THE ROUTLEDGE COMPANION TO MARKETING AND SUSTAINABILITY

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First published 2025

ISBN: 978-1-032-03764-6 (hbk)
ISBN: 978-1-032-03766-0 (pbk)
ISBN: 978-1-003-18889-6 (ebk)

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DOI: 10.4324/9781003412397-27

The Open Access version of Chapter 23 was funded by UKRI ESRC.

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

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Introduction

When the sustainability of our production and consumption systems is discussed, the focus is usually on sectors with the largest physical impacts, and represent the 'essentials' of life including housing, food, clothing, energy and transport (with electronic devices and internet access also increasingly featuring as necessities). Leisure is an increasingly important element of peoples' lives and quality of life, yet it is often missing from discussions of sustainable consumer behaviour and lifestyles beyond the focus on international travel for tourism (see Chapter 21). Sports represent an intriguing sector from a sustainability perspective due to the complex and intertwined nature of its 'Triple Bottom Line' contributions via its socio-cultural impact and health benefits (and sometimes costs) of participation, the economic significance of its commercialisation and globalisation, and the way much of it depends upon, and impacts the physical environment.

Major sports events tend to dominate discussions of the economics of sport, but the sector has a wide range of direct and indirect impacts. The sports sector includes major events, participation, equipment and apparel sales, marketing and media, and associated health and nutrition products and services, which together in 2023 accounted for 2.65 Trillion US$ in sales, making it the ninth largest industry on the planet (GSI, 2024). For the UK, while major sporting events generated an estimated £373 million in direct economic impacts (UK Sport, 2024), sport and physical activities overall contributed around £39 billion along with wider economic benefits linked to job creation, reduced healthcare costs and crime (Sport England, 2024). Globally, sport tourism accounts for around 10% of the world's expenditure on tourism and is one of the fastest-growing tourism markets with an expected growth rate of 17.5% between 2023 and 2030 (UN Tourism, 2024).

Participating in, or watching, sport can also have a range of social benefits including improved health and education, enhanced wellbeing and mental health (Davies *et al*., 2019). Sporting events are social occasions that can unite people, foster a 'sense of belonging' to a team, place or community and contribute to social capital. In addition, sporting events can generate wider impacts such as an increased sense of community through volunteering (Kerwin *et al*., 2017) and public health benefits such as increased physical activity prompted by cycling events (Derom & VanWynsberghe, 2015). Sports mega-events can significantly augment destination branding, tourism and trade, enhance sport development, social cohesion, community pride and identity, but they are also

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an economic and social burden for residents (Mair *et al*., 2021). Negative social impacts include increased congestion, disruption of every-day life, reduced feelings of safety, increased crime, anti-social behaviour, vandalism and cultural/social conflicts (Kim *et al*., 2015; Mair *et al*., 2021).

In recent years, the relationship between sport and environmental sustainability has gained increased attention from academics, policy makers and event organisers due to its reciprocal nature. Sport can have a negative impact on the environment due to the consumption of natural resources, and in turn, the environment, and particularly the effects of climate change, can negatively impact sport. However, at the same time, sport can be a powerful force to drive sustainability forward, as it brings people together regardless of their demographics, socio-economic backgrounds or political affiliations, has the power to unite communities, and is deeply embedded in people's daily lives and cultural practices. Sport ecology research is still a nascent field (Gerke *et al*., 2024) and so far, has focused on understanding the impacts of sports activities on the environment, how sports organisations and individuals can reduce their environmental impacts, the impact of global warming on sports events, and the motivations for, and barriers to, organisations, fans and athletes engaging in environmental actions (McCullough, 2023).

This chapter explores the critical link between sport, sustainability and marketing with a specific focus on environmental sustainability. It is worth unpacking this relationship further as it could be argued that sport and sustainability are a conundrum. Given the potential negative environmental impacts of (some) sports, particularly major events, can sport be ecologically sustainable and whose responsibility is it anyway? More specifically, we will discuss the environmental impacts of sport and sports events, while also demonstrating how sports (events) can be a driving force for sustainability.

Sport and its connection with climate change

Impact of climate change on sport

Climate change is impacting on the sporting sector, with numerous threats putting athletes, spectators and sporting grounds at risk (BASIS, 2023; Orr, 2024). Direct sport-specific, health-related risks include heatwaves, UV radiation over-exposure and extreme weather events (including avalanches, floods and lightning). Indirect risks include exposure to air pollutants, allergens, bacteria and viruses (Schneider & Mücke, 2024). Other impacts include damage to buildings and sports infrastructure due to storms and flooding, coastal erosion and sea level rise, increased injuries to players and athletes, low outdoor water quality due to algal blooms and compromised fan experience due to heat (UNFCCC, 2024).

Potential consequences of climate change for sport include delays and cancellations (Orr, 2024), shortened snow seasons (Scott *et al*., 2003), damage and destruction of sporting facilities (Elsasser & Bürki, 2002), a reduced interest in a sport (Dawson *et al*., 2013) and decline in tourism and revenues (Elsasser & Bürki, 2002). These effects require organisers to adapt and manage the natural environment they are reliant on (Orr, 2024). Sports organisations can encounter economic losses due to cancelling, rescheduling or relocating events, as well as designing and implementing costly climate mitigation strategies.

Golf is a sport that has attracted criticisms for its comparative elitism, requisitioning of land in urban areas, and intense water use in many water-stressed regions of the world (Millington & Wilson, 2016). The sport is also inextricably linked to the natural environment and the condition of golf courses are shaped by the climate. Climate change effects (such as increased rain, extreme weather conditions, coastal erosion and rising sea levels) are impacting on the very existence of golf clubs

in the UK (Scottish Golf History, 2014), and is a growing concern for spectators and players, not only in causing disruption to recreation golf and major golf events but also leading to a reduction in participation. Due to rising sea levels, storms and subsequent erosion, 34 golf courses in Scotland already experience issues due to coastal erosion and 109 have been identified at risk of erosion by 2050 (Dynamic Coast, 2021).

Increasing global temperatures have been affecting winter sports destinations for some time, impacting the economic viability of winter sports events and tourism. According to the International Biathlon Union's Athlete Sustainability Survey 2021, almost 90% of athletes consider the sport has already been impacted by climate change (IBU, 2022). A study by Scott *et al.* (2023) concluded that even under a low emission scenario aligned to the Paris Climate Agreement, only 9 of the 21 former Winter Olympic cities would be able to reliably host the Winter Games by 2050. Under a high emission scenario, the number of viable cities would decrease to four by 2050 and only one by 2080.

Heatwaves also affect major outdoor sports events including cycling, football, cricket, tennis, triathlon and running. To protect athletes from the heat, organisers of the Tokyo 2020 Olympic Games (held in 2021 due to the Covid-19 pandemic) relocated the marathon and long-distance walking event to Sapporo, 800 km north of Tokyo. However, Sapporo experienced a severe heatwave with high humidity and temperatures over 30 degrees proving very challenging for athletes with high incidence rates for exertional heat illness (Sugawara *et al*., 2022). Extreme heat at events can also be problematic for spectators, volunteers and game officials. In 2014, temperatures at the Australian Open reached 43.9 degrees Celsius resulting in 1,000 fans being treated for heat exhaustion (The Age, 2014).

Turf-based sports, such as golf, cricket, rugby and football, are further impacted by climate change associated weather extremes such as heavy rain, flooding and heatwaves resulting in disruption, rescheduling and cancellation of matches. A YouGov poll commissioned by BASIS (The British Association for Sustainable Sport) as part of its report on the impact of climate change on sport in the UK found that 64% of spectators and players for golf, 60% for cricket and 40% for football had experienced climate-related disruption, such as cancellation, rescheduling or shortening of matches between October 2022 and 2023 (BASIS, 2023). It is predicted that by 2050, almost one in four of the English football league grounds will experience flooding, including four current Premier League Clubs (Goldblatt, 2020).

The above examples demonstrate that climate change is already impacting sports at different levels across the world. At the same time, sports events are also a major contributor to global warming through their carbon emissions and other environmental impacts, which are discussed in the following section.

Environmental impacts of sports events

The environmental impact of major sports events has become an important focus for researchers, event organisers and policy makers. However, assessing the environmental impact of sports events is complex and difficult. Negative environmental impacts can be wide-ranging including litter and waste, increased noise levels, emissions generated by travel to events by spectators, participants, staff and volunteers, the construction of permanent and temporary stadia and venues, energy use and water consumption, manufacture of event merchandise and promotion materials, sports equipment and apparel, food and drink consumption, the subsequent management of waste, and impacts on the natural environment, biodiversity and wildlife. Subsequently, the overall contribution of sports events to intensifying climate change is unclear, but the majority of

greenhouse gas emissions are linked to new infrastructure construction and spectators' travel (Uusitalo *et al*., 2024).

Early studies have examined selected carbon emissions generated by spectators attending specific sports events included the UK round of 2004 World Rally Championship (Jones, 2008), 2024 FA Cup Final (Collins *et al*., 2007) and UK stages of the Tour de France (Collins *et al*., 2012). These highlighted the significant global environmental impacts attributable to spectators attending sports events. For example, Collins and colleagues (2009) found the ecological footprint of a typical spectator attending the FA Cup Final was seven times greater than someone who stayed at home going about normal, daily activities. A key driving factor was spectator travel, accounting for between 55% and 75% of the overall 'ecological footprint'. Estimates from other studies also show that event-related travel can account for almost 80% of participants' and spectators' total carbon dioxide emissions (Cooper & McCullough, 2021), although this depends on the scope of travel activities, whether international air travel is included, assumptions and conversion factors used within calculations. In North America, Dolf and Teehan (2015) examined the carbon footprint of spectator and team travel for a small-scale varsity sports event. Like Cooper and McCullough (2021), they found that spectator travel emissions were greater than team travel to sports events. Although only 4% of spectators had travelled to the event by air, this accounted for 52% of total spectator travel emissions. Strategies to help mitigate the impact include reducing long distance air travel, switching to low-emission travel modes and increasing car occupancy rates.

With sport tourism continuing to be one of the fastest growing sectors of tourism, involving the movement of people intra and intercontinentally (UN Tourism, 2024), a number of studies have focused on sport-related travel at football, winter sports and outdoor running events (e.g. Grofelnik *et al*., 2023; Loewen & Wicker, 2021; Uusitalo *et al*., 2024; Wicker, 2018). A key conclusion from these studies is that travel activities, particularly by plane and private car, are a major contributor to the carbon footprint of the sports sector, not only spectator travel but also those that travel to actively participate.

While sport may be contributing to climate change and global warming, the sports industry also has the potential to be part of the solution. Event organisers, promoters and policy makers are increasingly interested in assessing the environmental impacts and identifying strategies to both reduce these and accelerate positive climate action (Breitbarth *et al*., 2023).

Sports (events) as drivers of sustainable behaviour change

Fans and event sustainability

Sports events are hugely popular and have a large reach – approximately 2.67 million fans attended the 51st EURO 2024 football games in Germany (Statista, 2024b) and The 152nd Open at Royal Troon was attended by almost 260,000 fans throughout the week of the Championship (Todays Golfer, 2024). In addition, millions of people regularly attend events closer to home – to support their favourite team, club, player or athlete. Beyond attending live sporting events, fans also watch sport on TV, and follow their team online and on social media. For example, FC Bayern Munich has 316,000 official fan club members and over 169 million social media followers worldwide (FC Bayern Munich, 2024).

Bringing fans together for a major sporting event will have environmental consequences that need to be managed and minimised, but it also creates opportunities to communicate with fans and have a positive influence (something it has in common with music events, see Chapter 26). In contrast to other sectors, sport brings together people from diverse backgrounds (e.g. from different

communities/regions/nations, demographic groups, socio-economic background and educational levels) with a common interest. Although fans and participants are primarily driven by the enjoyment they gain from the sport, they are also passionate about it. Amann and Doidge (2023) propose that matchday attendance and rituals related to fandom can create collective emotional energy and a sense of belonging to a football club. Research on fans of an English Premier League football club found their interaction at matchdays significantly impacted team identification and club loyalty intention; highlighting the importance of leveraging these social benefits of game attendance rather than merely focusing on the on-pitch sport performance (Koenig-Lewis *et al*., 2018).

Many sports fans identify strongly with 'their' team or club, and this strong sense of belonging might lead an individual to adopt the behaviour of their respective fan group, which can be positive (e.g. LGBTQ rights, pro-environmental initiatives) or negative (e.g. football hooliganism). Based on this idea, Mabon (2022, p. 314) proposes football – the most popular sport globally – as "a forum for galvanizing societal action in support of climate policy" and acknowledges that "clubs and players can lead by example on climate-positive actions, and energize wider action through fan bases." Similarly, recent research (Amann & Doidge, 2023) acknowledges football fans as a social movement which have acted politically for years and hence can also be collectively mobilised by pro-sustainability behaviour change campaigns and advocacy behaviours (i.e. for the type of social marketing campaigns explored in Chapter 26). The authors propose that initiatives and communications which bring about social change via collective action need to be aligned with the identity and worldview of fans, and the broader culture of football.

Although education and providing information on the environmental impact of sport and supporters is central to raising awareness and empowering fans, events and festival research has shown that this alone is insufficient to bring about long-term changes. Koenig-Lewis and colleagues (2021) validated a behavioural '*engagement ladder*' based on van Doorn *et al.*'s (2010) 'Customer Engagement Behaviour' framework and 'Service-Dominant-Logic' (Vargo & Lusch, 2004), which consists of four distinct clusters – 'Disengaged', 'Observers', 'Learners', and 'Doers'. Only 'Learners' and 'Doers' demonstrated cultural and social legacy impacts, suggesting that sustainability initiatives need to be engaging, participatory, interactive, relevant and perceived to be effective by fans. One initiative with an added competitive element is the 'Green Football Weekend' – one of the largest sustainability-related football campaigns in the UK. Football fans are encouraged to make a pledge on an online platform, such as Pledgeball, to take action to reduce their carbon emissions and help their club to reach the top of the leaderboard to win the 'Green Football Cup.' Pledgeball is based around rivalry and collective identity aligned with the culture of football fandom (Amann & Doidge, 2023). The pledges are collated to show the total amount of emissions saved per club, and this provides fans with a visual understanding of their potential impact on the environment. This not only is an innovative way for fans to learn more about the topic but also provides them with 'agency' and feeling that collectively they can make a significant contribution (Amann & Doidge, 2023). However, alongside this there needs to be a strong alignment and link between a club's sustainability effort and meaningful engagement with fans on sustainability issues throughout the season to ensure these campaigns are not just a one-off public relations event. Temporary and one-time engagement with fans via 'green games' are limited as repetitive messaging is missing (McCullough & Kellison, 2016).

The points of attachment that consumers have with the sport, events, sports organisation/team, coaches and players are tremendously strong and ripe with opportunities to leverage and encourage collective climate action among these populations – a segment of the global population that may not otherwise be open to such messages (Trail & McCullough, 2021). While it is impossible to eliminate the environmental impacts of sports consumption, marketers can

encourage participants and spectators to choose more sustainable behaviours while consuming sport (e.g. attending events, buying merchandise, selecting gyms or events) and influence their everyday sustainable behaviours.

Fans and sustainability initiatives: Getting them onside

Typically, sustainability initiatives at sports events focus on reducing waste, increasing recycling, reducing single-use plastics by providing water refill stations, offering sustainable food options, switching to renewable energy and promoting public transport. Some event organisers are going further by donating excess food to local charities, donating sports and event equipment to local communities, engaging in beach clean-ups or litter picking in the surrounding areas, planting trees, creating green spaces or supporting biodiversity projects, educating and raising awareness of spectators and training sustainability volunteers who work at the event. In addition, engaging in circular economy practices such as recycling, reduce, reuse and rethink can help to reduce the carbon footprint of sports facilities and events (see also Chapter 10).

As sports organisations and events advance the sophistication of their environmental initiatives, it is necessary to encourage their customers (i.e. participants and spectators) to engage in pro-environmental behaviours to reduce the environmental impact of events. Research with men's basketball season ticket holders at a US Division I university found that a season-long environmental campaign resulted in increased awareness and perceptions towards sustainable behaviours in their everyday lives (Casper *et al*., 2020). Cayolla *et al*. (2023) assessed fan's perceptions of pro-environmental sustainability initiatives promoted by a professional sports club and found a positive effect on their social behaviours, daily environmental actions and loyalty towards the club. Their collective findings are encouraging that sports organisations can serve as agents of sustainable behavioural change, which is supported by Delia and colleagues' (2024) findings examining the influence of environmental sustainability initiatives on fans of UK football club Forest Green Rovers. Specifically, they found that fans felt comfortable using the context of their fandom of the club to talk with others (both fans and non-fans) about environmental sustainability initiatives and climate change.

The impact of pro-sustainability sports marketing campaigns can extend beyond consumers' direct involvement with the sport, event or club. Trail and McCullough (2020, 2021) proposed the Sport Sustainability Campaign Evaluation Model (SSCEM) and later the extended SSCEM (eSSCEM) to help organisations design, launch and evaluate sustainability campaigns. The SSCEM uses various theoretical frameworks to create market segments based on psychographics to understand the influence of internal and external constraints on the receptivity to campaign messaging and subsequent behaviours at the event and beyond (see Figure 23.1). It proposes that psychological needs and universal values will positively influence fans' attitudes towards the environmental campaign, in addition to points of attachment (to the sport, event and community) and internal constraints (lack of knowledge, interest, perceived efficacy and social pressure). Consequently, intentions towards sustainable behaviours (such as recycling at the event or carbon off-setting) are influenced by attitudes towards the campaign, past sustainable behaviours and external constraints (Trail & McCullough, 2020).

Trail and McCullough (2021) examined the Walkable Game sustainability campaigns featured at the USA Special Olympic Games in Seattle, Washington. They found, in preliminary data collection to inform segments and campaign messages, that 78% of respondents were planning on renting a car during the sporting event. Based on these preliminary findings, the researchers adapted the messaging to increase awareness of the features of the Walkable Games initiatives

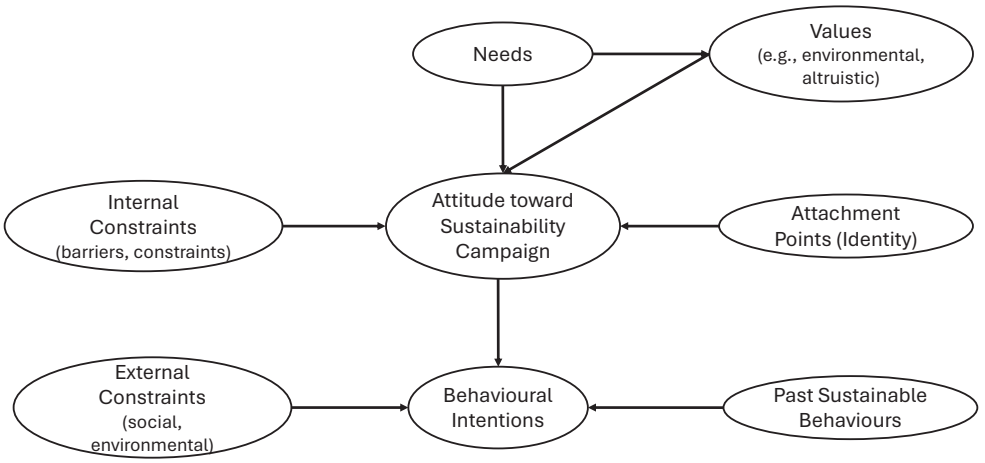

Figure 23.1 Sport Sustainability Campaign Evaluation Model (SSCEM).

Source: Adapted from Trail and McCullough (2020).

(e.g. credentials doubled as a public transportation pass, and hotels and venues on light-rail lines). Their post-event survey found that only 7% of respondents rented a car during their visit, dramatically decreasing the carbon footprint of local transportation associated with the event. Further, the researchers' longitudinal model predicted 96% of advocacy behaviours in their hometowns for similar environmental initiatives like those experienced in Seattle.

Raising awareness of the environmental impacts of sports events with fans, and promoting sustainable behaviours, is admirable, but to be meaningful requires support from wider structural (e.g. location of events, infrastructure) and organisational changes (e.g. timing and frequency of events) to enable fan behaviour changes (such as using public transport or choosing plant-based foods). Whilst many sports organisations implement sustainable initiatives and communication campaigns, it remains unclear if these are effective in changing fans' attitudes and behaviours (McCullough *et al*., 2022). Michie *et al.* (2011) proposed the 'Behaviour Change Wheel' (BCW) which is centred around their 'Capability, Opportunity, Motivation-Behaviour' (COM-B) model as a framework for designing and assessing behaviour change strategies (see Figure 23.2). According to the COM-B model, a specific behaviour will only happen if an individual has the capability (i.e. skills, ability, knowledge), opportunity (i.e. provisions in the built environment and culture) and motivation (intrinsic or extrinsic) to engage in that behaviour (Michie *et al*., 2011; Nguyen-Trung *et al*., 2023). Although this framework has hardly been applied to sustainable behaviour change at sports events or clubs, it provides a useful lens to evaluate sustainability initiatives aimed to engage fans in sustainable behaviours. It emphasises that informational campaigns and education will increase an individual's capability to take up a behaviour (e.g. knowledge about the benefits of a shift to a more plant-based diet), but fans must also be motivated and persuaded (e.g. cognitive, normative and emotional factors, as well as incentives), and the environment must provide opportunities to engage in that behaviour (e.g. convenience, availability and affordability of plant-based meals at the sports club or event).

The findings from this growing body of literature are that sport, through its ability to bring people and organisations together, serves as a powerful platform to engage new populations with the importance of immediate climate action and the subsequent calls to action both at sporting

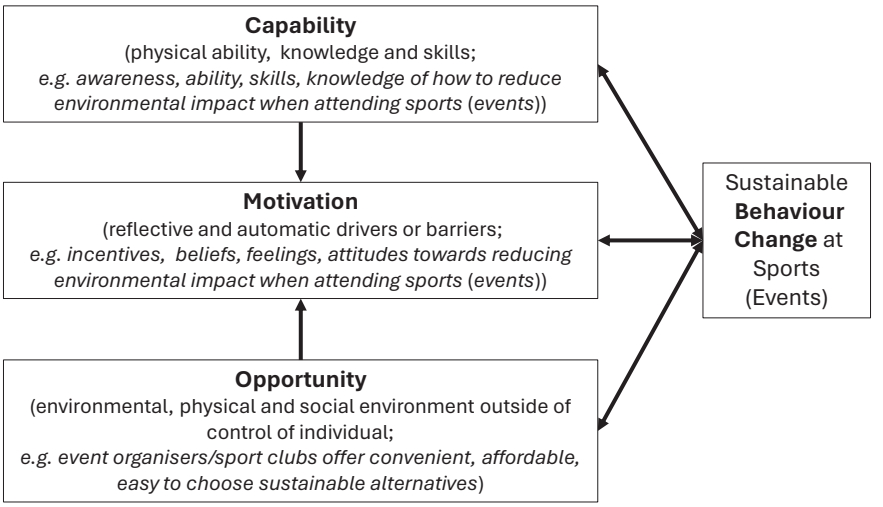

Figure 23.2 COM-B Model.

Source: Adapted from Michie *et al.* (2011).

events and in everyday life. Despite these connections, the marketing mix to encourage climate action requires strategic and tactical approaches to ensure receptivity of target markets in a seemingly environmental intensive activity (i.e. attending or participating in sport). Sports events can potentially reduce the environmental impacts of international tourism, by inspiring future generations and encouraging more sustainable consumption. As stated in the United Nations Sports for Climate Action Framework (UNFCCC, 2024), sport can play a role in addressing and combating climate change, including raising participants' and spectators' awareness, influencing behaviours and shrinking its carbon footprint.

The dark side of sport sustainability marketing

Sports and sports events are financially resource-intensive and often reliant on external funding and sponsorship. At the same time, sports can have a positive image, and hence is becoming increasingly attractive and popular for brands and organisations to fund or sponsor, due to the anticipated commercial and reputational gains. The global sports sponsorship market was estimated at 97.35 billion U.S. dollars in 2022 and is expected to be worth 190 billion U.S. dollars by 2030, increasing annually by a compound annual growth rate of 8.68% (Statista, 2024a).

Many fossil fuel and carbon-intensive industries, including mining and energy, car and airline companies, which contribute to the climate challenges, frequently sponsor sport at all levels: clubs, teams, associations, leagues, federations, races, championships, tours, tournaments, and stadia due to the potential large reach and the positive image of sport (linked to health, socialisation and outdoor activity). These sponsorship deals range across many sports categories including football, rugby, cricket, sailing, tennis, cycling, athletics, basketball, golf and motorsport (Badvertising, 2021). Such organisations are oftentimes in dire financial situations, which these sponsors take advantage of which can result in greenwashing (Sherry *et al*., 2022).

For example, Equinor (a Norwegian oil and gas producer) sponsors the Norwegian Ski Federation, the governing body for snow sports in Norway. A recent report estimated that each

sponsorship euro from Equinor will generate increased emissions of 26.4 kg CO_2 and 1 million euro sponsorship would equate to 26,400 tonnes CO_2 (Badvertising, 2024). Aramco, a Saudi Arabian state-owned oil company, has a partnership with FIFA guaranteeing sponsorship rights for the FIFA World Cup 2026 and the Women's World Cup 2027 (FIFA, 2024). Ineos, a petro-chemical company and major producer of single-use virgin plastics and shale gas fracking company, sponsors several sports including Formula 1 (as Principal Partner to the Mercedes-AMG PETRONAS F1 Team), cycling (Tour de France winners Ineos Grenadiers, formerly Team Sky), sailing (INEOS Britannia), football (co-owner of Manchester United) and running (NN Running Team) (INEOS, 2024).

However, it is not just oil and gas companies that are problematic, but also car producers and airlines. Ford sponsors the Swedish Ski Association – generating increased emissions of 33 kg CO_2 for each sponsorship euro equating to 33,000 tonnes CO_2 for a 1 million euro sponsorship deal (Badvertising, 2024). Sponsorship interests can go beyond corporate levels to state level. For example, a recent report identified 323 examples of Saudi state-linked sponsorship and investments across a wide range of sports and events. This includes the creation of LIV Golf in 2022 which signed many of the world's best golfers and the takeover of the UK Premier League football club, Newcastle United in 2021, both financed by the Saudi Arabia's Public Investment Fund (PIF) (Play the Game, 2023). Saudi Arabia will also host the 2029 Asian Winter Games and (potentially) the FIFA World Cup 2034.

Sponsorship deals with high carbon emitters are highly problematic, as they also impact consumer behaviour. While financially supporting the sport, their advertisements encourage more consumption of products and services contributing to current high-carbon lifestyles, whilst reinforcing awareness of their brands with (potentially) new audiences. In addition, sports sponsorship helps organisations, brands, and destinations to leverage the symbolic power of sport and improve their brand value by becoming more associated with the positive image of the sport, team or athlete/player, and the shared positive intense emotional experiences at sports events rather than their high-carbon businesses and economies, which can be considered greenwashing but also to some extent as a form of '*sportswashing*'. Chadwick (2022, p. 696) defines sportswashing as a "means by which a country can deflect audiences' attention away from less favourable perceptions of a country via a programme of investment in sport."

Such sponsorship and partnership deals with high-carbon industries can undermine the genuine and visible commitment to sustainability and pro-environmental initiatives by sport clubs, organisations and events. Similarly, greenwashing concerns might be raised if sustainability efforts are branding and communication practices that mislead and deceive fans and supporters rather than reflecting a genuine commitment to lower the environmental impact of the sport and events. One example is the excessive pre-season air travel of many UK Premier League football clubs with flights to the United States, Far East and Europe (BBC, 2024b). Or 'The Greenest Game' in July 2024 promoting sustainability in football featuring a litter pick and biodegradable bags, while both teams, Manchester United FC and Real Betis, flew to this friendly pre-season game in San Diego (BBC, 2024a). Another example is Formula One's ambition to achieve net zero by 2030 and promoting hybrid technologies, biofuels and sustainability initiatives at events, whilst at the same time relying on car manufacturers, a global series of races around the world and non-renewable energy use in the sport's structure, delivery and experience (Sturm *et al*., 2024). Broadcasters and media have also been accused of hypocrisy by promoting sustainability initiatives, whilst at the same time scheduling fixtures at times which make it difficult for fans to travel by public transport.

There are many examples of organisations, governing bodies and clubs producing policy statements, sustainability guidelines and engaging in one-off sustainability initiatives in sport, with

many focussing on waste management and recycling. However, few clubs and organisations have fully embedded environmental sustainability into their strategies and culture with a clear plan on addressing the root causes of climate change to protect their sport and achieve carbon neutrality across all operations, including fan and team travel. One example is Forest Green Rovers, which has put sustainability as its core of everything they do and brands itself as the *World's Greenest Football Club*. Forest Green Rovers has various initiatives including only offering vegan food, reducing waste, cutting emissions from travel by organising group travel to away matches, a travel policy for players, measuring and reporting carbon emissions, eco-trail consisting of information boards around the stadium, and a new sustainable Eco-Park stadium fully constructed from wood (see Forest Green Rovers, 2024b).

However, fears of being accused of greenwashing and negative feedback can lead clubs and event organisers to underreport information about their sustainability aims, efforts and achievements, otherwise referred to as 'greenhushing'. This is also problematic as it might give the impression that sustainability issues are not important, not endorsed and not financially supported by the club or event. More importantly, it may give fans, supporters, players and other stakeholders a justification to deny any responsibilities and not adopt environmentally sustainable behaviours.

A gameplan for sustainable and responsible sports

Many sports organisations, including clubs, governing bodies, international federations, recognise the environmental impact of their activities, and acknowledge their responsibility to reduce their carbon footprint within specific sustainability strategies or CSR policies. So far, over 250 have signed up to the UN's Sports for Climate Action Framework launched in 2018, supporting limiting the global temperature rise to 1.5 degrees Celsius and reducing emissions 50% by 2030 and aiming to achieve net-zero by 2040 (UNFCCC, 2024). Signatory organisations commit to and report their annual progress on: (1) incorporating climate change into their business strategy, (2) measuring Scope 1, 2, and 3 carbon emissions associated with their organisation and events, (3) collaborating and sharing knowledge on addressing climate issues, (4) promoting sustainable and responsible consumption (including sustainable supply chains and shifts to low carbon transport), and (5) educating and advocating for climate action through communication (Scott *et al*., 2023). The more organisations become involved, other sports organisations will consequently come under pressure to also participate in these programmes, and to communicate and evaluate the effectiveness of their environmental sustainability efforts.

For example, Sport Positive publishes an annual league table evaluating the environmental impacts and environmental sustainability initiatives of football clubs in the English Premier League, Germany's Bundesliga, English Football League and the French Ligue 1 (Sport Positive Leagues, 2024). In Germany, mandatory sustainability guidelines attached to licensing regulations need to be followed by all German football clubs who want to play in the Bundesliga 1 and 2 (first and second league) since the 2023/2024 season (DFL, 2024). This also includes an 'Environment, Social and Governance' (ESG) check of the sustainability aspects of financial partners and sponsors.

With regard to sponsorship, the Climate Council of Australia encourages sports clubs and organisations to sign the 'fossil free partnership pledge' that rules out sponsorship agreements, funding or any in-kind contributions, and promotion of fossil-fuel companies (Climate Council of Australia, 2023). Friends of the Earth (2019) similarly called for a complete ban on all fossil-fuel sports sponsorship and advertisements, comparing it to former Tobacco adverts and sponsorship which are prohibited due to their damaging health effects. However, this might be difficult to

achieve without governmental intervention/regulation, additional funding and increased pressure from athletes, players, fans, and other stakeholders. Currently many sports fans and spectators might be unaware of, or not interested in, the core economic activities of major sports sponsors. Even if such relevant information is readily and freely available, as in the case of the Saudi takeover of Newcastle United F.C., fans may want to maintain a sense of positive social identity by using a strategy of motivated ignorance to avoid identity threat (Jones *et al*., 2024).

There are, however, some promising developments in 'responsible' sponsorship of sports clubs and events. For example, Octopus Energy, a renewable energy provider and partner of the English Premier League Football Club Arsenal, has supplied renewable energy to the club's stadium, their training ground and youth development centre since 2016 (The Arsenal Football Club Limited, 2024). Ecotricity (a UK green energy provider) is the major sponsor and majority owner of Forest Green Rovers, which also has sponsorship deals with various plant-based food companies, such as Oatley, Quorn or Sheese (Forest Green Rovers, 2024a). Mastercard (an official Patron of The Open) has supported *The Open Water Initiative* since 2021. The initiative created by The R&A in partnership with Bluewater (a provider of water purification solutions) has provided free on-site water refill stations for fans and players since 2019 with the aim to eliminate single-use plastic water bottles at their major events (R&A Championships Limited, 2024).

A key feature of the Tour de France is the corporate publicity caravan (the '*carvane publicitaire'*) which is used to build excitement before the passing of the cyclists and involves corporate sponsors throwing millions of freebies and souvenirs to spectators along the route. Although it provides a key marketing opportunity for corporations and generates significant revenue for the Tour organisers, many freebies are made of or wrapped in single-use plastic leading to criticism from environmental groups (Cockburn, 2019). Collins's (2024) book chapter on the environmental impact of the Tour de France highlights that the Tour organisers have subsequently worked with sponsors to reduce waste in several ways including the introduction of specifications and standards to reduce plastics, a ban on leaflets and stopping the distribution of gifts along parts of the route. In 2019, the number of plastic gifts had been reduced from 18 million (in 2017) to 15 million, and In 2020, the Tour announced that 100% of single use plastic packing would be excluded from the caravan (apart from those required for hygiene reasons), and 100% of food samples provided by the French hypermarket E. Leclerc would be wrapped in recyclable packaging.

While it might not be possible yet to fully eliminate external funding from high-carbon businesses, there is a shift in mindset within organisations moving towards smaller, local sponsors and recognising the importance of different types of partnerships, such as with local communities, environmental groups, charities, public transport providers, and public councils to make their sport and events more sustainable. These partnerships and initiatives need to be communicated to stakeholders including fans and supporters to raise awareness of organisations' sustainability journeys even though most might have a long way to go. Only transparency and environmental reporting will increase the legitimacy of sports organisations.

Concluding remarks (final whistle)

The field of environmental sustainability in sport deserves more attention from organisations, policy makers and the academic literature due to the complexity and diversity of sport, the environmental impacts on and of sports (events) and the wider role of sports (events) as agents for sustainable behaviour change. For example, the sustainability journey of a local non-for-profit grassroots sports club will be very different than that of a for-profit international elite sports organisation. Similarly, the negative environmental impacts, challenges and opportunities and fan base will vary by the type

and level of the sport (e.g. golf versus football versus swimming, amateur vs professional club, annual versus monthly sports events). More research is needed on how different sports and events can mobilise fans, supporters, athletes and players to adopt more positive sustainable behaviour changes and address climate change issues when consuming sport and in their daily lives.

This chapter has outlined the vulnerability of sport to climate change and proposed that fans, supporters and athletes are central to bringing about change to protect the sport for their community and future generations. It is crucial for sport to respond now to address current and emerging sustainability challenges (Breitbarth *et al*., 2023), educate their stakeholders and promote pro-environmental behaviour (Deloitte, 2021). Sport relies on global collaboration to achieve engagement worldwide, and so makes sporting events ideal platforms through which to influence change over vital societal issues, including climate change and encouraging pro-environmental behaviours (Inoue & Kent, 2012).

Whilst sport organisations and events can be a driving force for sustainability by mobilising fans and players/athletes to engage in sustainable behaviours when consuming sports and in their daily life, and encourage others to do the same, hence bringing about a change in norms and cultures, these need to be supported by wider structural and organisational changes. In addition, monitoring and measuring the effectiveness of these initiatives is crucial as well as providing honest and timely feedback to all stakeholders on the successes and challenges of the sustainability journey. Knowing and observing how small changes can collectively have a big impact will empower fans and other stakeholders.

However, given the environmental impacts of sport and the climate change challenges, many sports as we know them today with international mega-events, international tours around the world, as many international fixtures and games as possible squeezed into pre- and main seasons, promoting new kits every season and encouraging more sports consumption to reap the economic benefits, will not be environmentally and socially sustainable in the long run. Wilby *et al.* (2023, p. 29) called for a new Olympic motto: "Rather than '*Citius, Altius, Fortius'* ('Faster, Higher, Stronger'), we now need '*Tardius, Proprius, Leviora*' ('Slower, Closer, Lighter') footprints." This calls for a move towards mindful sports consumption. This includes reducing sports consumption by attending less fixtures, competitions, and hence less travel for teams, athletes, fans and putting pressure on federations and associations to decrease the frequency, change the timing, and international locations of events to encourage and enable more environmentally sustainable behaviours of teams, athletes, players, officials, and supporters. It also includes reusing of sports kit and equipment, using sustainable transport options and replacing some meat-based options with plant-based options. In addition, this might call for different types of stakeholder partnerships favouring environmentally responsible organisations as well as working more closely with local partners, charities and communities.

Acknowledgements

The first two authors would like to acknowledge that part of this work was supported by funding received from the Research Wales Innovation Funding (RWIF) – Higher Education Funding Council for Wales (HEFCW) and Cardiff University Economic and Social Research Council (ESRC) Impact Acceleration Account (IAA) ES/X004937/1.

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