOC, 2013). A few years later, Olympic athletes were required to act as role models for environmental initiatives (Mallen, Hyatt, & Adams, 2010). Changes to Olympic policy on the environment have continued to occur. The most recent change is the adoption of Agenda 2022, which occurred in August 2014 (IOC, 2015a). Agenda 2022 defines a future path for the Games and two of its recommendations address sustainability in the Games. One of these recommendations is to "include sustainability in all aspects of the Olympic Games" (IOC, 2015a, p. 37). And, the other recommendation is to "include sustainability within the Olympic Movement's daily operations" (IOC, 2015a, p. 37).

The history of environmentalism and sustainably in the Olympic Games is short compared to the whole history of the Games. However, there has been much action from the IOC in the last several decades on environmental issues, but most initiatives are still left to the OCOGs themselves. While these changes from the IOC and initiatives from OCOGs on environmental issues appear to have led the way to stronger environmental programs in the Olympic Games, other stakeholders have been involved in bringing the environmental movement into the Olympic Games on a more permanent basis. As such, the purpose of this paper is to identify the Olympic environmental stakeholders and define their role in the adoption of the environmental movement within the Games. This will show which organizations are largely responsible for making environmental management part of the standard Olympic planning and management process and how these organizations were involved.

Theoretical Framework

In order to help interpret the data, identify stakeholders, and better understand the roles of stakeholders in adopting environmental management into the Games, stakeholder theory was utilized. The next section will explain stakeholder theory and justify its use in this study.

Stakeholder theory is concerned with the relationships between a focal organization and its various stakeholders (Fernando & Lawrence, 2014). A stakeholder is, according to Freeman (1984), "any group or individual who can affect or is affected by the achievement of the firm's objectives" (p. 46). Stakeholders are who and what matters to an organization and their pursuit of their goals (Freeman, 1984). The theory itself suggests that organizations must, in order to be successful, meet the expectations of the various stakeholders and not just its shareholders (Donaldson & Preston, 1995). Shareholders are those who are financially invested in a particular firm whereas the stakeholder is anyone who is affected by or can affect the firm. They are not necessarily invested in the firm financially, so they could be employees, customers, suppliers, competitors, regulators, or any other number of groups affected by an organization's existence. There have been a number of authors who have written on stakeholder theory (i.e., Donaldson & Preston, 1995; Fassin, 2012; Mitchell, Agle, & Wood, 1997; Phillips, 2003), which will be discussed next in brief and followed by a short discussion of stakeholder theory in the sport event management and Olympic context.

Two authors who have written on the process of identifying stakeholders are Fassin and Phillips. Fassin (2012) introduces the idea of a stakeowner as a "genuine [stakeholder] with a legitimate stake […] Stakeowners own and deserve a stake in the firm" (p. 83). In other words, a stakeowner is one who owns a stake in the firm rather than simply being affected by the firm's activities. Additionally, Phillips (2003) discusses the idea of identification, which seeks to define

the stakeholders of the organization. Normatively legitimate stakeholders as those to whom an organization has an obligation and derivatively legitimate stakeholders as those who may affect the organization or its stakeholders (Phillips, 2003). This study identified those stakeholders that are normatively legitimate (i.e., the ones who the OCOG is required to engage) as well as those that are derivatively legitimate (i.e., the ones who are impacted by the general efforts of the IOC and the OCOG). Since identification of Olympic environmental stakeholders is one of the central questions of this study, this literature from Fassin and Phillips was integral to examination of the findings.

Fassin (2012) also suggests that an organization practicing CSR (i.e., functioning in such a manner as to produce socially beneficial outcomes) implies that they are practicing corporate stakeholder responsibility. As an example of corporate stakeholder responsibility, for an OCOG to claim they practice CSR implies that they are working with the various stakeholder groups of the Olympic Games and are satisfying their needs. This would imply that OCOGs with good environmental practices should be engaging multiple stakeholder groups on the matter, and therefore any group or organization engaged by the IOC and OCOG with regard to environment or sustainability is a stakeholder to consider. Another aspect of value from Fassin (2012) is the idea of stakeholder reciprocity between a stakeowner and various other stakeholders. In other words, the various stakeholder groups exchange services for the mutual benefit of each other. Thus, if the OCOG and an environmental organization are both stakeholders, then they work together in order to each receive a benefit to each other like hosting the Olympics for the OCOG and environmental protection for the environmental organization. As such, this project considered stakeholders engaged with the IOC and OCOG who received some benefit from their inclusion.

Once a stakeholder is identified, it will be important to understand their stakeholder role(s). What is perhaps the best example of stakeholder roles in events can be found in the festival stakeholder roles research by Getz, Andersson, and Larson (2006) as no literature was available that details stakeholder roles in sport events. While working with the festival organizers, the owners and producers of the festival, a total of six other stakeholder roles were identified: co-producers are independent organizations that volunteer to help hold the festival, facilitators provide resources and support, suppliers and venues are groups who often become sponsors and partners for the festival, allies and collaborators provide intangible help with issues like marketing, regulators are groups from whom the festival requires approval, and there is the audience and the impacted that are the attendees and any other impacted groups (Getz et al, 2006).

In regards to a sport event, Parent (2008) has identified many different stakeholders in a sport event: national and local governments, communities, sponsors, sport organizations, delegations, and the media. In the Olympic context, Kearins and Pavlovich (2002) recognized the role of stakeholders and liaisons between them as crucial to the execution of Sydney's 'green Games.' Several important stakeholders necessary for the hosting of this Sydney edition of the Olympic Games were identified and their roles defined. For example, the Olympic family's (namely the IOC) role was to select the host and regulate the Games in a hands-off manner (Kearins & Pavlovich, 2002). Local governments and the OCOGs were responsible for hosting the Games (Kearins & Pavlovich, 2002). Businesses and commercial sponsorships provided the funds and resources necessary for hosting the Games (Kearins & Pavlovich, 2002). Lastly, developers and merchandisers were required to build and sell the Games to spectators (Kearins & Pavlovich, 2002). Another important stakeholder at the Sydney Games was the environmental

groups like Greenpeace that provided expertise and critiques on environmental issues (Kearins & Pavlovich, 2002). These environmental stakeholders were all required to buy into the green concepts necessary for hosting the Games. Given this understanding of stakeholders and stakeholder roles, the stakeholder theory framework may be considered best for use in this research since it most closely fits the research objective.

There are multiple approaches for the use of stakeholder theory in research as described by Donaldson and Preston (1995). Their article discusses how three different approaches of stakeholder theory support each other: descriptive, instrumental, and normative. The descriptive approach seeks to describe and understand certain behaviors of an organization like how they are managed (Donaldson & Preston, 1995). An instrumental approach identifies connections between management of stakeholders and the ability of an organization to achieve its goals (Donaldson & Preston, 1995). Lastly, the normative approach seeks to understand how an organization functions and what values or guidelines shape the management of the organization in question (Donaldson & Preston, 1995). Given that the central questions of this study are concerned with identification of the stakeholders that help the IOC and OCOG achieve their environmental objectives as well as the roles of those identified stakeholders, an instrumental approach was used.

Stakeholder theory will be used as a framework with which to interpret the data and provide conclusions for this research. It is useful for this project as it allows the researcher to consider the people and groups that can impact an organization as it attempts to achieve its desired goals (Freeman, 1984). As the research questions at hand involve identifying the major stakeholders (i.e., the who and what) involved in the adoption of environmentalism (i.e., the

objective) into the Olympic Movement (i.e., the organization) as well as the roles of those major stakeholders, the use of stakeholder theory was reasonable for this study.

Methodology

While there has been much research on the subject of environmentalism in sport, there remains a gap in identifying the major stakeholders responsible for the environmental management within the Olympic Games. A qualitative research design using a combination of stakeholder theory and the sport event management literature was employed to build a case study focusing on the Olympic Games. Yin (2013) suggests that a case study design would be preferable for this research as it is an analysis of an event within the context of larger social phenomena. A case study is also best for analysis of the decision-making process and the results of those decisions (Schramm, 1971). The incorporation of stakeholder theory facilitates the integration of the sport event management literature. Stakeholder theory also allows the knowledge learned from this study to help further the sport management literature on this subject by providing a framework for understanding the value of this knowledge. The methodology section that follows here details the case setting, issues of data access and collection, how the data were analyzed, and the quality of the research.

Case Setting

The immense size, nature, and scale of the Olympic Games reinforce the status of the event as the premier global sporting mega-event (Holden et al, 2008). As a result, the Olympic Games and broader Olympic Movement are used in this study for their influence on planning and practices in sport events. In particular, their approach to environmental issues and sustainability are the subject of examination. For example, the 2012 London Olympic Games saw 10,500 athletes represent 207 nations while competing in 26 sports (IOC, 2015b). These London Games

were held with the theme ‘One Planet’ and issues of environment, sustainability, and legacy were considered in the planning and execution of the Games (Gold & Gold, 2013; Holden et al, 2008). As well, London used the Games as an opportunity to restore a blighted section of East London in terms of its physical and socio-economic presence (McCarthy & Synnott, 2012). The Games have grown in the size and nature of the event which likely means creating a larger environmental footprint. Thus, with these London Games there were environmental projects undertaken to mitigate the negative impact of the event (McCarthy & Synnott, 2012). Engagement with multiple stakeholders is likely given the scale of the event, which is evidenced in the research by Kearins and Pavlovich (2002). Ultimately, as a sport mega-event, the Olympic Games are the best case to use in this study.

Data Collection

The approach for studying the stakeholders involved in the adoption of environmentalism into the Olympic Games was to build a case study centered on the Olympic Movement. All bids were examined starting with the 1994 Lillehammer Winter Games until, and including, 2015 due to Lillehammer’s status as the first environmentally friendly Olympic Games (Cantelon & Letters, 2000; Chappelet, 2008). Bids from before 1994 were examined as well in order to determine if environmental statements existed prior to the 1994 Winter Games. Additionally, all IOC and OCOG documents available through 2015 on environment were examined. Collection of archival documents was critical for the execution of this study. Archival documents include official letters, communications, meeting minutes, studies, and evaluations, periodicals, and records (Yin, 2013). This data provided official standpoints of the various organizations studied and can help verify information learned from other sources. Inferences on stakeholders and

stakeholder roles in the environmental management of the Games were ultimately drawn from this data (Yin, 2013).

Multiple types of archival documents were gathered for this study from the IOC archives in Lausanne, Switzerland. In total, over 100 different documents were collected, which included bid documents from cities who submitted bids for the Games, bid manuals from the 2000 Games until the 2018 Winter Games, bid reports from the 2002 Winter Games until the 2018 Winter Games, newspaper articles, and other media from the websites of the major stakeholders, the IOC, and the OCOGs. Data collection began with a focus on the time period around the 1994 addition of environment as the third pillar of Olympism and the Lillehammer Winter Games although several bids from before 1994 were considered (e.g., 1960 Squaw Valley Winter Games) in order to determine if any environmental statements existed in bids from before the Lillehammer 1994 Winter Games. Any and all mandates, initiatives, organizations, and other activities from the IOC and OCOGs in the years since were included as part of this study (Gold & Gold, 2013). Covered by this time period were any changes to the Olympic Charter, introduction and implementation of Agenda 21 for the Olympic Movement, introduction of Agenda 2022 for the Olympic Movement, the creation of the commission on sport and the environment, and the adoption of the Olympic Games Impact (OGI) program (Chappelet, 2008; IOC, 2015a). All candidate cities that submitted bid documents during this time period were examined and related stakeholders were identified based on content analysis of the amassed data. As a reflection of the official policies and initiatives used by the IOC and OCOGs, these documents were the best to use since they provide official stances on the topic of environmentalism within the Games.

Limitations. A major limitation of this study was the IOC embargo on certain materials being made available to the public. Various types of documents have predetermined timelines on when they will be made available to the public. On average, materials are not released until twenty years from their respective Games. Given this limitation, Lillehammer's materials were the most recently made available to the public at the time of data collection. However, some materials that detailed the inner workings of the IOC and their committees were available for collection despite the embargo and it appeared that the necessary documents for this study were all available for collection. Additionally, since official IOC and OCOG documents provide the official viewpoints of those organizations, there could be bias in the information provided. Collection of periodicals and other archival documents not from the IOC and OCOGs was meant to limit the influence on this bias.

Data Analysis

Content analysis was the primary method of data analysis for this study. After conversion of all materials to electronic formats all data were coded using ATLAS.ti 1.0 for Mac software for all references to environment, sustainability, green, and the stakeholders involved in those processes. Through use of this software, themes regarding the stakeholders in the Olympic environmental management were highlighted and easily retrieved when relevant coded data were found. The first cycle of coding used open coding techniques from Miles, Huberman, and Saldaña (2014). A combination of deductive and inductive processes was used to create codes, which identified data as important. Through a second coding cycle, these codes were grouped into smaller categories of relevant data that belonged together (i.e., regulators as the code for United Nations, local governments, Greenpeace, and ISO) (Miles et al, 2014). Via the second coding cycle, networks were created to highlight the trends in the data (Miles et al, 2014). Then,

higher order themes emerged from these codes that gave way to the various stakeholder groups identified by this research (e.g., organizers, regulators, non-governmental organizations, and sponsors) as well as their roles (e.g., hosting duties, providing approvals, providing expertise, and providing funding) (Miles et al, 2014). As a last step in the analysis of the data, comparisons were drawn across the various data collected to find inconsistencies with or support for the findings. If inconsistencies were found, the data were reexamined.

Data Saturation. If a researcher no longer finds new information from the data collected, then the point of data saturation is reached (Siegle, 2015). Data analysis occurs during the process of collection in a qualitative study. All of the data collected (i.e. every bid, IOC bid manual, IOC bid report, periodical, and other media) was examined for the purposes of this study. Any further data collected would also not alter the findings of this study.

Research Quality

Regarding the quality of the research, one must consider: construct validity, external validity, and reliability (Yin, 2013). If the measurements used address the questions asked, then a study has construct validity (Yin, 2013). The abundance of materials and variety in the materials collected provided sufficient data that appropriately answered this study's questions. As well, accuracy was ensured via the comparison of findings amongst the materials so as to provide multiple viewpoints for all data. If the findings are generalizable to more broad topics, then the study possess external validity (Yin, 2013). As a case study, the findings will contribute to the sport event literature and will prove useful for future Olympic Games organizers by providing an outline of the major environmental stakeholders in the Games as well as their roles in environmental management. If researchers are able to replicate the study, then it posses reliability (Yin, 2013). Via careful preparation and detailed documentation of collection and

analysis as well as the usage of methods in previous Olympic studies (c.f. Leopkey & Parent, 2012a; Leopkey & Parent, 2012b) this study possess reliability. Since this study possesses the three research quality characteristics discussed, the study can be considered methodologically sound.

Results

When environmental management first appeared in the Olympic Movement it came in the form of suggestions from executives, like then-IOC president Samaranch, and voluntary actions by OCOG's (e.g., Lillehammer's 1994 Winter Games). Over time, the idea of the Games showing concern for their environmental impact evolved into an incredibly formalized and widely accepted aspect of the Movement as a whole. This did not happen by random chance as many different stakeholders played in role in making Olympic environmentalism into a formal institution. In addition to the organizers stakeholder group (i.e., the IOC and OCOGs), three additional types of stakeholders emerged from the data: regulators (e.g. UN, environmental quality authorities, political parties, LEED, and ISO), non-governmental organizations (e.g. Greenpeace, WWF, and WHO), as well as sponsors. Roles that emerged for these groups included owning and producing the event, approval and coordination of efforts, providing expertise, as well as facilitating and financing the Games. These groups, examples, and their roles are summarized in Table 5 and will be discussed in more detail below.

Table 5
Olympic Environmental Stakeholder Identities and Roles

Identity	Examples	Role
Organizers	IOC, OCOGs	Own and produce Games
Regulators	UN, local governments, ISO, LEED	Approve and coordinate efforts
NGOs	Greenpeace, WWF, WHO	Provide expertise
Sponsors	(None given)	Facilitate and finance Games

Stakeholder Groups

Here, the various stakeholder groups that emerged in the data are described along with examples of those stakeholders that fit in those groups.

Organizers. Several efforts have been taken upon by the IOC to encourage and require environment initiatives to be considered by OCOGs. From declaring environment as a pillar of Olympism, to signing pledges on the environment, to formally integrating environment into its charter. The IOC has taken several steps to help instill the environmentalism into its Games (IOC, 2014a). Perhaps the most important step from the IOC was the requirement that candidate cities submit proposals on environmental performance and planning as part of the bid process as early as 1992 (IOC, 1992). The IOC made explicitly clear what they wanted to see in the bids and has continued to update their requirements to meet the environmental needs of a modern and evolving world:

> The Olympic Movement is fully committed to sustainable development and endeavors to contribute to the protection of the natural environment. The IOC is anxious that the Games should be an exemplary event in this respect. To this effect, the IOC adopts environmentally sound policies, programs and practices. (IOC, 1995, p. 44)

While all bids have been required to engage governmental agencies and environmental organizations, they have more recently been required to create stakeholder engagement plans which included a more diverse array of stakeholders like sponsors for example (IOC, 1992; IOC, 2007). This specific language was found in the 2016 Games Bid Manual in regards to stakeholder engagement:

> Describe your stakeholder engagement plan and how you envisage establishing appropriate relations with:

- environmental public authorities; describe their respective environment and natural resource management plans and their cooperation, responsibilities and working methods vis-à-vis the OCOG
- non-government environmental organizations
- the private sector. (IOC, 2007, p. 87)

This has made it a requirement that all stakeholders to the Games be engaged in environmental practices as proposed by their respective OCOGs. Since the IOC and OCOG are central to the Games their role may be considered essential for the growth of Olympic environmental management.

Regulators. Within the regulator stakeholder group are two sub-categories: governing authorities (e.g., UN and local governments) and certification and standardization programs (e.g., LEED and ISO).

Early efforts to ingrain environmentalism with stakeholders included adherence to international policies from the UN like Agenda 21 (IOC, 2014b). Many OCOGs mention adherence to a local Agenda 21 as part of their environmental proposals (e.g., Jaca, 2001; Klagenfurt, 1997; Lille, 1995; Östersund, 1993; Torino, 1997). An example of this is reflected in the Lille 2004 bid presented below:

> The city of Lille and Lille urban community have both signed the Aalborg charter concerning the application by cities of the principles of sustainable development defined at the 1992 Rio de Janeiro conference.
>
> The Agenda 21, drawn up thanks to a long period of joint effort on the part of all involved, includes all measures planned within the framework of the candidature. The

> vote by the elected assemblies guarantees effective application of the measures required by the IOC and decided upon by the OCOG.
>
> This Agenda 21 […] includes choices made in relation to facilities and measures affecting the entire local environment. (Lille, 1995, p. 74)

The UN, being the premier global governing authority, working with the IOC in the initial stages of adopting the environmentalism was an important step for the Movement to take since the UN is a prominent stakeholder to engage. While the inclusion of the UN is a significant partnership for the IOC, it is not the only governmental organization that the Movement worked with to further its pursuit of environmental practices.

At a more local level, OCOGs were forced to work with local governmental authorities (e.g., Government of New South Wales, Australia or the United States Forest Service) to create their environmental proposals for the Games. This requirement first appeared in the bid manual for the 2000 Olympic Games and has endured since (IOC, 1992). Theme 5.1 from the 2000 bid manual, the very first requirement for each environmental proposal, was that OCOGs were required to secure approvals from all relevant local government agencies that Olympic work met environmental standards of the host community. This is reflected here: "supply and official guarantee from the competent authorities, stating that all work necessary for the organization of the Games will comply with local, regional and national regulations regarding town and country planning and protection of the environment" (IOC, 1992, p. 29). Regardless of whether the host community had devoted environmental quality authorities, this forced OCOGs to work with their local governments to ensure that construction and management for the Games were environmentally responsible to at least the legal standards of the hosts. They allowed for each host OCOG to connect environmental projects with local environmental issues of importance

regardless of whether it be restoration, minimizing damage, or catalyzing development projects. Another small, but important group to consider in the local government context are political parties that may exert influence over governmental decision-making. Green political parties were mentioned as stakeholders in several bids (e.g., Berlin, 1992; Milan, 1991; Poprad-Tatry, 1993; Sion, 1997; St. Petersburg, 1995; Torino, 1997). As an example, the St. Petersburg Bid for the 2004 Games consulted their own Green Party along with other environmental organizations as part of their bid (St. Petersburg, 1995). Their inclusion furthered the environmentally-focused relationship between government actors and the Movement.

The other regulator sub-category that has helped further environmental performance in the Games comes in the form of certification and standards programs like LEED and ISO. The IOC does require that the OCOG provide documentation on green certification and standardization programs. An example of such requirements comes from the bid manual for the 2018 Winter Games: "do you intend to apply any 'Green' building certification systems in the construction/refurbishing of Olympic-related infrastructure? Provide details on the environmental management tools and/or compliance standards that will be used to achieve the environmental targets and objectives" (IOC, 2009, p. 90). One can see that OCOGs will need to engage organizations that provide such certifications and standardizations.

The Leadership in Energy and Environmental Design (LEED) program is one of the most popular green certification programs and is used globally (USGBC, 2016). Many bids use LEED certifications, or a similar program like the Comprehensive Assessment System for Built Environment Efficiency in Japan, as justification for legitimacy to their environmental performance or proposals (New York, 2003; Tokyo, 2011; VANOC, 2001). From Vancouver's 2010 bid book: "North America's most respected building rating system, [LEED], will be used

as the standard with new and existing facilities meeting the highest certification level that can reasonably be attained" (VANOC, 2001, p. 21). While LEED addresses building construction and renovation, there is another set of standards widely used by OCOGs in their bids: the International Organization for Standardization (ISO) standards for environmental management. These are, like LEED standards, a widely accepted metric for analyzing environmental performance, via ISO 14000, and event sustainability management systems, via ISO 20121 (ISO, 2016). ISO standards were used in multiple bids (Istanbul, 1995; Istanbul, 1999; London, 2003; Moscow, 2003; New York, 2003; Stockholm, 1995).

Non-Governmental Organizations. While governments and their representatives have inherent authority as legitimized leaders, it was evident that non-governmental organizations (NGOs) also hold prominent positions in their chosen sectors. Again, starting with the 2000 bid manual, the IOC encouraged consulting with and seeking approval from environmental organizations:

> State whether the ecological organizations in your city, your region or your country have been informed or consulted. If this is the case, state their opinions and attitudes regarding your candidature. Indicate the size of these organizations and the extent to which they are representative. (IOC, 1992, p. 29)

This is a requirement that has also stood the test of time as it remains in the most recent bid manuals.

The first and most prominently featured NGO is Greenpeace. Sydney notably worked very closely with Greenpeace in the 1990s to ensure that their restoration and development of Homebush Bay for the 2000 Games was adequate in the view of environmental leaders (Sydney, 1992). Several other bids mentioned working with their local Greenpeace organizations to ensure

satisfactory environmental proposals and performance (e.g., Jaca, 1993; Östersund, 1993; Poprad-Tatry, 1997; Rio de Janeiro, 1995; Rome, 1995; Sion, 1993; Sion, 1997; Sochi, 2005; Tarvisio, 1993). Another prominent global environmental organization consulted for several OCOG's bids was the World Wildlife Fund (e.g., Helsinki, 1997; Klagenfurt, 1997; Milan, 1991; Rio de Janeiro, 2007; Rome, 1995; Sion, 1993; Sochi, 2005; Torino, 1997). Both of these organizations are seen as some of the leading organizations for environmental protection and their working with many of these organizing committees across a long timeframe helped to integrate environmentalism into the Olympic Movement. It is important to note with these bids that most did not detail the relationship between the OCOG and the environmental organization. They simply mentioned a working relationship like with the Jaca 2002 Winter Games bid: "the Committee has worked with the principal Ecological Organisations active in Aragon. Amongst such organisations, our contacts with the following are worth highlighting: Greenpeace" (Jaca, 1993, p. 72). One more NGO of note was the World Health Organization (WHO) who was mentioned in recent bids in reference to air and water quality standards (Beijing, 1999; New York, 2003; Osaka, 1999; Rio de Janeiro, 2007; Tokyo, 2011). An example comes from the Tokyo 2020 Games bid: "the air quality in Tokyo – and in cities more than 50 km from Tokyo proposed as locations – during the proposed Games-times meets World Health Organisation (WHO) guideline values" (Tokyo, 2011, p. 20). Health-related issues are a part of sustainability and can be consequences of poor environmental management. WHO is arguably the global authority on health and their inclusion as a stakeholder does help further the sustainability initiatives, which do relate to environmentalism.

Sponsors. The last major stakeholder group whose presence have helped elevate the presence environmental management in the Olympic Games are the sponsors. The Olympic

Movement as a whole is attempting to engage sponsors more in recent and future editions of the Games as part of their environmental initiatives. In fact, starting with the 2010 bid manual, OCOGs were required to engage sponsors in environmental initiatives (IOC, 2001). This excerpt from the 2010 bid manual shows how sponsors are required to be engaged by the OCOGs: "how will the OCOG integrate its environmental approach into contracts with suppliers and or sponsors, for example, with respect to procurement of recyclable or compostable goods, in recyclable or compostable packaging" (IOC, 2001, p. 43). Several bids have used language to describe a relationship with sponsors (e.g., Moscow, 2003; PyeongChang, 2009; Rio de Janeiro, 2007; Sochi, 2003; Tokyo, 2011; VANOC, 2001). From these, OCOGs have proposed making sponsors and developers who will be working with the Games pay fees that would be used for environmental projects. Or, there have been stipulations inserted in the contracts of sponsors and developers that require them to participate in environmental campaigns or to conduct their business in ways that meet proposed environmental standards. However, sponsors are a less developed stakeholder as they have not been as engaged in these environmental practices as the other stakeholder groups.

Stakeholder Roles

This section examines the stakeholder roles that emerged in the data and addresses which stakeholders are responsible for those roles.

Own and produce Games. This stakeholder role is charged with owning and producing the event (Getz et al, 2006). Within this particular case, both the IOC and the local OCOG share these roles. It is important to note that the IOC owns the rights to the Games and transfers the production of the event itself to the winning OCOG to host the Games. Without the IOC or the OCOG, there would not be an Olympic Games, so their role of ownership and production of the

Games is critical to environmental management within the Games. As central stakeholders in the Olympic Games, their practices and policies are essential for Games environmental management as they can coerce other stakeholders to engage in environmentally friendly practices. For example, the IOC requires the OCOG to adopt certain environmental practices, which means the OCOG will comply in order to attain the rights to host. This is illustrated in the following quote: "The IOC seeks to understand a Candidate City's environmental approach as it relates to the following elements: geographical features, public authorities and stakeholders, environmental planning, venue location, design and construction, development projects" (IOC, 2007, p. 85). This demonstrates an ownership of the Games and a desire for the Games to be produced in a certain manner. Thus, the ownership and production role belongs to the organizers. Ultimately, the IOC's actions and OCOG's obedience, as the organizers of the Games, carry much weight within the Olympic Movement since they are the owners and producers of the Olympic Games.

Approve and coordinate efforts. This role gives approval for environmental efforts, ensures local laws are followed, and helps to coordinate the OCOGs efforts to ensure they meet all standards. Stakeholders that are represented in the regulators group tend to perform this role. For example, the UN and local governments appear to be to enforce certain environmental laws (e.g., Kyoto Protocol, Agenda 21, local environmental laws) and thus provide approvals to the IOC and OCOGs that their management plans adhere to those environmental laws at all levels of governance. London in 2012 had to work with their local governing authorities on their environmental efforts:

> Environmental protection and sustainable development policy in the UK is supported by a comprehensive range of laws and regulator instruments. Many of these are derived from European Union Directives and international conventions.

> Responsibility for these policies and their integration across government lies with the Department for Environment, Food, and Rural Affairs (Defra).
>
> There are a number of pubic authorities responsible for environmental protection, notably: the Environment Agency (with a remit that includes protecting the quality of the air, land and water); English Nature (responsible for conservation of biodiversity); and English Heritage (responsible for historic environment). (London, 2003, p. 73)

Since the introduction of IOC environmental requirements for bid cities (c.f., IOC, 1992), all bids have been required to engage these governmental authorities, which explains why these stakeholders appeared in all bids from the 2000 Games to the present. The role of the LEED certification and ISO standardization programs was to provide approval that practices proposed by each OCOG meet a minimal standard of responsible environmental performance and sustainability. These standards programs make it easy for OCOGs to measure environmental performance along an internationally recognized metric. New York City used LEED in their 2012 bid to approve of their green building design: "NYCOG will certify all new construction under the internationally recognized LEED system, ensuring that traditional and innovative technologies are incorporated into each design" (New York, 2003, p. 87). Thus, the data suggests that both governing authorities and standardization and certification programs perform the role of approving and coordinating efforts.

Provide expertise. The provision of knowledge and skill is also an essential stakeholder role that emerged in the data. Most of these stakeholders provide local approval and expertise on the issues they care most deeply about. For example, Sydney famously worked with Greenpeace, in addition to other organizations in their bid for the 2000 Games since they could provide expertise on the local environmental situation: "the New South Wales Government, in preparing

a master plan for the regeneration of Homebush Bay, consulted widely with a range of organisations and community interest groups and incorporated their views in to the plan" (Sydney, 1992, p. 66). In this case, it is often the NGOs who appear to be the groups who are playing the role of providing expertise on their respective areas of interest. They can therefore be considered to play an important role in the adoption of environmental practices in the Games. The Movement recognizes the value that these NGOs have in helping OCOGs and the IOC with their environmental initiatives. Environmentalism can be said to be further adopted into the Movement due to provision of expertise by local NGOs who continue to be a presence in all bids for the Olympic Games.

Facilitate and finance Games. Stakeholders who perform this role help to provide income and supplies necessary to carry out the environmental projects that OCOGs are required to implement. The IOC and OCOG need funding and suppliers in order to facilitate their environmental practices. Moscow's 2012 bid provides an example of this facilitator role: "The OCOG shall make every effort to ensure that our sponsors and suppliers utilize goods the production of which is environmentally friendly, recyclable or compostable" (Moscow, 2003, p. 85). This quote shows this role of sponsors and suppliers providing those inputs for hosting the event successfully is necessary and is a role assumed by the sponsors. Thus, these sponsors play a role in the integration of environment into the Olympic Movement, although their presence is new and less developed compared to the other stakeholder groups.

Across all of the bids since the beginning of environmental management in the Olympic Games, there have been numerous stakeholders (i.e., organizers, regulators, NGOs, and sponsors) who have had roles (i.e., owning and producing the games, approving and coordinating efforts, providing expertise, as well as facilitating and financing the Games) in helping to further

environmental practices by the IOC and the OCOGs. An examination of the literature on the roles that each stakeholder group played as well as the implications of their actions will be discussed further in the discussion section below.

Discussion

These findings suggest that there are four major stakeholder groups to consider in environmental management of the Olympic Games: organizers, regulators, NGOs, and sponsors. These stakeholders each play a different role in the environmental management of the Games: they own and host the Games, approve of environmental projects, provide expertise on environmental projects, and offer the funding necessary to host the Games, respectively. Given these stakeholder groups, the roles that these stakeholders play in environmental management of the Games can be discussed below.

The stakeholder roles as defined for festivals by Getz, Andersson, and Larson (2006) as well as Sydney's 'Green Games' by Kearins and Pavlovich (2002) were used to define the roles of the environmental stakeholders in the Games. Their two typologies of roles align well for some of the stakeholders discussed (i.e. regulators and local governments) and contradict for others (i.e., festival organizers and the Olympic Family). For example, Getz, Andersson, and Larson's (2006) idea of regulators is similar to Kearins and Pavlovich's idea of local governments. Local governments are considered to be a part of the regulator group (Getz et al, 2006). However, Kearins and Pavlovich (2002) describe the OCOG as being a part of the local governments group and not their Olympic Family group, which only includes the IOC. In the other typology from Getz, Andersson, and Larson (2006) the organizer stakeholder group would include the IOC and OCOG, and the regulators would be all of the other governmental authorities. The data suggests that the IOC and OCOG are operating together as the owners and

producers of the Games and are therefore organizers. Another discrepancy comes in the certification and standardizations organizations like LEED and ISO. These fit within the regulator category of Getz, Andersson, and Larson's (2006) typology. However, Kearins and Pavlovich (2002) did not consider such organizations in their research. At the time of the 2000 Sydney Games these organizations were not approached by the IOC or OCOG (Sydney, 1992). It appeared that there was room for improvement on the previous research in identifying the major environmental stakeholders and defining their roles. This study borrowed from both typologies in order to define stakeholder roles in the best fit possible.

One group where these typologies differed was the NGOs group. NGOs included organizations like Greenpeace, WWF, and WHO. This stakeholder group most closely fits in the role of a co-producer as defined by Getz, Andersson, and Larson (2006). These co-producers are independent organizations that voluntarily engage with the organizers in the management of the event with regard to their specific area of interest (Getz et al, 2006). However, Kearins and Pavlovich (2002) have a stakeholder group that more closely resembles these NGOs. They identify environmental organizations as an important stakeholder group in creating the 'Green Games' of the Sydney 2000 Olympics (Kearins & Pavlovich, 2002). The role of their environmental organizations was to provide expertise on environment as part of the planning and management process (Kearins & Pavlovich, 2002). These NGOs, which include environmental organizations like Greenpeace and WWF as well as a health organization in WHO, fit this role defined by Kearins and Pavlovich (2002) of the environmental organizations better than the role of co-producers as defined by Getz, Andersson, and Larson (2006).

Another example of where the literature differs is with regards to the group roles is the sponsor group. The role of these stakeholders would be called 'sponsors' by Kearins and

Pavlovich (2002) and 'facilitators' by Getz, Andersson, and Larson (2006). The sponsor role is to provide financing and supplies necessary for hosting the Games (Kearins & Pavlovich, 2002). Facilitators are groups that provide cash and sponsorships to an event (Getz et al, 2006). Given what is known about these sponsor stakeholders' engagement with environmental issues, they may certainly be considered to be both sponsors and facilitators (Kearins & Pavlovich, 2002, Getz et al, 2006), but will continue to be called 'sponsors' as that is how they are referred to in the data.

Reciprocity appears to be a major highlight of the efforts of various stakeholders in regards to environmentalism in the Olympics. This idea of reciprocity was proposed by Fassin (2012) and suggests that these stakeholders work together because they all benefit from their partnership. The various stakeholders, in working with the IOC and OCOG to host the Games, give legitimacy to the environmental efforts. This legitimacy helps make these stakeholders resilient (DiMaggio & Powell, 1983). In other words, the IOC and OCOGs benefit from working with these stakeholders. With laws to follow, tools for measuring performance, expertise in environmental efforts, and the funding to carry out the efforts, all of those stakeholders make the Olympic Movement's environmental efforts possible. For example, the UN being the highest global governing authority and the IOC being the premier global sporting movement, creates a situation with two global authorities working together on a common issue. This gives legitimacy to each others' efforts. The reverse is potentially true too. The other stakeholders all benefit in having the opportunity to work with a movement as large as the Olympic Games. The IOC and OCOG legitimize the other stakeholders' existence by working with them on the various environmental issues. Thus, they both benefit from working together. Additionally, they IOC and OCOG can be considered to be practicing CSR since they are engaging all of their stakeholders

in the environmental issues that matter to them (Fassin, 2012). It seems that the IOC and OCOG's environmental efforts and responsibly carried out and that they benefit from working with the various stakeholders they engage.

The data suggests that all of the major stakeholders identified in this study are normatively legitimate stakeholders since OCOGs are now required by the IOC to engage all of the other stakeholders (i.e., regulators, NGOs, and sponsors) as part of their environmental planning processes. Phillips (2003) suggested that normatively legitimate stakeholders are ones to whom a firm has a moral obligation to engage, and since the OCOG is awarded the rights to host the Olympic Games from the IOC, it has a moral obligation to meet the requirements that the IOC sets for hosting. IOC policies, as of recent, require that regulators, NGOs, and sponsors all be engaged in the environmental planning process of the OCOG (IOC, 2009). Therefore, the OCOG is obligated to engage those stakeholders. If the OCOG does not follow through on this, then they will have broken their obligation to the IOC. But, if the OCOG better understands the roles that these stakeholders play, then the OCOG could work better with the stakeholders to achieve their environmental goals.

Conclusion

Given the lack of knowledge on the role of stakeholders in the environmental management of the Olympic Games, the primary purpose of this article was to identify the major environmental stakeholders in the Olympic Movement and describe their related roles. This was important for understanding how environmentalism became adopted as a standardized norm within the Olympic Movement. Each of these stakeholder groups identified had clear roles associated with their group that helped to develop Olympic environmental management through their interaction with the IOC or OCOGs.

The first major stakeholders are the organizers of the Games (i.e., the IOC and the OCOGs). A role that emerged in the data of owning and presenting the Games is performed by these organizers (Getz et al, 2006). Without the organizers there would be no Olympic Games. Likewise, their mandates and practices dictate how the greater Olympic Movement acts. If the IOC wants the Games to be environmentally friendly, then their recommendation is followed the by the OCOGs and other stakeholders (e.g., IOC, 1992). Mandates from these organizers have required all bid committees and other stakeholders to consider environment. Therefore, environmental planning has been incorporated into the bid process as well as the greater Olympic Movement as a result of those mandates. The role of the organizers in this process cannot be ignored.

The data suggests that the regulators of environmental management in the Olympics can be split into two smaller categories: governing authorities (i.e., the UN and local governments) and certification and standardization programs (i.e., ISO and LEED). The role that regulators play is in approving and coordinating Olympic environmental projects (Getz et al, 2006). Governing authorities provide the approvals the IOC and OCOGs need in order to host the Games (Getz et al, 2006). Certification and standardization organizations provide approvals that Olympic projects meet certain environmental metrics and may thus be considered environmentally friendly or sustainable. Since the IOC requires that bids now engage with both governing authorities and certification and standardization programs, these stakeholders have contributed to this outcome (IOC, 2009). Their help has allowed the environmental practices to develop and maintain their status within the Olympic Movement.

Often working with the organizers and regulators are non-governmental organizations like Geenpeace, WWF, and WHO. These NGOs are associated with the role of providing

expertise to the IOC and OCOG on issues of environment and sustainability (Kearins & Pavlovich, 2002). If using the typology and roles as defined by Getz, Andersson, and Larson (2006), then these NGOs are co-producers who voluntarily engage with IOC and OCOG with respect to their specific interests (i.e. environmental protection or public health). However, these NGOs are not voluntary and are engaged because the IOC requires that the OCOGs work with local environmental organizations to plan and manage their Olympic Games (IOC, 1992). Since Sydney worked with Greenepace on the 2000 Games, several other bids have approached Greenpeace about their proposals (e.g., Jaca, 1993; Östersund, 1993; Poprad-Tatry, 1997; Rio de Janeiro, 1995; Rome, 1995; Sion, 1993; Sion, 1997; Sochi, 2005; Tarvisio, 1993). Regardless, their continued inclusion in the environmental planning and management of the Games has facilitated the inclusion of the environment into the Movement as a whole.

The last stakeholder group to consider is the sponsor group. The role of the sponsors emerged as facilitating and financing the efforts necessary to hosting the Games (Getz et al, 2006; Kearins & Pavlovich, 2002). As with the other stakeholder groups, the IOC now requires OCOGs to engage sponsors in their environmental planning and management (IOC, 2001). While sponsors provide a desirable service to the OCOG (i.e. funding), they are required by the OCOG to comply with environmental efforts if they want to become a sponsor in the first place (IOC, 2001). And, while sponsors do not directly provide environmental expertise or enforce laws, their presence is necessary to have the funding to host the event. Therefore, forcing sponsors to comply with environmental planning and management has helped to further reinforce the importance of environmentalism and sustainability in the Olympic Games.

In regards to stakeholder theory, the data from this study suggest that reciprocity was an important factor in stakeholder engagement with environmental issues. The concept of

reciprocity suggests that the stakeholders work together because they each mutually benefit from the partnership (Fassin, 2012). The IOC and OCOG as organizers of the Games benefit from working with regulators, NGOs, and sponsors on environmental issues because it helps them achieve their goals of hosting an environmentally responsible and sustainable Olympic Games. Likewise, the regulators and NGOs have their needs met by ensuring that environmental practices by the IOC and OCOG comply with laws, standards, and local environmental needs. The sponsors achieve their goal of becoming Olympic sponsors and gaining that marketing advantage. If all stakeholders' needs are met, then the IOC and OCOG can be considered to have practiced good CSR (Fassin, 2012). Ultimately, it appears that all of the stakeholders worked together to achieve this common goal for the benefit of each other's own interests.

With these conclusions in mind, the limitations and future directions of this research may be considered. There was one limitation to this study: the IOC embargo on certain documents. This did not prevent collection of sufficient and necessary data to answer the central questions of this study. The findings suggest that there is room for future research to occur on stakeholder engagement with environmentalism in the Olympics. Organizational learning might have occurred between the IOC, the various OCOGs, and the other environmental stakeholders. Interviews with IOC officials, OCOG officials, and other stakeholders would provide much more data that could investigate the idea of institutional learning. Such knowledge could prove useful for understanding Olympic Games management with stakeholders beyond environmental ones.

The final result of this study was the identification of the major environmental stakeholders in the Olympic Games as well as the description of their roles in incorporating environmental practices into the Olympic Movement. These findings are generalizable back to stakeholder theory and to sport event management literature with a specific focus on the Olympic

Games. Ultimately, this study provides Olympic event organizers an idea of stakeholders to engage in order to accomplish environmental initiatives and this study details the roles of these stakeholders. Hopefully, future editions of the Olympic Games can engage the appropriate stakeholders in creating an environmentally friendly event. This research can help build the body of knowledge available on the subject such that future interactions between the Olympic Movement and its stakeholders are productive with regard to reducing environmental impact.

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CHAPTER 4

CONCLUSION

The primary purpose of this study was to analyze the environmental practices used by the major stakeholders in the Olympic Movement, how these practices became accepted as norms within the Movement, identify the major environmental stakeholders, and define these environmental stakeholders' roles. This knowledge furthers the sport event management literature, which helps researchers and practitioners better understand environmental themes and trends in mega-sport events. A case study was built to help delve deeper into these issues including the identification of environmental practices used by the major Games organizers (e.g., the IOC, OCOGs, candidate cities, and host cities). Additionally, how these practices became adopted as legitimized standards within the Olympic Movement was examined. More specifically, two research questions were considered: 1) what is the institutional history of the environmental policies and practices within the Olympic Games? and 2) who are the major stakeholders in the environmental movement within the Olympic Games and what are their roles in the environmental management of the Olympic Movement? The major result of this research is that it provides an expansion on our understanding of how environmental changes to the Olympic Games occurred and who helped to motivate these changes. Additionally, these findings will be useful for future organizers of the Olympic Games as it provides framework for understanding the evolution of environmental practices and who is responsible for managing those environmental efforts. After reviewing the findings from each paper, a critical analysis that

combines the findings of the two articles will be presented. Then, limitations and future research directions will be presented.

Summary of Findings

Understanding the evolution and adoption of environmental practices in the Olympic Movement was the purpose of Chapter 2. The time period considered for this study ran from the 1896 Olympic Games through the 2015; however, previous literature suggested that the Lillehammer Winter Games held in 1994 were the origin of the environmental movement within the Games (Cantelon & Letters, 2000; Chappelet, 2008). Starting in the 1980s with the planning for the 1994 Lillehammer Winter Games and continuing through the present, the environmental history of the Olympic Games consists of three themes of environmental practices: environment, sustainability, and zero impact. Environment consisted of simple environmental protection, sustainability expanded from environmental protection to other topics of concern (i.e. economic well-being and public health issues), and zero-impact contained the most ambitious goals of zero-waste, carbon neutrality, and oxygen-plus Games. It is important to understand that these themes are not exclusive. One edition of the Games may exhibit environmental planning that integrates one, two, or all three of the themes. The London 2012 Games notably included commitments to environmental protection, sustainability, and carbon neutrality (London, 2003). The reason for the emergence and subsequent institutionalization of these themes within the Games is that the OCOGs appear to be bowing to normative, coercive, and mimetic pressures from society, the IOC, and each other, which caused isomorphism to occur within the environmental movement in the Games. More recent bids, like that of the Tokyo 2020 Games build off of the previous IOC mandates as well as from previous OCOGs proposals (Tokyo, 2011). As a result, findings support for Pentifallo and VanWynsberghe's (2012) conclusion that

isomorphism is occurring amongst the environmental proposals in Olympic bids. As a result of this isomorphism in the environmental sections of bids and proposed actions of the OCOGs, the very idea of environmental planning and management for the Olympics has become an accepted norm of the bidding process. This suggests that institutionalization has occurred (DiMaggio & Powell, 1983). Yet, this process did not occur without the help of various stakeholders. Chapter 3 more closely examined the stakeholders involved in institutionalizing environmentalism and sustainability into the Olympic Games.

Little previous knowledge regarding stakeholders' involvement in this process was known. Chapter 3 aimed to identify the major stakeholders in the environmental movement of the Games and describing their roles in the institutionalization of the environmental movement into the Games. Understanding the role of stakeholders was important for creating a clear understanding of how environmentalism and sustainability became norms within the planning and management processes of the Olympics. Four types of stakeholders emerged as a result of this research: the event organizers, regulators, NGOs, and sponsors. The organizers are the IOC and OCOG who have the role of owning and hosting the Games. Regulators are organizations like the UN, local governments, LEED, and ISO that provide approvals to the organizers regarding laws or certify environmental efforts as meeting a standard. NGOs are organizations like Greenpeace, WWF, and WHO that provide expertise on their specific areas of interest to the IOC and OCOG. Lastly, sponsors are corporations that provide the funds necessary for hosting the Games. Since these groups either affect environmental issues in the Olympic Games or are affected by environmental issues in the Games, they can be considered stakeholders. The data suggests that these stakeholders are all engaged in these environmental practices since they all benefit from working together. This is a concept called 'stakeholder reciprocity' (Fassin, 2012).

Fassin (2012) also suggests that an organization that practices CSR, must be engaged with all of its stakeholders. It appears that, in regards to the environmental efforts of the Olympic Movement, the organizers are practicing CSR since they have attempted to work with all of the necessary stakeholders. With the findings of these two chapters in mind, we can consider what they collectively mean practically and theoretically.

While it is clear that the environmental considerations have evolved from simple environmental protection to sustainability and zero impact, they have become institutionalized within the Olympic Movement. This process would not have been possible without the help of the stakeholders who played roles in legitimizing environmental efforts by organizers. For example, as the Olympic environmental movement evolved, the IOC began to require that bid committees (i.e., for the 2018 edition) provide examples of environmental metrics and certifications being used to evaluate the success of environmental practices (IOC, 2009). However, many Games organizers were already engaging such stakeholders such as LEED for green building certifications and ISO for sustainability management principles before this time (e.g., London, 2003). Despite already having a voluntary role in the environmental movement in the Olympic Games, these stakeholders now have a more central role in that many future bids will be required to engage these stakeholders as part of their proposal. Pentifallo and VanWynsberghe (2012) suggested that environmental proposals for the Olympic Games were experiencing isomorphism. As a result, bids and organizers began presenting similar proposals and engaging similar stakeholders on the issue of environmental protection and management. Therefore, these stakeholders played roles in the evolution of environmental themes in the Olympic Movement as well as having played a role in the institutionalization of the environmental movement into the Games. In other words, these findings are truly related, as the

institutionalization of environment in the Games would not have been possible without the various stakeholder groups identified. Given this relationship between the two articles, the implications of the findings on theory and practical knowledge may be examined.

Theoretical and Practical Implications

The implications of these findings are important to consider on both a theoretical and practical basis. This study supports the work of Pentifallo and VanWynsberghe (2012) who suggested that isomorphism was occurring in the environmental proposals for Olympic Games bids. It appears that the bids themselves are bowing to normative, coercive, and mimetic pressures, which would have caused them to adapt to their institutional environment (DiMaggio & Powell, 1983). Lillehammer's 1994 Winter Games environmental response to protests following the Albertville Games exemplifies normative pressure (Cantelon & Letters, 2000). Any OCOG that submits a proposal that discusses all of the environmental issues the IOC requires exemplifies coercive pressure. As exemplified by Tokyo 2020's bid studying the sustainability programs from the London 2012 Games, OCOGs are borrowing the most successful practices from each other (Tokyo, 2011). This illustrates mimetic pressure. This borrowing of the most successful practices is what is leading the various OCOGs to present increasingly similar environmental proposals and has given those environmental practices a degree of resilience within the Olympic Movement (DiMaggio & Powell, 1983). Resilience is what has institutionalized those environmental efforts (Scott, 2013). Thus, the findings of this study show support for the use of institutional theory in better understanding how environment became a accepted as a legitimized norm in the Olympic Movement as occurred. We can now consider stakeholder theory.

This study identified several stakeholders who were critical to the achievement of environmental protection in the Olympic Movement: organizers, regulators, NGOs, and sponsors. Without these stakeholders, it would not have been possible for environmentalism to have become institutionalized within the Olympic Movement. The implications of the identification of these stakeholders, as well as defining their roles, are that these stakeholders appear to be normatively legitimate and are working together due to a mutual benefit to each other. Normatively legitimate stakeholders are ones to whom a firm holds a moral obligation to engage (Phillips, 2003). As of the most recent editions of the Olympic Games yet to be held, and OCOG is required by the IOC to work with all of these stakeholders identified (IOC, 2009). This mandate to work together help to legitimize the efforts of those stakeholders in working on environmental management projects. This also shows support for the idea that in order to practice good CSR, a firm must work with all stakeholders on the issue at hand (Fassin, 2012). This is, again, due to the fact that the IOC now requires OCOGs to engage all of these major stakeholdes (IOC, 2009). The stakeholders are working together on these projects because they experience reciprocity from their participation (Fassin, 2012). They each gain some benefit whether its host a green Olympics, ensuring their environmental laws and standards are respected, having their environmental interests considered, or earning the opportunity to sponsor the Olympic Games. Ultimately, this study shows support for the use of stakeholder theory in understanding that organizers of the Games would not have been able to achieve their environmental protection goals without engaging all of the stakeholders affected by their hosting of the Games. This has practical implications that must be considered outside of just theory.

Current and future organizers of the Olympic Games ought to consider that, if they want to put forward a strong and relevant environmental proposal for their bid, they need to consider

the trends in the Olympic environmental movement and engage all of the necessary stakeholders. It is appropriate to borrow successful environmental practices from previous Games in order to strengthen a current bid. In general, it also seems that the environmental proposals are involving all of the themes presented (i.e., environment, sustainability, and zero impact), but there is room for a new theme to emerge in the future like leveraging the Games to provide environmental benefits. So, an organizer should look for opportunities to present new and ambitious environmental protection plans. Then, in order to successfully implement their environmental proposals, organizers must be sure that all of the major stakeholders are involved in the process. Through these efforts, Olympic organizers can put together stronger environmental proposals for future editions of the Olympic Games.

Future Directions, Limitations, and Conclusion

Opportunities for future research on this subject presented themselves through the data analyses of these two studies. Potential topics to explore include: Atlanta's environmental efforts in 1996, the potential for organizational learning to have occurred between the IOC and OCOGs, as well as the increased role of sponsors. First, consider the Atlanta case. While it had been suggested by Chappelet (2008) that Atlanta did not create any environmental protection and management plans in the bid for their 1996 Games, which was found to be true. But, the Atlanta Organizing Committee did present a statement on the environmental impact of their Games to the IOC in 1995 (Atlanta, 1995). The Winter Games immediately before and after Atlanta, Lillehammer 1994 and Nagano 1998, both took on environmental protection efforts in their hosting of the Games (Cantelon & Letters, 2000; Organizing, 1989). Additionally, by 1995 the IOC had asked that all future Games show reasonable concern for the environment and had made environment the third pillar of Olympism (Gold & Gold, 2013). With all of the Olympic

environmental efforts taking place around the time that the Atlanta Games were being planned, it is possible that Atlanta was attempting to homogenize itself into the environmental trend. It would explain why Atlanta presented a document on its environmental efforts with a year until they would host the Games (Atlanta, 1995). Where the opportunity exists for future research is to understand if Atlanta's environmental statement was a response to normative, coercive, or mimetic pressures, or a combination of them. As well, it would be useful to determine if the efforts by Atlanta were a genuine interest in environmental protection or simply going with a trend. Interviews with Atlanta Games organizers would yield such information for a future study. This would be beneficial to the Olympic environmental literature since Atlanta's Games occurred at the beginning of the environmental movement and may have potentially had an impact on the direction of environmental issues in the Olympics.

Another area for future research is examining if organizational learning occurred between the IOC and the OCOGs, an OCOG and another OCOG, or between the event organizers and the other environmental stakeholders. This would apply to both the evolution of the environmental movement as well as the increase role of stakeholders in institutionalizing environment into the Games. Some bids directly reference learning from other previous editions of the Games. For example, the Tokyo 2020 bid mentions studying the London 2012 Games' sustainability plan to improve their environmental operations (Tokyo, 2011). Interviews with IOC officials, OCOG officials, and the other environmental stakeholders would help provide the necessary data to determine if organizational learning did occur. The body of literature on environmental issues in the Olympic Games would benefit from an understanding of what types of knowledge were shared between the various stakeholder groups, if any was shared at all. This would help explain the trends in the environmental movement within the Games and why certain stakeholders were

engaged in the process. Such information would benefit the sport event management literature as well as future Olympic Games organizers as they confront their own environmental challenges.

The last area for future research to consider is the increased role of sponsors in the environmental management of the Games. The IOC officially began requiring OCOGs to engage sponsors starting with the 2010 Winter Games (IOC, 2001). Sponsors, as facilitators of the Games, play an important role in helping to finance Olympic operations (Getz et al, 2006; Kearins & Pavlovich, 2002). Many organizers have proposed making organizations that wish to sponsor the Olympics engage in the environmental efforts of the IOC and OCOG (e.g., Rio de Janeiro, 2007; Sochi, 2005). Since sponsors provide a significant amount of revenue to the IOC, it would be beneficial to investigate how to better use their partnership in Olympic efforts to improve environmental performance in the Games (IOC, 2015). This knowledge would benefit both sponsors as well as future Games organizers as they seek to improve environmental performance across multiple areas of the Olympic Games.

Only one limitation presented itself during this research: the IOC embargo on documents. Certain sensitive documents are not released for public viewing by the IOC until a set number of years have passed. Typically, documents pertaining to a particular edition of the Games are not released for twenty years following that Olympic Games event. However, all bids, final reports, IOC meeting minutes, and other data were publically available at the time of data collection. This limitation was overcome since all of the data necessary for the execution of this study was collected and analyzed.

In summary, the primary purpose of this thesis was to examine the institutional history of the environmental policies and practices in the Olympic Games, how environment became accepted as a legitimized norm in the Movement, and to examine the role of stakeholders in the

institutionalization of environment in the Olympic Movement. The findings suggest that beginning in the 1980s a theme of general environmental protection emerged in the Olympics, which was followed by the themes of sustainability and zero impact. The major stakeholders in the environmental movement in the Games are the organizers (i.e., IOC and OCOGs), regulators (e.g., UN, governments, LEED, and ISO), non-governmental organizations (e.g., Greenpeace, WWF, and WHO), and lastly sponsors. These stakeholders played the respective roles of owning and hosting the games, approving environmental projects for the Games, providing environmental expertise, and providing the funds and supplies necessary for hosting the carrying out those environmental initiatives. This research benefits the sport event management literature and will help future Olympic Games organizers as they undertake their own planning and management for environmental initiatives. Via this research, a better understanding of the environmental efforts of the Olympics emerged, which will help future editions of the Olympics become more environmentally sensitive.

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Purpose: Understand the evolution, implementation and management of environment and sustainability practices in the hosting of mega-sporting events.

Theoretical Framework: Institutional theory and stakeholder theory

Study:

Paper Based Thesis:

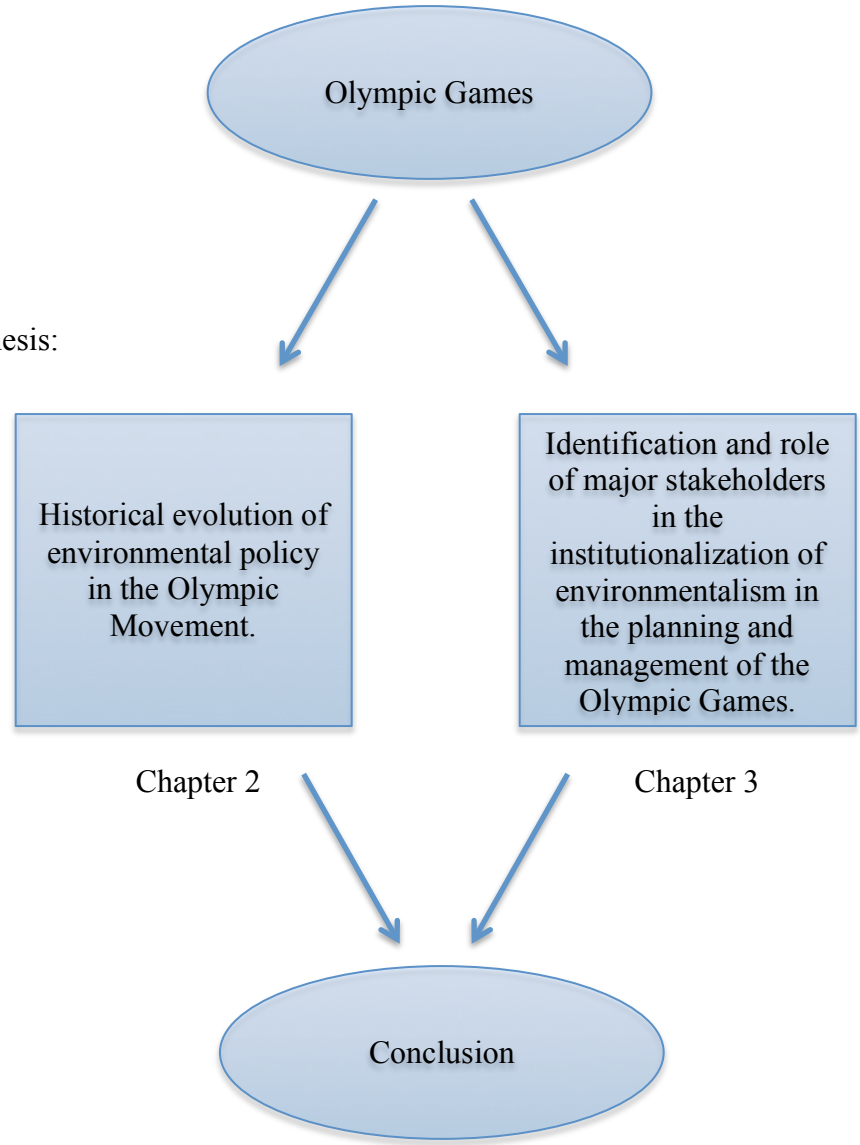

Figure 1. Theory and Research Flow Chart