



THE FUTURE OF SUSTAINABLE SPORTS EVENTS: ENVIRONMENTAL, ECONOMIC, AND SOCIO-CULTURAL IMPACTS – THE CASE OF THE 2022 WOMEN'S EUROPEAN HANDBALL CHAMPIONSHIP

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Abstract:

Sports events significantly influence the image of a destination and can also be one of the main motives for tourists to travel. Our society is becoming increasingly sustainability-conscious, which makes the sustainable orientation of events a very important part of their organization. In this research, we defined sports and event tourism, sporting events, and the sustainable organization of events. We also theoretically elaborated on the environmental, economic, and socio-cultural impacts of sporting events. We conducted research interviews and reviewed reports, which provided us with more detailed insights into the effects of the 2022 Women's European Handball Championship, held in Ljubljana and Celje. We identified the following key concepts: carbon footprint, sustainable mobility, waste separation and materials, involvement of the local population, empowerment of women, local perception and pride, multiplier effects, immediate loss – long-term benefit, tourist consumption, standardization, and the role of local and national authorities. Measuring and assessing the impacts of sporting events is important in order to adopt better and more effective measures for future events, to maximize positive and minimize negative impacts, to gain public and media support, and to ensure the long-term sustainability of sporting events.

Keywords:

sports events, environmental impacts, socio-cultural impacts, economic impacts, sustainability.

INTRODUCTION

Through a review of the literature on sports tourism and sporting events, we have learned that sports tourism is experiencing rapid growth. An increasing number of countries are engaging in the organization of major sporting events as a way to attract visitors, enrich their tourism offerings, and simultaneously promote their nation. There is also a growing trend of cooperation between countries that choose to act as co-hosts, thereby sharing the costs of the event. Organizing such large-scale events requires a structured plan and clear objectives aimed at achieving positive outcomes; however, the results can also be negative, both for the organizers and for the destination hosting the event or championship.

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In the case of the 2022 Women's European Handball Championship, the impacts had not yet been systematically researched. Therefore, in this research, we set out to examine various dimensions of the impacts: environmental, socio-cultural, and economic. The purpose of this research was to determine the effects of the Women's European Handball Championship on the local communities in the two host cities, Ljubljana and Celje. We also aimed to identify the environmental impacts, to investigate the extent to which the championship was oriented towards sustainability and responsibility, and to further explore the goals and measures set by the organizers regarding the championship's effects on the local community and environment. In addition, we sought to analyze the economic impacts on tourism during the championship as well as the socio-cultural impacts.

The findings of this research will serve organizers and sports federations for planning future sporting events in Slovenia, as well as municipalities that may host such championships. These findings can be used to ensure that future events are organized at an even higher level, with a stronger focus on sustainability.

LITERATURE REVIEW

Sports Events

Sport and tourism are two distinct elements within the leisure industry, both of which hold significant importance in their own right. Over the past two decades, so-called sports tourism has developed rapidly. The relationship between sport and tourism continues to evolve in line with contemporary leisure demand and the structures of supply (Weed & Jackson, 2008).

Sports tourism represents a segment of the tourism market, and its economic contribution has grown considerably in recent decades. It is an economic and social activity situated at the intersection of sport and tourism (Pigeassu, 2007). The World Tourism Organization (UNWTO, n.d.) also emphasizes on its website that sport and tourism are interconnected and complementary. Sport, whether professional, amateur, or recreational, involves extensive travel for competitions and games across various destinations and countries.

Professional sport is also regarded as part of sports tourism, since it requires athletes and their teams to travel for training and competitions (Mihalič & Gartner, 2003, in Berčič *et al.*, 2010). However, the travel of professional athletes is more commonly classified as business travel. Spectators, on the other hand, represent those who travel to various tourist locations; conversely, sport can also serve as an active form of leisure, where individuals choose a suitable tourist destination (Kurtzman, 2001, in Berčič *et al.*, 2010). Spectators are a particularly important element of sporting events, as they generate the largest economic impacts.

In the past, certain limitations existed: events could only be attended by a limited number of people at the venue (e.g., spectators in the sports hall), media coverage was often restricted to the local level (e.g., live broadcasts were not common), and the overall appeal of events was limited (e.g., some sports were less interesting in regions where they were not practiced). Today, with accessible technological solutions (e.g., smartphone cameras), broadcasts across multiple platforms (e.g., streaming and subscription services), and increased mobility (e.g., the ability to purchase tickets and travel abroad), fans can follow their favorite sports anywhere in the world. Consequently, there are more and more sporting events aimed at a broad audience (Hallmann & Breuer, 2010).

According to Lesjak (2018), sporting events enhance the visibility of the host destination and enrich its tourism offer. They increase the number of arrivals and overnight stays of foreign tourists as well as their spending at the destination. Often, they also contribute to greater media visibility during the event or championship, attract foreign investors, and lead to the renovation of old infrastructure or the construction of new facilities for event purposes.

Based on size, events can be categorized into smaller events (local in character, intended for fewer participants, often serving relaxation and community purposes), larger events (attracting more participants, drawing media interest, commonly referred to as "major events"), and very large events (attracting significant numbers of visitors and having long-term economic impacts, further divided into "hallmark" and "mega" events) (Getz, 1997).



The scale of sporting events also carries wider implications. As Hall (2007) notes, sports events affect the environmental, economic, and social structures of the host community. The literature generally agrees that the benefits for the host community include an improved public image, greater visibility, and positive psychological effects. However, there remains skepticism as to whether publicly funded sporting events truly generate positive economic impacts for local communities, or at least to the extent claimed by event-sponsored studies in terms of employment, regional development, and economic growth (Cantuche & Hurtado, 2007).

Sustainable Sports Events

A sustainable sports event is one that meets the present needs of organizers, participants, visitors, sponsors, suppliers of products and services, the local community, and society as a whole—without compromising the ability of future generations to meet their own needs. This concept is grounded in the protection of natural resources, animal and plant species, and ecosystems, as well as in reducing climate change, minimizing waste, and promoting sustainable mobility (Karba, Brecelj & Kern, 2013).

Sport is at once both a culprit and a victim of harmful human impacts on the environment and society. Its conflict with the environment is particularly evident: sporting events produce high levels of greenhouse gas emissions, as well as chemical, light, and noise pollution, while exploiting nature relentlessly. Climate change, environmental pollution, water pollution, and the depletion of natural resources are just some of the consequences of our irresponsible behavior toward nature. More broadly, one can say that sport both contributes to these issues and is impacted by them. A vivid example can be seen in climate change, which in the past decade significantly affected the hosting of winter sporting competitions in Slovenia (Prelc, 2023).

Sporting events organized in a sustainable way are important from several perspectives. The first perspective is environmental: such events typically involve large numbers of participants and require significant resources. By reducing waste, using renewable energy sources, and encouraging green mobility, the negative environmental impacts of sporting events can be reduced. The second perspective is societal: since sport has a strong influence on society, sporting events provide an opportunity for organizers to encourage sustainable practices among the broader public. The third perspective is economic, encompassing waste management, energy consumption, transportation costs, and more (Prelc, 2023).

Finally, Lesjak (2018) observes that despite responsible and sustainable initiatives, the organization of major sporting events in recent years has been associated not only with positive but also with significant negative impacts. Doubts have arisen regarding the financial feasibility and sustainability of hosting world-renowned sporting events. Many destinations have withdrawn from ambitions to host global spectacles (e.g., the Olympic Games), primarily due to substantial financial discrepancies between planned budgets and actual implementation.

Butina (2007) also emphasizes that every event has impacts on the environment in which it takes place. These impacts can be both positive and negative, and they usually occur simultaneously. It is important that an event generates more positive than negative effects. In the past, the focus was primarily on the positive economic and political impacts of events, while other effects were often overlooked. Today, however, there is the increasing emphasis on environmental and social impacts. It is no longer sufficient for an event to generate profit; attention must also be paid to the environment and the well-being of the local population. Only by ensuring that positive impacts outweigh the negative ones in all respects can an event achieve long-term success. Events touch almost every aspect of our lives, whether social, cultural, economic, environmental, or political (Filip, 2013).

Environmental impacts

Sporting events have significant environmental impacts, which can be either positive or negative depending on the organizers' approach to sustainability. Environmental impacts remain a relatively under-researched area in the literature on assessing the effects of major sporting events (Collins, Jones & Munday, 2009). Large sporting events can promote planning and control measures for recycling policies and pollution management (Allen, O'Toole, McDonnell & Harris, 2005), and they can serve as a platform to raise environmental awareness



among the local population (Kim & Lee, 2006). They may also contribute to the preservation of the physical environment and local heritage (Deccio & Baloglu, 2002), and through thoughtful planning and interventions, act as a catalyst for urban and regional renewal where the event is hosted. Changes in infrastructure development and transport improvements during the preparation and organization of large events can generate a series of positive effects, reflected in upgraded transport and urban infrastructure that enhance the well-being of the local community (Andriotis & Vaughan, 2003).

Despite these efforts, sporting events often generate substantial environmental burdens (Babiak & Trendafilova, 2011). Among the most significant challenges is the increased carbon footprint resulting from the mass travel of spectators, athletes, and staff, particularly at international events. Jones (2008), Kim and Lee (2006), and Lorde, Greenidge, and Devonish (2011) also highlight negative impacts, noting that interventions in the environment for large sporting events raise concerns about local ecosystem damage, excess carbon emissions, environmental strain, the depletion of irreplaceable natural resources, and contributions to climate change. Negative environmental effects mainly occur in the infrastructure and construction, transportation, and waste management domains (Pourpakhdeh & Oboudi, 2022). The sustainability of sport is therefore closely linked to the sustainability of the environment. Consequently, minimizing the negative environmental impacts generated by sporting activities plays a significant role in supporting overall environmental sustainability (Atalay, 2021).

Socio-cultural impacts

Burnett (2008) interprets socio-cultural impacts as the establishment of mutually beneficial relationships, networking, and social integration. Sporting events and tours generate social benefits and are promoted in governmental policies as a means to familiarize citizens with other parts of their country and to strengthen respect for their homeland. Visitors, in this case tourists attending sporting events, influence the behavior of local residents and interpersonal relationships (Saayman, 2001 in Knott, Swart & Visser, 2015).

Several positive socio-cultural impacts of major events have been highlighted by Ritchie, Shipway, and Cleeve (2009). They found that large sporting events enhance pride, improve quality of life, reduce social exclusion, strengthen cultural values and traditions, and help build national identity. Major sporting events play a significant role in reinforcing a sense of belonging to a place and in strengthening the identity of the local community (Moscardo, 2008).

Sporting events have numerous socio-cultural impacts, which can be both positive and negative (Weed *et al.*, 2015). On the positive side, sporting events foster community cohesion and strengthen national pride. They often create opportunities for volunteer work, engaging a broad range of people in organizational processes. However, sporting events can also generate negative socio-cultural effects. One of the main challenges is the exclusion of certain social groups. This can occur when event tickets are prohibitively expensive or when events do not consider the needs and interests of diverse social groups. As a result, sporting events may only be accessible to specific segments of the population, thereby increasing social inequality (Weed *et al.*, 2015).

Another negative effect, identified by Grix and Carmichael (2012), is the potential rise of cultural nationalism or intolerance, which may occasionally emerge during major international sporting events. Additionally, sporting events often place significant strain on local communities. Increased traffic congestion and higher demand for services such as accommodation, food, and utilities can lead to substantial costs for residents and disrupt daily life. For some individuals, these disruptions can be emotionally and psychologically burdensome, especially in cities hosting events over multiple weeks (Smith, 2009).

Negative impacts can also include displacement or migration, rising rental prices, seasonal employment only, an increase in low-paid jobs, crowding that disrupts residents' daily routines, more traffic congestion, fewer parking spaces, and higher rates of crime, vandalism, and prostitution, all of which can reduce local safety (Chen, 2006). Major sporting events can also bring long-term negative effects to the host community, visible as increased unemployment, poverty, lower educational outcomes, housing problems, and higher prices for goods and services (Evans, 2005).



Economic impacts

The organization of major sporting events represents an excellent opportunity to generate revenue, although local communities often perceive such events with mixed feelings. These types of events are most frequently evaluated from an economic perspective, and their organization is often justified by the economic pressures of tourism and other stakeholders, who influence the local economy (Ntloko & Swart, 2008).

Well-organized major sporting events can bring numerous positive economic effects, which local communities experience as new employment opportunities, positive media coverage that increases tourist arrivals, higher investment and sponsor expenditures, overall economic growth, increased sales, new or renovated sports and tourism infrastructure, and various other progressive impacts (Getz, 2008; Ritchie *et al.*, 2009; Dwyer, Mellor, Mistilis & Mules, 2000, in Lesjak, 2018).

Sporting events often create new jobs, including direct employment in event organization, such as volunteers, security personnel, catering staff, and technical staff. They also have an indirect effect on job creation in sectors such as hospitality, transportation, retail, and construction, as infrastructure improvements—such as roads, airports, sports facilities, and other public spaces—are often required. For example, the 2014 FIFA World Cup in Brazil contributed to the creation of thousands of jobs related to stadium construction, infrastructure, and tourism (Baade & Matheson, 2004).

Although sporting events can generate substantial economic benefits, they may also have negative consequences. One of the main challenges is the high cost of organization. Hosting major sporting events often requires enormous financial resources for infrastructure construction, urban redevelopment, security measures, promotion, and logistics. In many cases, costs exceed initial estimates, leading to public debt. For instance, the 2004 Athens Olympic Games became a financial failure due to excessive spending and delays in infrastructure development, with long-term financial repercussions for the country (Andreff, 2008).

This research focuses on the 2022 Women's European Handball Championship, hosted by Slovenia from November 4 to 20, 2022, and its impacts on the local community. It was the largest sporting event in Slovenia in 2022 and the largest international women's sporting event ever held in the country (STO, n.d.). The organizers aimed to make the event unique by emphasizing two key pillars: sustainable development and women's empowerment, thereby creating more than a conventional sporting event. To ensure sustainability, the organizers systematically followed the Clean Win – Sustainable Sports Events manual, published by Umanotera in 2013. They analyzed potential negative impacts on society and the environment and identified 12 focus areas, each with concrete objectives and measures. This resulted in approximately 40 objectives and 100 measures, implemented before, during, and after the championship (Pavli, 2022). The competitions were attended live by 30,000 spectators, while television broadcasts reached over 350 million viewers worldwide. To promote awareness of women's issues during the championship, the organizers created the official anthem, Play With Heart, performed by Senidah, and held a multi-day conference on the topic.

METHODOLOGY

Based on the reviewed literature, the following research questions were formulated:

1. What were the environmental impacts of the 2022 Women's European Handball Championship in Celje and Ljubljana?

It was important to investigate the environmental impacts of the event, as one of the championship's key pillars was sustainability. This allowed us to examine how the organizers sought to reduce the carbon footprint and what other measures were implemented to minimize negative environmental effects.

Environmental impacts of sporting events are often associated with carbon emissions, primarily due to the travel of participants and spectators, as well as energy consumption. A study on the impact of sporting events on air quality indicated that such events can increase air pollution due to higher traffic and activity levels (Watanabe, Yan & McLeod, 2023). Similarly, a study on the ecological footprint of the 2004 FA Cup final revealed that over half of the event's carbon footprint originated from fan travel, highlighting the importance of sustainable transportation planning (Copley, 2005).



2. What were the socio-cultural impacts of the 2022 Women's European Handball Championship in Celje and Ljubljana?

Investigating the socio-cultural impacts of the championship was essential to understand the effects on the local population, the types of activities in which they participated, and whether the event attracted more tourists than usual during that period.

A study among residents of Shanghai analyzed six factors regarding the social impacts of major sporting events and how local residents perceive these effects: enhancing city recognition and pride, promoting international exchange and cultural collaboration, stimulating economic and tourism development, and improving infrastructure. Two negative factors were also identified: disruption of daily life and environmental and safety challenges. The study concluded that understanding the social impact of sporting events is crucial for better organization of future events, and that assessing both positive and negative consequences in advance contributes to a sustainable and socially responsible approach (Liu, 2016).

3. What were the economic impacts of the 2022 Women's European Handball Championship on tourism in Celje and Ljubljana?

It was important to investigate the economic impacts of the championship to determine the costs of organization and whether the event produced positive or negative outcomes for the Handball Federation of Slovenia. We also aimed to evaluate the economic impact of the championship on the two host cities and on Slovenia as a country.

A study of the economic impacts of sporting events in the state of Maine, USA, in 2019 reported that direct effects amounted to USD 60.9 million, directly supporting 716 jobs and generating USD 20.6 million in wages for workers. Indirect effects totaled USD 35.6 million, supporting additional 320 jobs and contributing USD 14.6 million in wages. The overall economic-tourism impact of spending was USD 96.6 million, creating USD 35.2 million in wages for workers. The study emphasized the role of sporting events as generators of economic activity, not only through direct visitor spending but also via broader effects on the local economy (Maine Office of Tourism, 2021).

The theoretical part of this research employed a descriptive method, in which secondary sources—such as literature, articles, books, and electronic resources—were used to analyze and describe the theory of sports tourism, sporting events, and their impacts on society, the environment, and the economy.

The purpose of descriptive research is to quantitatively define or assess the basic characteristics of the phenomenon under study and to determine whether a relationship exists between two or more variables, as well as the strength of that relationship. It is essential to clearly define the characteristics of interest, explain the terminology used, and establish clear hypotheses (Selič, 2016).

In the empirical part of the research, a qualitative method was applied, using partially structured interviews with the organizers and persons responsible for specific aspects of the Women's European Handball Championship to explore its impacts in detail.

The qualitative method focuses primarily on quality—that is, the essence and nature of the research. Its goals are to describe, understand, and generate hypotheses. The research sample is typically small. Researchers use instruments such as interviews, focus groups, or observation, and the collected data are analyzed using content analysis. The conclusions are comprehensive, effective, and richly descriptive (Selič, 2016). Qualitative analysis relies on interpretation; the researcher seeks to interpret the meaning participants attribute to their experiences, expressed through their opinions, perspectives, and descriptions (Banjac, 2020).

A semi-structured interview is the most common form of qualitative interview. It is characterized by a set of pre-prepared questions that serve as a general framework, guiding the researcher rather than restricting the conversation. A dialogue is established between the interviewer and the interviewee, allowing for flexibility and in-depth responses (Banjac, 2020).

The results of the interviews were analyzed through coding. Coding is the process of analyzing, categorizing, and combining various pieces of data. It is necessary because theories cannot be derived directly from raw data. The aim of coding is to develop a tentative theory grounded in the facts. Coding is particularly useful when the amount of raw data is large, as codes accelerate the analysis process (Kordeš & Smrdu, 2015).



RESULTS

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The coding process was divided into four main themes, which are directly related to the research questions. Within these themes, we identified codes that frequently recurred among the interviewees. The themes are as follows:

- Environmental impacts
- Socio-cultural impacts
- Economic impacts
- Systemic development

Table 1. Environmental Impacts of the 2022 Women's European Handball Championship

THEME	CODE	KEY CONCEPTS	INTERVIEW
Environmental impacts	Carbon footprint	CO ₂ measurements, impact reduction, sustainability criteria	Gašper Pavli, Metka Pirc, Tjaša Ficko
Environmental impacts	Sustainable mobility	Electric vehicles, carpooling, public transport, walking, cycling	Jure Cvetko, Tjaša Ficko, Gašper Pavli, Goran Cvijić
Environmental impacts	Waste separation and materials	Recycling, returnable glasses, education	Tjaša Ficko, Jure Cvetko

Source: Authors

The theme of environmental impacts (Table 1) clearly demonstrates a strong commitment to reducing negative effects on the environment, particularly through the measurement of the carbon footprint, the use of electric vehicles, and encouraging participants and visitors to adopt more sustainable mobility practices, such as walking, carpooling, and public transportation. Waste separation and recycling were also emphasized. In most of the interviews, the respondents highlighted that such events inevitably leave certain impacts; however, the key lies in their active management.

Table 2. Socio-Cultural Impacts of the 2022 Women's European Handball Championship

THEME	CODE	KEY CONCEPTS	INTERVIEW
Social impacts	Involvement of local population and community	Schools, kindergartens, volunteers, local businesses	Gašper Pavli, Tjaša Ficko, Jure Cvetko
Social impacts	Women empowerment	Ambassadors, women's sports, equality	Gašper Pavli, Tjaša Ficko
Social impacts	Local perception and pride	Residents' response, media presence	Tjaša Ficko, Jure Cvetko, Metka Pirc

Source: Authors

The socio-cultural impacts (Table 2) are reflected primarily through the active involvement of local residents, volunteers, and local businesses. An important dimension of the event was also the promotion and empowerment of women in sport, which was particularly evident through the role of ambassadors and targeted media campaigns.



Table 3. Economic Impacts of the 2022 Women’s European Handball Championship

THEME	CODE	KEY CONCEPTS	INTERVIEW
Economic impacts	Multiplicative effects	Direct and indirect revenue	Gašper Pavli, Maja Zalaznik, Metka Pirc
Economic impacts	Direct loss, long-term benefit	Destination promotion, reputation, long-term growth	Goran Cvijić, Metka Pirc, Ana Lampić
Economic impacts	Tourist spending	Overnight stays, hospitality	Jure Cvetko, Metka Pirc

Source: Authors

The economic impacts (Table 3) were mixed: while the direct financial outcome was negative, the indirect economic effects—particularly in tourism, overnight stays, and hospitality—were significant. Nevertheless, several interviewees emphasized that the event represented a valuable long-term investment in the promotion of the destination, women’s handball, and sport more broadly.

Table 4. Systemic Development for Future Similar Events

THEME	CODE	KEY CONCEPTS	INTERVIEW
System development	Standardization and indicators	Methodology, comparability, tool for future events	Gašper Pavli, Maja Zalaznik, Metka Pirc
System development	Role of local and national authorities	Cooperation, support, coordination, communication	Tjaša Ficko, Ana Lampić, Urša Dorn

Source: Authors

Systemic development was emphasized in many of the interviews. Respondents highlighted the importance of collaboration, communication, and coordination among all stakeholders for future similar events. They also stressed the need to establish standards or benchmarks that would make organizing such events easier, while ensuring that best practices are transferred and applied to subsequent events.

For the purpose of this research, we conducted eight interviews and reviewed several reports that contained the most relevant data for answering our research questions regarding the environmental, socio-cultural, and economic impacts of the 2022 Women’s European Handball Championship. We also applied a qualitative research method—coding—with the aim of identifying key themes and recurring patterns.

Through the research we conducted and the interviews carried out, we found the following answers to our research questions:

1. What were the environmental impacts of the 2022 Women’s European Handball Championship in Celje and Ljubljana?

One of the most concretely measured environmental impacts of the 2022 Women’s European Handball Championship was its carbon footprint, which amounted to 1,777,039.46 kg CO₂. According to the measurements, the largest impact on the environment was caused by the mobility of visitors, while the smallest came from waste. The organizers made significant efforts in all areas of sustainability commitments to minimize negative impacts and to encourage both stakeholders and participants as well as visitors to adopt sustainable practices. Recycled materials were used, waste was strictly separated and later recycled, energy and water consumption were reduced through various measures, and attention was given to sustainable food procurement and consumption. To further reduce negative environmental impacts, the organizers collaborated with Simbio (Celje) and Voka Snaga (Ljubljana), two companies that helped develop waste reduction plans.

2. What were the socio-cultural impacts of the 2022 Women’s European Handball Championship in Celje and Ljubljana?

A total of 105 volunteers were involved in the championship, while numerous events and activities were organized even before the tournament, engaging not only the local population of Ljubljana and Celje but also



residents from other parts of Slovenia, particularly young girls. In creating artworks and exhibitions, 57 schools and kindergartens from Ljubljana and 18 from Celje participated, as well as the Institute for Special Needs in Ljubljana. Women's empowerment was another key pillar of the championship: the organizers invited 17 ambassadors from different fields to promote the values of the event and raise awareness of sport and handball throughout the championship. A symbolic event was also organized, in which the ball traveled from Celje to Ljubljana, involving many young girls from handball clubs across Slovenia. Another notable socio-cultural effect was the increased enrollment of girls in handball clubs, which rose by 10% immediately after the event, and by 35% two years later.

3. What were the economic impacts of the 2022 Women's European Handball Championship in Celje and Ljubljana?

The 2022 Women's European Handball Championship in Ljubljana and Celje had significant direct and indirect economic effects. The organizers incurred costs of €2.675 million, while revenues amounted to €2.254 million, resulting in a net loss of approximately €420,000. Nevertheless, the overall economic effects of the event exceeded the organizers' financial balance. The total revenues generated in the Slovenian economy amounted to €4.1 million, including €2.33 million in direct and €1.73 million in indirect revenues. Direct revenues primarily included labor costs, while the largest indirect revenues were generated in the hospitality sector (€1.07 million), rental services (€289,600), and advertising and market research (€274,700). In addition, the championship generated an extra €4.1 million in final household consumption, €1.2 million in service exports, €820,000 in taxes, and €200,000 in investments. The total generated expenditure amounted to €10.4 million, demonstrating the positive multiplier effect of the event on the Slovenian economy, despite the loss incurred by the organizers.

DISCUSSION

In the theoretical part, we defined what sport tourism, event tourism, and events are, as well as what sustainable organization of sporting events entails. Later, we defined the impacts of sports events. Glyptis (1982) included sporting spectating—that is, travel related to attending sporting events—as one of the five typologies of sport tourism, which aligns with our case study of the 2022 Women's European Handball Championship. Lesjak (2018) noted that sporting events increase the visibility of the host destination. According to Metka Pirc, regarding the placement of the "I feel Slovenia" brand, and data from Nielsen, it is evident that Slovenia as a country, and its brand, gained significant international recognition, which could translate into greater tourist visits in the future.

The sustainable execution and organization of sporting events is crucial due to the substantial environmental, social, and economic impacts of large events, as Prelec (2023) notes. For this reason, and primarily to reduce negative environmental impacts, the organizers decided to implement a sustainability-focused European Championship, as Dr. Gašper Pavli explained in the interview. Goran Cvijić added that the goal of the organization was also to increase the visibility and popularity of women's handball.

Golob (2007) argues that sporting events contribute to a positive image of the destination, which Metka Pirc confirmed in an interview: "Such a sporting event certainly has a positive impact on the destination's image, both from a sporting perspective and in terms of increasing opportunities for hosting other sports events." Golob (2007) also mentions the extension of the tourist season, which we learned in an interview with Jure Cvetko was appreciated by local accommodation providers in Celje, as the event took place in November, outside the main tourist season. Dr. Gašper Pavli emphasized: "The main goal is to reduce negative environmental impacts, because an event cannot have positive environmental effects," which aligns with Butina's (2007) claim that it is ultimately important for an event to produce more positive than negative effects. He also noted that nowadays, environmental and social impacts receive much more attention, making the 2022 Women's European Handball Championship a fitting example.

Regarding environmental impacts of sports events, Babiak and Trendafilova (2011) highlight the carbon footprint, primarily caused by mass travel of participants, visitors, and staff. In our case, this was confirmed with concrete data showing that mobility contributed the largest carbon footprint compared to other activities.



Kim and Lee (2006) argue that sporting events serve as a major platform for raising local environmental awareness. Tjaša Ficko noted in an interview: “Our key objectives were to help raise awareness and promote the two main values of the championship: sustainability and women’s empowerment.” This illustrates the connection and importance of informing all stakeholders about the main goals and the significance of reducing negative impacts from large events. Babiak and Trendafilova (2011) also cite noise and light pollution as negative effects of large events; however, Tjaša Ficko confirmed that these were not observed in the championship under study.

Waitt (2003) claims that sporting events enhance tourist experiences and the attractiveness of a destination when the local community is positively engaged. According to Tjaša Ficko and Jure Cvetko, local residents were indeed supportive and enthusiastic about the European Championship. This is further confirmed by the fact that one of the Slovenian team’s matches during the championship was the most attended women’s team sport event in Slovenia’s history, as Goran Cvijić highlighted.

Weed *et al.* (2015) note that volunteering can involve a wide range of people, fostering effective cooperation and building social bonds. “Volunteering is also important in Slovenia, where it has a strong tradition and local community involvement,” said Metka Pirc. Reports confirm this, showing 105 volunteers, including some from other countries. Weed *et al.* (2015) also emphasize that sporting events increase youth participation and interest in sports activities, which Goran Cvijić confirmed with specific figures: “Enrollment of girls in handball clubs increased by 10% immediately after the event and by 35% in 2024.”

Fredline and Faulkner (2000) identify one negative socio-cultural effect as the exclusion of social groups through expensive tickets and failure to consider the interests of diverse groups. In our case, with relatively low attendance and ticket sales, as noted by Goran Cvijić, this could be considered one of the few negative effects of the event.

Andreff (2008) highlights the high cost of organizing events as a negative economic effect. In our case, the championship generated a loss for the Handball Federation of Slovenia, as confirmed in interviews with Gašper Pavli and Goran Cvijić. Nevertheless, positive economic effects were also observed, such as the creation of direct jobs and indirect effects in hospitality, transport, retail, and construction (Baade and Matheson, 2004). In our case, these indirect economic effects generated €4.1 million, which Dr. Gašper Pavli described as: “The multiplier effect of the event was very good.”

CONCLUSION

In this research, we examined the environmental, economic, and socio-cultural impacts of sporting events, using the 2022 Women’s European Handball Championship as a case study. The research showed that every sporting event produces a range of effects, but it is crucial to minimize negative impacts and maximize the positive ones. Due to the organizers’ conscious decision to prioritize sustainability and reduce environmental impacts, the championship was very positively received by stakeholders, the media, and participants.

In the theoretical part, we achieved all the set objectives. We explained in detail the concepts of sport and event tourism, sporting events, and their sustainable organization. We also theoretically analyzed the environmental, socio-cultural, and economic impacts of sports events. In the empirical part, we explored and described these impacts specifically for the 2022 Women’s European Handball Championship. Environmental impacts were analyzed collectively for both host cities, while socio-cultural effects and activities involving volunteers and local residents were analyzed separately for Celje and Ljubljana. Economic impacts were examined generally for the entire championship.

We believe the event provided very good guidance and recommendations for future similar events, though it is important that organizers continue to follow these best practices and strive to improve certain measures and effects. One area that needs particular attention is mobility, as our research showed that transportation accounted for the largest carbon footprint. Future events should implement strategies to encourage participants and visitors to adopt greener transportation options. Another measure that faded quickly was reduced meat consumption. While organizers cannot force vegetarianism or veganism, they could still raise awareness about the environmental impact of animal products—for example, with informative signs in dining areas about the carbon footprint of producing a steak or yogurt.



We consider the organizers' efforts on socio-cultural effects to be very successful, particularly in engaging schools, kindergartens, ambassadors, local businesses, and other stakeholders. However, we note that local tourism organizations could be more actively involved. In Ljubljana, Tourism Ljubljana and the City Municipality were highly engaged, but in Celje, the Tourist Board could have done more to promote the event and the destination. Future research and event organization could also include more precise measurement of local residents' satisfaction and the effects of such events on the community, as local populations are key stakeholders who contribute significantly to a destination's positive image. A notable socio-cultural outcome was the increase in girls joining handball clubs, which rose sharply after the championship—an important positive effect, particularly in a digital age where young people are increasingly focused on screens rather than sports.

The case study also demonstrates that the economic multiplier effect of the event was very strong, despite the Handball Federation of Slovenia recording a direct loss. Economic consequences vary significantly for different stakeholders. While sustainable event organization is both financially and logistically challenging, none of our interviewees, particularly Goran Cvijić, expressed regret over hosting the championship, even though the Federation is still managing the resulting debts. Overall, all interviewees agreed that future sporting events in Slovenia must be organized sustainably.

Systematic national-level solutions are critical. As most of our interviewees emphasized—and we concur—long-term progress in sustainable event management requires collaboration, idea-sharing, and communication among all stakeholders. Effective communication is key to advancing the sustainable organization of large sports events. One upcoming opportunity to apply these lessons is EuroBasket 2029, where we hope organizers will draw upon the experiences and guidelines from the 2022 Women's European Handball Championship to create an even larger and more exemplary sustainable sporting event for the future.

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