

# Sport Events and Environmental Sustainability: Towards an Eco-Friendly Agenda in Malawi

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**Abstract:** The study aimed to explore the environmentally sustainable measures adopted and implemented by the sporting events sector in Malawi, with a focus on understanding the current practices in place and identifying existing gaps in environmental management. Sporting events are seen as valuable platforms for raising environmental awareness and educating stakeholders. Using a qualitative approach, in-depth interviews were conducted with 24 purposefully selected experts from the sports and tourism sectors. The findings reveal minimal efforts toward making sporting events environmentally sustainable. While ecotourism-rich destinations in developing countries offer potential for sustainable sport tourism, challenges such as limited environmental awareness, financial constraints, and poor intersectoral collaboration persist. The study advocates for collaborative governance to overcome these barriers and support environmentally sustainable tourism. It offers practical and policy insights to strengthen the link between sport tourism and sustainability in developing contexts.

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**Keywords:** sporting events, development agenda, sustainability, Malawi

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## Introduction

When managed properly, sport events, irrespective of their size and scope have significant importance to destinations that host them (Hemmonsby & Tichaawa, 2018). This is because such events have been proven to serve as catalysts for economic growth (Daniels & Tichaawa, 2021), social unity (Nyikana et al., 2014) and sustainable development (Tichaawa & Hemmonsby, 2022). Over the years, the global sport event industry has started recognising the importance of planning and hosting environmentally sustainable events (Ulloa-Hernández et al., 2024). There has been increasing pressure from different stakeholders, particularly the United Nations, environmentalists, and policymakers, for the sports industry to host environmentally sustainable events (Collins & Cooper, 2017). This is because of growing concerns regarding the environmental harm caused by sporting events (Sotiriadou & Hill, 2015; Daddi et al., 2025). As a result, the sector has implemented different strategies, such as green events (Greenhalgh et al., 2015; McCullough et al., 2016; Fermeglia, 2017) and carrying capacity limitations (McCullough et al., 2023; Fang et al., 2025), to ensure that events are environmentally friendly and that stakeholders are conscious of the harm caused to the environment (Gibson et al., 2012; Mchunu et al., 2021; Daddi

et al., 2025; Fang et al., 2025). For instance, one of the requirements set by the International Olympic Committee and FIFA for hosting events is that the bidding host destination must prioritise environmental sustainability and development by hosting green events (Achu, 2019; Pourpakdelfekr & Oboudi, 2022). Green events are defined as events that are planned and hosted in a way that have minimal negative environmental impacts (Li & Liu, 2020).

Sport events rely on the environment because it serves as the 'venue' where the events are hosted (Mallen et al., 2015; McCullough et al., 2021; Eriksson et al., 2025; Trendafilova & Ziakas, 2025). Events are hosted in different environmental settings; for instance, skiing requires environments with snowfall and cold temperatures, while mountain races require dry land and warm temperatures. Toscani et al. (2024) highlight that the sports events sector is constantly evolving and adapting to new environments, including managing scarce resources and addressing climate change. Therefore, it is imperative that destinations host environmentally sustainable events to minimise the negative environmental impacts of hosting such events. Daddi et al. (2025) argue that the environment can be perceived as an important stakeholder or non-human actor in sport tourism because it is directly affected by the events. Events consume renewable and non-renewable resources, such as energy and water, and generate waste, greenhouse gas emissions, and pollution that affect the environment (Gössling et al., 2012; Han et al., 2015; Boggia et al., 2018). Given that events directly interact with the environment and cause environmental sustainability issues, event organisers must adopt and implement effective environmental management strategies. In this context, environmental management refers to the measures and practices implemented by sport associations, event organisers, and attendees to mitigate negative environmental impacts caused by sporting events (Mallen et al., 2015). Toscani et al. (2024) note that events are often hosted in environmentally sensitive areas, causing significant harm to natural habitats. Sport event management addresses environmental sustainability challenges and ensures the implementation of effective measures to protect ecosystems (Zhong et al., 2021). Öztopcu (2023) highlights that the environmental impacts caused by the sport event industry have become a global concern; therefore, it is a global responsibility to host environmentally sustainable events which are essential for the attainment of Sustainable Development Goals [SDGs], especially those related to goals 11, 12 and 13 (Kimbu & Tichaawa, 2018).

This paper advances the agenda for eco-friendly sporting events in the Global South context, with a specific focus on Malawi. This is because existing literature on the environmental management and sustainability of sporting events largely focuses on the developed world and mega-sporting events (Gibson et al., 2012; Tichaawa & Bob, 2015; Zhong et al., 2021; Toscani et al., 2024;). Therefore, this paper makes a

theoretical contribution to the existing body of knowledge in sport tourism and environmental sustainability by advancing the theoretical understanding of the environmentally sustainable measures implemented in underexplored contexts, using Malawi as a case study. Based on the study findings, we demonstrate how sustainable sport events can be achieved through collaborative governance among different stakeholders involved in sport tourism development. More importantly, the study argues that sustainable development can be achieved through the implementation of destination-tailored strategic policies and environmental measures that align and reflect the destination's unique environmental conditions.

## **Literature Review**

### ***Sport tourism development and environmental sustainability***

This study is grounded in the principle of environmental sustainability linked to sport tourism development. The principle of environmental sustainability has become a global phenomenon, having been incorporated into the strategic plans and policies of various sectors (Holmes et al., 2015). The concepts of sustainability and sustainable development are often used interchangeably to emphasise the ability of the present generation to meet its needs without compromising the ability of future generations to meet their own needs (Costa et al., 2019; Öztopcu, 2023). In the context of this study, it refers to the ability of present generations to promote the conscious use of renewable and non-renewable resources without depleting these resources for future generations and causing environmental harm (Morelli, 2011; Trendafilova et al., 2014; Watkin et al., 2021). Environmental sustainability further emphasises the importance of efficiently using and conserving both renewable and non-renewable resources (Costa et al., 2019). There are three main pillars of sustainability: economic, social, and environmental. Collins et al. (2007) note that many research studies primarily focus on the economic pillar because of the perception that economic benefits are more important for organisations and destinations. Similarly, Adams (2004) found that several organisations believe that adopting only the economic pillar is the best way to achieve sustainability and to fast-track tourism development. However, there has been an increase in academic studies that focus on the environmental sustainability of the sport tourism industry, and it has become a matter of international importance for sport tourism development (Gibson et al., 2012; McCullough et al., 2021; Martins et al., 2021; Daddi et al., 2025; Trendafilova & Ziakas, 2025). There are global debates on the environmental impacts of by different types of sporting events (Chirieleison et al., 2020). Some studies acknowledge that small-scale sport events can cause environmental harm, albeit not to the same extent as mega-sporting events (Gibson et al., 2012; Chalip, 2017). Sporting events, particularly large-scale events, often have adverse environmental impacts (Orr et al., 2022; Toscani et al., 2024). These events have a significant travel component, as fans

often travel to different destinations to attend, resulting in a substantial increase in greenhouse gas emissions (Sotiriadou & Hill, 2015; Boggia et al., 2018). Additionally, they attract large crowds, which causes an increase in the waste generated at the destination, and in many developing countries, the waste may be incorrectly disposed of, causing health concerns and pollution (Cooper, 2020; Dingle and Mallen, 2021; Pourpakdelfekr & Oboudi, 2022). The large amount of waste generated may also deteriorate the natural environment, which in turn has adverse effects on the sports events sector because sporting events depending on the natural environment cannot be hosted (Collins et al., 2014; Bunds et al., 2019). Interestingly, Daddi et al. (2025) argue that despite growing concerns about the environmental impact of events, it is mostly mega-sporting events that have prioritised environmental sustainability. They argue that smaller-scale sporting events have been less proactive in implementing environmentally sustainable measures, despite their popularity as being the more environmentally friendly alternative. Academic studies have investigated and analysed the environmental sustainability and impacts of small-scale sport events (Gibson et al., 2012; Mchunu et al., 2021). Huang et al. (2024) argue that the differences in event size mean that environmental impacts and sustainability are measured differently. It is essential to note that mega-sporting events attract more global scrutiny than small-scale events (Collins et al., 2007; Cerezo-Esteve et al., 2022; Pourpakdelfekr & Oboudi, 2022). Hence, the attention is mostly skewed towards these events.

The increased attention on the environmental sustainability of sporting events and climate change has compelled different sport tourism stakeholders to implement environmental management strategies (McCullough et al., 2021; Orr et al., 2022; Trendafilova & Ziakas, 2025). Some of these environmental practices are designed to encourage pro-environmental behaviour among sporting attendees (summarised in Table 1), such as encouraging attendees to use recycling bins at events (Mchunu et al., 2021) and to use public transportation to reduce high carbon emissions (Collins & Cooper, 2017; Martins et al., 2021).

**Table 1.** Summary of management practices implemented at sporting events

<b>Environmental management practices</b>	<b>Purpose of the implemented practices</b>
<b>Waste management</b>	These are environmental practices implemented to reduce the waste generated at sporting events. This includes measures such as reusing, recycling, and reducing materials used at events, and correct disposal of waste (Dodds and Walsh, 2019).
<b>Water management</b>	Measures implemented to reduce water wastage and contamination at sporting events (Lakho et al., 2020).
<b>Transport management</b>	Environmental practices implemented to reduce environmental impacts associated with transportation systems used during events, including encouraging attendees to use public transport (Collins and Cooper, 2017).

Environmental management practices	Purpose of the implemented practices
<b>Green communication</b>	Environmental measures implemented to communicate environmental messages to event attendees, such as encouraging the use of recycling bins and using the correct disposal bins at events (Zhong et al., 2021).
<b>Ecological conservation and management</b>	These measures are aimed at conserving and preserving the natural landscapes when events are held in environmentally sensitive areas (Graefe et al., 2019; Newland et al., 2021).

Research conducted on sport events and environmental sustainability has largely focused on the Global North, investigating green event management strategies (Wang et al., 2019; Li & Liu, 2020), managing scarce resources (Malchrowicz-Moško & Poczka, 2018; Triantafyllidis et al., 2018), and sustainable event planning (Fotiadis et al., 2016). Studies conducted on the sustainability of sports events from a Global North perspective provide insights into environmental management strategies for sports events. However, the strategies and measures implemented in a developed world context are rooted in structured policies and governance structures, which is not the case for the Global South, where there is a lack of institutional support and effective policies (Acquah-Sam, 2021; Nyikana & Tichaawa, 2024). Given the global concerns about environmental management and mitigating climate change, the discussion on sporting events and sustainability presented above highlights a pressing need to examine the environmental principles associated with sporting events and environmental management from a Global South perspective. The limitations of such research studies are concerning given the increasing number of small-scale, medium-scale, and large-scale sporting events being hosted in environmentally sensitive areas that lack effective environmental strategies and management. Hence, the current study is important because it provides empirical evidence from a geographically specific context in the Global South, thus allowing for comparative analysis to be conducted in academic literature.

### Methodology

To achieve the aim of this study, a qualitative research approach was adopted. The qualitative research design was exploratory in nature, grounded in understanding the lived experiences and perceptions of the stakeholders (Creswell & Plano Clark, 2018; Asenahabi, 2019). Qualitative research enables researchers to explore complex subjects and gather detailed responses from participants, providing context for the research problem (Köhler et al., 2024). Existing literature on the environmental sustainability of sporting events in the Global South, particularly in less developed countries, is scarce. Therefore, a qualitative research design allowed the researchers to explore the research area and provide a holistic understanding of this phenomenon. In-depth, semi-structured interviews were conducted with stakeholders ( $n = 24$ ) from the sports and tourism sectors in Malawi. Table 2 provides

a summary of the participants from the public and private sectors of the sport and tourism industries.

**Table 2.** Summary of interviewed stakeholders ( $n=24$ )

<b>Participant code</b>	<b>Participant</b>	<b>Participant field</b>
PT1	Department of Tourism	Public sector
PT2	Department of Tourism	Public sector
PT3	Department of Tourism	Public sector
PT4	Department of Tourism	Public sector
PT5	Department of Tourism	Public sector
PT6	Department of Tourism	Public sector
PT7	Department of Tourism	Public sector
PT8	Department of Tourism	Public sector
PS9	Ministry of Youth and Sports	Public sector
PS10	Ministry of Youth and Sports	Public sector
PS11	Ministry of Youth and Sports	Public sector
PS12	Ministry of Youth and Sports	Public sector
PS13	Ministry of Youth and Sports	Public sector
PSA14	Sports association	Public sector
PSA15	Sports association	Public sector
PSA16	Sports association	Public sector
PSA17	Sports association	Public sector
PSA18	Sports association	Public sector
PSA19	Sports association	Public sector
PSA20	Sports association	Public sector
PE21	Event organiser	Private sector
PE22	Event organiser	Private sector
PDM23	Destination marketer	Private sector
PDM24	Destination marketer	Private sector

The participants were diverse stakeholders from the public sector, including the Ministry of Youth and Sports, sports associations, and the Department of Tourism, as well as representatives from the private sector, such as event organisers and destination marketers. The participants were purposively selected by the researchers owing to their expertise and knowledge in their respective fields of sports and tourism, as well as their involvement and experience in environmental management in the context of sporting events. The interviews were conducted face-to-face at the workplaces of the different stakeholders. Each interview lasted from 1 hour to 1 hour 45 minutes, on average. The themes explored in the interviews were environmental sustainability and the management of sporting events. The interviews were transcribed verbatim and uploaded to the ATLAS.ti software, where transcripts were individually coded based on the themes explored in the interviews. Thereafter, the identified codes were grouped into four themes, which are discussed in the results section.

## **Results**

### ***Environmental objectives for hosting sporting events***

Several studies note that one way sporting events have incorporated environmental sustainability is using the events as platforms to communicate environmental messages and raise environmental awareness (McCullough et al., 2021). Gibson et al. (2012) and Mchunu et al. (2021) report that sporting events can positively influence attendees to become more environmentally conscious and friendly, therefore they can be a platform to encourage pro-environmental behaviour. More importantly, because sporting events have been used to strategically advance tourism development, sporting events become the ideal platform to test and implement best environmental management practices. The interviews conducted revealed that very few of the events in Malawi have specific environmental objectives. One of the participants, an event organiser, noted the following:

*“So, over the years, when the event was organized by us, we used the event as a platform to send out messages about conservation. So, we would bring people together and speak about the conservation of the mountain.” (PE22)*

This indicates that since the change in the event organising team, no conservation awareness initiatives or programmes have been implemented. A government official from the Department of Tourism noted the following:

*“We do have environmental objectives, but these are not clearly communicated, and not every stakeholder involved in event planning may understand them. However, we do try to maintain the environment, keep the surrounding areas clean, and conserve energy.” (PT2)*

A major challenge mentioned in the interviews by different stakeholders is the limited knowledge of what environmental objectives are and what is required from organising teams to identify such objectives. The findings indicate that most of the events do not have specific environmental objectives in place that guide and inform stakeholders of their environmental performance and ensure commitment to achieving environmental sustainability. The objectives outlined for most events in the country are closely tied to the social aspects of these events, which aim to promote socioeconomic development. In instances where environmental objectives are outlined, they are aligned with general environmental practices that are not specifically tailored for sporting events or events in environmentally sensitive areas. It is regrettable that none of the stakeholders interviewed plan sporting events with specific environmental intentions.

### ***Current environmental management practices for sporting events***

The interviews with the government officials from sports and tourism revealed that environmental sustainability and management are not the primary focus in sports tourism development. Most of the sport event stakeholders have not

implemented environmental management practices, despite the fact that some of the events in Malawi are in environmentally sensitive areas. The focus in sport tourism development is boosting tourism statistics and economic growth. This has resulted in environmental sustainability receiving very little focus from stakeholders. However, there are some events that involve both sectors, where specific environmental measures are implemented. This sentiment was captured by one of the sports association representatives and a government official from the Department of Tourism, who said the following:

*“So, we want to try and limit the amount of chemicals we use by switching to more environmentally safe chemicals and finding a better way to [treat] waste water. We agree that there is a need to use more environmentally friendly products. That is what we are trying to test at the moment.” (PSA16)*

Another informant, a tourism public sector official, noted the following:

*“In terms of environmental measures with the sporting events we are involved in, we look at the carrying capacity of the event venues. We try to make sure that we have the number of people that fit the carrying capacity for each venue. We also look at waste management and maintaining water usage during the events.” (PT7)*

These sentiments suggest that some of the events in the country have implemented environmentally sustainable measures. However, these measures are not entirely effective in addressing environmental sustainability issues on a large scale. Furthermore, not many stakeholders in sports or tourism have implemented environmental management practices or measures. This was revealed in one interview, where a public sector official noted that they felt the events they host do not have a significant environmental impact; therefore, they have not implemented any environmental measures. A sports association representative stated the following:

*“These events do not cause a big harm to the environment, so we do not have strategies or measures in place. However, we engage in environmental initiatives such as planting trees to raise some awareness about the environment.” (PSA18)*

The sentiment reveals that there may be a perception that if the sporting events do not cause environmental harm, there is no need to implement environmental measures. Mchunu et al. (2021) notes that environmental impacts are intangible and, in most cases, cannot be realised immediately. This may explain why some stakeholders feel that their events do not have environmental impacts.

### ***Challenges in achieving environmental sustainability***

Mchunu et al. (2021) reveal that some small-scale sporting events struggle to implement environmentally sustainable practices for various reasons, including limited finances and a lack of interest in environmental sustainability issues. The



interviews for the current study revealed that the public and private sectors face several challenges in achieving environmental sustainability. One of the challenges in Malawi is that environmental impacts are not documented. This is a problem because if environmental impacts are not captured and reported, it is difficult to identify which events have environmental impacts that must be mitigated and managed. A government official from the Department of Tourism shared the following sentiment:

*“Every time there is a sports event, the impact is there. The only problem now is for us to be measuring the impact immediately, to say, within this sport event, within this international sport tournament, this is how the change or the impact has been made.” (PT5)*

The second challenge identified in the interviews is a lack of policy development and implementation that specifically address environmental sustainability or the management of sporting events. One of the tourism public sector officials said the following:

*“The government has not been able to develop or implement strategies that specifically aim to achieve environmental sustainability and management of sporting events.” (PS13)*

This presents a challenge because an effective policy environment would guide various government departments in the measures and strategies to be implemented for achieving sustainability. The policies would make it mandatory for stakeholders to enforce environmental sustainability measures. Currently, there is no incentive or mandate encouraging stakeholders to host environmentally friendly sporting events in the country. The interviews further revealed a lack of collaboration between the sports and tourism sectors in Malawi. The ministry departments may collaborate to host some events, but the relationship and coordination between the two sectors, as well as government departments, are not well-established. This presents a problem because the lack of collaboration has a direct impact on the sustainability strategies or measures that must be implemented. The lack of collaboration suggests that there is ineffective communication between the sectors, and environmental sustainability issues may not be a priority. A government official in the Ministry of Youth and Sport mentioned the following:

*“The government departments only work together should there be a sporting event that requires them to do so; thereafter, each department goes its separate ways.” (PS11)*

The interviews further revealed that another challenge is financial constraints. Several studies (Vicente-Molina et al., 2018; Mchunu et al., 2021) claim that financial constraints or a lack of financial support can be a barrier for event organisers or stakeholders to implement environmentally sustainable measures. This sentiment was captured by a tourism public sector official:

*“In order to implement sustainability measures, it requires finances, and as it is, the budget does not allow for that. Implementing sustainability measures is expensive and requires enough funding.” (PT3)*

## **Discussion**

Based on the research findings presented above, it is evident that the majority of sporting events in Malawi have not prioritised environmental sustainability and limited measures have been implemented in this regard. This is despite the fact that some of the sporting events are hosted in environmentally sensitive areas that require environmental management to ensure they remain protected. In instances where environmental sustainability measures are implemented, they are often not effectively implemented or encouraged. Moreover, some of the measures implemented are merely sustainability initiatives that are not directly linked to the event itself; however, these initiatives are presented in a manner that makes them appear to be part of the environmental sustainability measures implemented for the event. Although environmental initiatives, such as planting trees and raising environmental awareness, are important parts of sustainability, in the context of event management, stakeholders are expected to take more proactive and rigorous actions to manage the environmental impacts of sporting events. For events in environmentally sensitive areas, it is essential to incorporate environmental awareness strategies into the overall planning of the event. More importantly, sport and tourism government stakeholders should make environmental educational programmes mandatory for sporting events. The findings also show that the sporting events do not conduct environmental impact assessments, which causes implementation challenges that make it difficult for stakeholders to achieve sustainability. It is suggested that sporting events in Malawi consider using these events as a platform to initiate pro-environmental management processes in the planning and hosting of sporting events; for example, installing solar energy in sports facilities, such as stadiums, using a grey water system to maintain stadium pitches, and implementing more stringent waste management measures.

Trendafilova & Ziakas (2025) report that most sporting events struggle with environmentally sustainable reporting. This is the case for most events in developing and underdeveloped countries, as some lack the necessary measures or procedures to report on sustainability issues. The scholars suggest that event portfolios can be used to achieve environmental sustainability. An event portfolio is a strategy that outlines how socioeconomic benefits can be maximised (Chalip, 2017). Therefore, incorporating the element of environmental sustainability into event portfolios can encourage event stakeholders to implement sustainability measures. Lastly, the findings reveal a lack of collaboration between stakeholders involved in the sports

and tourism domains in both the public and private sectors. McCauley (2008) describes governance as the complex relationship between government and non-government stakeholders. This study recommends collaborative governance as a strategy to achieve environmental sustainability.

### **Conclusions**

The current study aimed to investigate the environmental sustainability measures and strategies employed by the sports events sector in Malawi. The results reveal that some of the events are not aligned with the environmental sustainability principles linked to sport tourism development, resulting in several negative environmental impacts. This presents significant implications for environmentally sensitive tourist destinations. The findings further reveal that the general perception among the informants was that sporting events are not detrimental to the environment, and as such, most of the events do not have environmental objectives or strategies in place to mitigate negative environmental impacts. The researchers suggest that event organisers and policymakers involved in sport tourism events in Malawi should develop destination-specific environmental strategies to ensure sporting events do not harm the environment, especially in environmentally sensitive areas. Furthermore, the event organisers should integrate environmental sustainability strategies into broader event planning strategies.

Theoretically, this paper makes a significant contribution to the existing body of knowledge by extending the empirical understanding of environmental sustainability measures implemented in underexplored destinations in the Global South, such as Malawi. This study reveals that some countries in the Global South face challenges in implementing environmental sustainability measures because of a lack of collaborative governance and institutional support aimed at ensuring sustainable development and growth in the sport tourism sector. Practically, this study highlights that the lack of collaborative governance between stakeholders hinders the effective implementation of environmental management measures. Thus, this study suggests a more collaborative governance approach between stakeholders in the sports and tourism sectors in Malawi. More importantly, it provides strategic direction on how sporting events can be strategically used to advance sustainability principles for tourism development in the Global South. Incorporating sustainability principles and advancing an eco-friendly agenda for sporting events can ensure the events sector is developed in a sustainable manner and the benefits accrued can be leveraged in the long term.

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