

Sport event greening in the UAE

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ABSTRACT

Sport, and sporting events in particular, presents a powerful platform to promote environmental awareness, to educate and expose players and spectators to environmental best practice and influence the industry to conduct sport events in a more environmentally responsible manner. Event greening refers to the process of integrating socially and environmentally responsible decision-making into all phases of an event. While there has been an increasing trend towards incorporating sustainable development into the bidding and hosting of sport mega events, less attention has been paid to event greening at other types of sport events.

Moreover, there is limited knowledge of event greening practices in the Middle East, and the UAE in particular. This case study aims to conduct an evaluation of event greening practices, and environmental sustainability in particular, at a range of different types of international events hosted in the UAE - from an international youth sport event to major sport events which took place in Dubai and Abu Dhabi during 2018 and 2019.

This case provides a status quo of event greening at this range of sport events, and attempts to understand the initiatives undertaken in order to move towards hosting greener events. It includes secondary data and primary data via surveys conducted with spectators at some of the events, semi-structured interviews with some of the event organisers and observations at all of the events. The environmental measures implemented varied depending on the event, with limited-to-no initiatives at some events to sustainability being an integral part of other events. Sport organisations may not necessarily have the environmental expertise thus the

importance of establishing strategic alliances to achieve more meaningful sustainability programmes is underscored.

Keywords: Sport events, event greening, UAE, sustainability

INTRODUCTION

The concept of event greening is inextricably linked to the concept of sustainable development. In an effort to reduce poverty by increasing economic production in a manner that would not compromise the environment, the World Commission on Environment and Development (WCED) published its report, *Our Common Future*, in 1987 which defined sustainable development as:

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”¹.

In 1994, the International Olympic Committee adopted the “environment” as its third pillar; partly due to criticism regarding the scale and impact of the Olympic Games, and partly to act as a champion for promoting sustainable event management and environmental legacy.² Since then many sport organisations, at all levels, have introduced sustainability initiatives into the management of their sport events. In 2010, the Green Sports Alliance was launched, and the Alliance is the first practitioner-based non-profit that focuses on environmental sustainability in the sport industry.³

More recently, climate change has become one of the most critical threats to society as underscored by the Paris Climate Agreement signed in December 2015 as

¹ WCED. 1987. *Our Common Future*. Oxford: Oxford University Press.

² Gold, John, and Margaret, Gold. “Sustainability, Legacy and the 2012 Games.” In *Routledge Handbook of Sport and Legacy: Meeting the Challenge of Major Sport Events*, edited by Richard Holt and Dino Ruta, 142-158. Oxon, UK: Routledge.

³ Trendafilova, Sylvia, and Brian McCullough. 2018. Environmental Sustainability Scholarship and the Efforts of the Sport Sector: A Rapid Review of Literature. *Cogent Social Sciences* 4, no. 1. <https://doi.org/10.1080/23311886.2018.1467256>

part of the 21st Conference of Parties (COP21).⁴ The United Nations Framework Convention on Climate Change (UNFCCC) acknowledges the sport industry's value in encouraging the wider population to be more environmentally responsible.⁵ Sport events provide a powerful platform to promote environmental awareness and influence sustainable behaviours.⁶ However, it is apparent that "many sport practitioners do not know how to initiate a robust sustainability campaign."⁷

With sustainability being one of the major challenges facing the sport industry in the 21st century⁸, it was deemed necessary to assess efforts by the sector in the UAE to be more environmentally friendly. Based on the case study, recommendations to enhance sustainability initiatives at sport events in Qatar and the Middle East North Africa (MENA) region are suggested.

THE CONCEPT OF EVENT GREENING

Event greening is defined as "the process of incorporating socially and environmentally responsible decision-making into the planning, organisation and implementation of, and participation in, an event."⁹

⁴ Ibid

⁵ Ibid

⁶ Kellison, Timothy, and Jonathan Casper. "Environmental Legacy of Mega Sport Events." In *Legacies and Mega Events*, edited by Ian Brittain, Jason Bocarro, Terri Byers and Kamilla Swart, 135-156. Oxon, UK: Routledge.

⁷ McCullough, Brian, Michael Pfahl, and Shelia Nguyen. 2015. The Green Waves of Environmental Sustainability in Sport. *Sport in Society*, <http://dx.doi.org/10.1080/17430437.2015.1096251>

⁸ McCullough, Brian, Sylvia Trendafilova, and Manuela Picariello. 2016. Legitimizing Sustainability Efforts through Strategic Partnerships. *Sport & Entertainment Review* 2: 77-83.

⁹ Ibid

Sustainable development principles and practices are integrated into all aspects of the event organisation and involve all key stakeholders, including suppliers and sub-contractors. The overall principle of event greening is the implementation of sustainable living practices; balancing environmental protection, social development, and economic benefit, something which is also referred to as the 'triple bottom-line'.¹⁰ 'Green' events aim to achieve the following outcomes:

- To improve the resource efficiency of the entire event and supply chain management
- To reduce negative environmental impacts, such as carbon emissions, waste to landfill, and the effect on biodiversity
- To increase economic, social and environmental benefits (triple bottom-line)
- To enhance the economic impact, such as local investment and long-term viability
- To strengthen the social impact, such as community involvement and fair employment
- To improve sustainable performance within an available budget
- To present opportunities for more efficient planning and use of equipment and infrastructure
- To reduce the negative impact on local inhabitants
- To protect the local biodiversity, water and soil resources
- To apply the principles of eco-procurement of goods and services
- To raise awareness of sustainability issues among all role players and

¹⁰ City of Cape Town. 2010. "Smart Events Handbook: Greening Guidelines for Hosting Sustainable Events in Cape Town."
https://www.aquarium.co.za/uploads/files/Smart_Events_Handbook_Part_1.pdf

- To ensure that the aims and objectives are clearly defined and measured.

SPORT EVENTS IN THE UAE

The United Arab Emirates (UAE) is part of the Gulf Cooperation Council (GCC) region that has historically included Saudi Arabia, Oman, Bahrain, Kuwait and Qatar. Dubai is the second largest of the seven emirates in the UAE, after the capital of Abu Dhabi. Aligned to the diversification strategies of many Middle Eastern countries, in particular the Arab Gulf countries such as the UAE, the sports industry has been prioritised as part of tourism development strategies.¹¹

Dubai has “emerged as an international sporting venue” and leisure has overcome business as a primary reason for visitors to choose Dubai as a destination.¹² Dubai is host to a wide range of major international sport events such as the Dubai Duty Free Tennis Championships, the European Tour’s season-long Race to Dubai, the Emirates Airline Dubai Rugby Sevens and the Dubai World Cup; the latter renowned as horse-racing’s richest race.

Abu Dhabi has also been using sport events to promote the emirate as a (sport) tourism destination,¹³ with the Abu Dhabi Formula 1 Grand Prix and the Abu Dhabi Desert Challenge being premier motorsport events on the international calendar. Dubai Sports Council introduced the Sports Events Ranking System (SERS) in 2014

¹¹ Alrawadieh, Ziad, and Deborah Johnson, D. 2012. “Building Sports Tourism and Event Portfolios: Key Success Factors in Middle East Sports Tourism.” *London Journal of Tourism, Sport and Creative Industries (LJTSCI)*, 6, no. 7: 32-41.

¹² Kumar, Rajesh . 2012. “Tourism in Dubai: The Sunrise Sector.” *Middle East Journal of Business*, 7 (1), 15-16.

¹³ Slak Valek, Natasa. “Abu Dhabi Sport Tourism: From Zero to Hero.” In *Sustainable Development of Sports Tourism*, edited by Matej Plevnik, Iztok Retar, Rado Pisot and Alenka Obid, 11-20. Slovenia: Anneles University Press.

to rank events according to the quality of their management and organisation.¹⁴ The 2014-2015 SERS classified events using five categories: event development, economic development, sports development, social development and brand development and the subsequent edition added environmental development as a sixth category.

METHODOLOGY

In order to assess environmental sustainability practices a range of different types of international events hosted in the UAE were considered. The events ranged from an international youth sport event to major sport events which took place in Dubai and Abu Dhabi during 2018 and 2019. The primary method was observations conducted at all the events, utilising an observation checklist. This method was supplemented by primary data via surveys conducted with spectators at some of the events and semi-structured interviews with some of the event organisers. Participation observation and the use of green volunteers were also employed at two of the events.

¹⁴ Sport Business. 2014. "Dubai Launches Innovative Sports Events Ranking System." July 11. <https://www.sportbusiness.com/news/dubai-launches-innovative-sports-event-ranking-system/>

OVERVIEW OF THE EVENTS

The events included in this case study are the U13 Dubai Intercontinental Football Cup, the F1 Abu Dhabi Grand Prix, the DP World Tour Championship and European Tour Race to Dubai, the Dubai International Baja and the Abu Dhabi Desert Challenge.

U13 DUBAI INTERCONTINENTAL FOOTBALL CUP

The U13 Dubai Intercontinental Football Cup took place 22-24 February 2018, attracting 20 teams from five continents, comprising 400 young athletes from 13 countries.¹⁵ Some of the top teams included Barcelona, Juventus, Liverpool, Real Madrid and Manchester City. The event was organised by Spanish Soccer School (SSS) at their football academy in Dubai Sports City.

DP WORLD TOUR CHAMPIONSHIP AND EUROPEAN RACE TO DUBAI

The Earth course at Jumeirah Golf Estates has been the venue for the European Tour's final event, the DP World Tour Championship, since its inception in 2009. The tournament is also the finale for the Rolex Series event of the season with a prize purse of US\$8 million and the additional US\$5 million Race to Dubai bonus pool.¹⁶ The Race to Dubai includes 47 tournaments in 26 countries on the European Tour's International Schedule. The 2016 finale edition is reported to have attracted over 60,000 visitors.¹⁷ The 2018 event took place from 15-18 November.

¹⁵ Spanish Soccer School. n.d. "U13 Dubai Intercontinental Cup – Previous Editions." <http://intercontinentalcupms2.com/1st-edition-2017/>

¹⁶ Worldwide Golf. 2017. "Jumeirah Golf Estates to Host DP World Tour Championship Until 2020." May 28. <https://worldwide.golf/tour-news/jumeirah-golf-estates-host-dp-world-tour-championship-2020/>

¹⁷ Ibid

F1 ABU DHABI GRAND PRIX

The Formula 1 (F1) Etihad Airways Abu Dhabi Grand Prix takes place annually at the Yas Marina Circuit and has firmly established itself as the last race of the season.¹⁸ The first race took place in 2009, and the spectator capacity of the circuit is 60,000. The 2018 edition took place from the 22-25 November. Abu Dhabi Motorsports Management has its headquarters at Yas Marina Circuit, and manages a portfolio of over 400 events annually.¹⁹

DUBAI INTERNATIONAL BAJA AND ABU DHABI DESERT CHALLENGE

The Dubai International Baja is a desert racing event that has been hosted by the Automobile and Touring Club of the United Arab Emirates (ATCUAE), now known as Emirates Motorsport Organisation (EMSO), since 1997. Until 2015, the event was staged as a round of the FIA Middle East Rally Championship and, after it being a candidate event in 2016, the Dubai International Baja became a round of both the FIA World Cup for Cross Country Rallies and the FIM Baja World Cup in 2018.²⁰ The 2019 event took place from 7-9 March, with the rally headquarters at the Dubai Autodrome.

The UAE Desert Challenge, one of the world's most prestigious international cross country events was renamed the Abu Dhabi Desert Challenge (ADDC) in 2009.²¹ Cross-country rallies comprise motorbike, quad-bike, four wheel and truck competitors. The 2018 event took place from 31 March - 4 April, with the rally headquarters at Yas Marina.

¹⁸ F1 Destinations Grand Prix Travel Guide. 2019. "Race Facts – Abu Dhabi Grand Prix." December 3. <https://f1destinations.com/race-facts-abu-dhabi-f1-grand-prix/>

¹⁹ Yas Marina Circuit. n.d. "About Us." <https://www.yasmarinacircuit.com/en/aboutus>

²⁰ ATCUAE. 2020. "Dubai International Baja." <https://www.atcuae.ae/dubai-international-baja/>

²¹ ATCUAE. 2020. "Abu Dhabi Desert Challenge." <https://www.atcuae.ae/abu-dhabi-desert-challenge/>

The ATCUAE serves as the governing body for motorsports in the UAE, while the Federation International de Automobile (FIA) is the world governing body for motorsport. The FIA Environment and Sustainability Commission was created in 2017, and its associated campaign “Action for Environment” encourages all motorsports events and organisations to follow sustainable practices.²² The FIA also introduced an Environmental Accreditation Programme aimed at assisting motorsport stakeholders to measure and enhance their environmental performance.²³ While the ATCUAE, as an organisation, received the highest rating in terms of the FIA Environmental Accreditation Program, this did not extend to its events. Consequently, the 2018 Dubai Baja and ADDC were used as pilot events to assess sustainability measures implemented and to obtain baseline data.

KEY FINDINGS

The events varied in their attempts to create environmental awareness and/or to implement environmentally-friendly measures into the event planning and organisation. For example, at the U13 youth football tournament these measures, even the most basic, were lacking. Figure 1 illustrates that was no attempt to separate waste nor recycle. Figure 2 shows the disregard by young players for littering. Youth events provide an ideal opportunity to educate young players about the importance of taking care of the environment. Simply location recycling stations around the venue as well as locating one at the entrance of the tunnel could have provided a simple solution and stopped players littering.

²² FIA. 2020. “FIA Action for the Environment.” <https://www.fia.com/action-environment>

²³ FIA. 2020. “FIA Environmental Accreditation Program.” <https://www.fia.com/environmental-accreditation-programme>



Figure 1: No attempt to separate waste and recycle

Source: Photo by Swart, 2019



Figure 2: Entrance tunnel on to the pitch strewn with water containers

Source - Swart, 2019

In contrast, at the DP World Tour Championship and Race to Dubai a lot more attention was paid, for example, to recycling initiatives. Cycled Technologies was the Recycling Partner to Voss, the supplier of water to the Championship.²⁴ Voss sold bottled water kits in cooler bags and had a Reduce Recycle Raffle at their stand (Figure 3). Cycled Technologies showcased their public Recycling Bins around the

²⁴ Cycled Technologies. 2018. "Cycled at the DP World Tour Championship Dubai." November, 23. <https://cycled.no/cycled-at-the-dp-world-tour-championship-dubai/>

venue (Figure 4), and there were additional plastic bottle recycling stations (Figure 5) In an attempt to create awareness for recycling, students used the empty bottles to build a replica of the Burj Khalifa, entitled Turning Waste to Art (Figure 6).



Figure 3: Voss bottled water cooler kits and Reduce Reuse Raffle

Source - Swart, 2019



Figure 4: Golf-themed recycling bins including Voss Bottles Recycling Station

Source - Swart, 2019



Figure 5: Additional plastic bottle recycling station

Source - Swart, 2019



Figure 6: Students used empty Voss bottles to build a replica of the Burg Khalifa

Source - Swart, 2019

Unfortunately, not the same attention to recycling initiatives were observed at the 2018 F1 Etihad Airways Abu Dhabi Grand Prix. Similar to the U13 event, there was no attempt to introduce the most rudimentary recycling initiatives (see Figure 7) for an event of this calibre, and despite the FIA Action for Environment Campaign.



Figure 7: No recycling stations inside nor outside venue

Source - Swart, 2019

As mentioned previously, in an attempt to introduce more sustainable measures into their motorsport events, the ATCUAE partnered with a university in the UAE to develop an environmental sustainability strategy and to conduct a baseline study on sustainability measures introduced at the 2019 Dubai International Baja and the ADDC. A sustainable marketing approach was used to conduct the study in order to influence sustainable consumption, and included the identification of three of the 17

United Nations (UN) Sustainable Development Goals (SGDs) to focus on - climate action, life on land and partnerships for the goals.²⁵ The university served as the sustainability project partner and drafted the Green Survey and Green Volunteers Guides. The students served as Green Volunteers at the events and their objective was to raise awareness of the initiatives taken by ATCUAE to have an environmentally-friendly event and to observe the event from a sustainability point of view. Some of the key findings are highlighted next.

At the 2019 Dubai International Baja event “promoting awareness for environmental sustainability” was the initiative most known to the stakeholders (74%), alongside “use of recyclable cutlery” (42%). In terms of how respondents became aware of the environmental initiatives, Green Volunteers ranked the highest with almost 40%, underscoring the important role they played in creating awareness of the said greening activities. This was followed by social media and the event’s website, with 37% and 36% respectively.

Respondents offered the following suggestions as to how to improve sustainability initiatives:

- Increase the promotion of these initiatives in terms of marketing and advertising
- Create a small place in the event for kids where they can enjoy some games and get educated about sustainability and how to implement it in our everyday life and

²⁵ Swart, K. and M. Seretny. 2019. “Dubai International Baja Preliminary Debrief Report.” Unpublished Report.

²⁵ Ibid

- Promote the initiatives to the Marshals as they participate in many different events and will have a good impact in raising the awareness.

The following provides a summary of the observations, and illustrated in Figure 8:

- The teams adhered to the rule of utilising the environmental mat under the vehicles
- Practically no sustainability promotion during the event
- The only other visible “green” measures were the FIA Action for the Environment branding that was displayed - however, it was absolutely minimal promotion
- The event had no recycling bins
- No plastic bottle reduction
- In the Media Centre the no-plastic-bottles policy was implemented on the day of the press conference when the sustainability initiatives were shared with the press. However, afterwards, plastic bottles were made available in and out of the Media Centre
- No clear agreement with the owner of the venue on the division of responsibilities related to the implementation of the sustainable development strategy.



Figure 8: Green Volunteer observations at the 2019 Dubai International Baja

Source - Swart, 2019

Based on the findings of the survey and the observations by the Green Volunteers, the ATCUAE attempted to address these shortcomings at the next event, the ADDC. There was much improvement with more visibility in terms of creating awareness for being “green” at the rally headquarters (Yas Marina), banners promoting “Think Green, Act Green”; water dispensers and paper cups replacing plastic bottles, the use of QR codes to access spectator guides and more visible Green Volunteers (Figure 9). However, there were still some challenges with third-party contractors who were using plastic cutlery (Figure 9). Greening initiatives were also visible in the Liwa Desert, with recycling bins and yellow bins for recycling oil and rally teams also making use of reusable metal bottles for water and of glass mugs (Figure 10).



Figure 9: Greening initiatives at ADDC Rally Headquarters - however cutlery still posed a challenge

Source - Swart, 2019





Figure 10: Greening initiatives at ADDC Rally Bivouac in the Liwa Desert²⁶

Source – Swart, 2019

CONCLUSION

Despite sport events providing a powerful platform to promote environmental awareness and influence sustainable behaviours, event greening, and environmental sustainability in particular, are still in their infancy in the UAE and the MENA region. Environmental measures implemented varied depending on the event, with limited-to-no initiatives at some events to sustainability being an integral part of other events. Environmental sustainability has become an important indicator since its integration into Dubai's SERS. However it is apparent that event organisers need assistance with the implementation of event greening practices. Furthermore, international sport organisation's environmental accreditation programmes and environmental campaigns (like those of the FIA) contribute by encouraging event organisers to

²⁶ The bivouac is a controlled and secured working area located between the finish time controls and the start of a stage. It is a for private use as part of a rally, with access reserved for all persons accredited by the organisers.

enhance their environmental processes and procedures when managing and organising events.

Sports organisations are likely to experience increased societal pressure to implement environmental initiatives.²⁷ In recent years, we have seen sustainability receiving increasing attention by sport organisations in Qatar. The vision of the QOC is, “To become a leading nation in bringing the world together through sustainable sport development”, with the aim of using “sport to enable a more sustainable environment” deemed as important in its strategic processes.²⁸ Thus, it is not surprising that sustainability is a key imperative of the 2022 FIFA World Cup to be hosted in Qatar. However, there is still much to be done for it to be fully integrated into the planning and implementation of other major sport events in Qatar.

Moreover, as was the case with the ATCUAE, sport organisations may not necessarily have the environmental expertise, making the establishment of strategic alliances to achieve more meaningful sustainability programmes ever more important. Sustainability management needs to take ownership and “champion” the sport organisation’s commitment to the sustainability cause.

²⁷ Ibid

²⁸ Qatar Olympic Committee. (n.d.). “Qatar Olympic Committee Strategy Map 2017-2022.” Unpublished report.

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BIBLIOGRAPHY

TEACHING NOTES

This case study reviews how sport events can be powerful platforms to promote environmental awareness, to educate players and spectators on environmental best practice and to influence the industry to conduct sport events in a more environmentally responsible manner. It also examines approaches to enhance event greening initiatives – and environmental sustainability in particular - at a range of events in the UAE, identifying key learnings from the implementation of these initiatives at sport events in the UAE. Lessons learned may also be applicable to sport events in the broader MENA region.

Students are asked a range of questions more broadly about the importance of event greening, its implementation at sport events in Qatar/the MENA region and the extent to which these practices can be enhanced.

Question 1: What important outcomes can event greening achieve?

The opening question relates to the broader context of locating sport events within societal concerns such as climate change, environmental degradation, poverty, inequality and peace, and how the sport industry (and sport events) can assist in achieving the UN's SDGs by 2030. While the case focuses on environmental sustainability, it is also important to underscore that a triple bottom-line approach is required.



Source: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

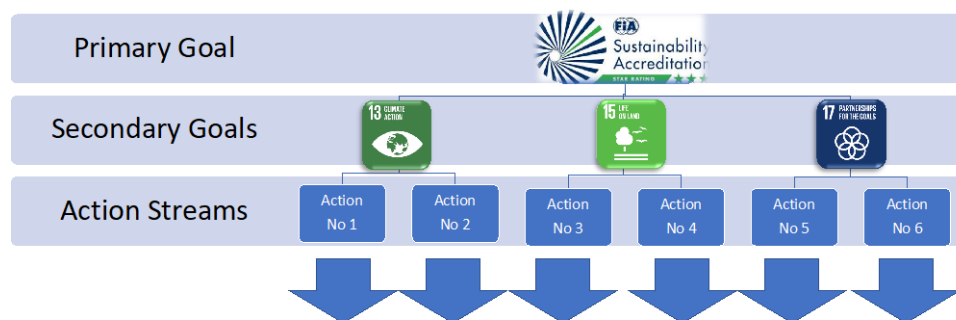
The case study identifies the outcomes of event greening and also illustrates how the SDGs can be linked to achieving environmental sustainability. Students can also refer to other events to ascertain how different types of events can be linked to different SDGs.

Question 2: You are the Sustainability Manager for a National Sport Federation. Explain how you go about implementing an environmentally sustainable event?

In the ACTUAE example, the primary goal was to implement environmental sustainability initiatives at their motorsport events in order to maintain FIA Sustainability Accreditation. Drawing on this case, students can apply the sustainable marketing approach of identifying certain SDGs (secondary goals) to focus upon and then work with a university or sustainability partner to implement various greening initiatives (action streams), including the use of Green Volunteers and the development of a Green Guide. The Green Guide is aimed at training the Green

Volunteers regarding environmentally sustainable practices relevant to the events, while at the same time educating spectators and participants upon completion of the Green Survey. Students need to identify the specific greening practices and also identify associated indicators to measure performance. Examples may include eco-procurement (giving preference to products that are not harmful to the environment and that reduce transport requirements); the number or percentage of suppliers and contractors that were local; the number or percentage of goods with recycled content, or goods that can be reused or recycled.

Implementation proposition



Source: Swart and Seretny (2019)

Question 3: Using various examples from sport organisations and events, categorise the efforts of sport organisations in terms of sport environmental sustainability?

Refer to McCullough, Pfahl and Nguyen's (2015) conceptual framework, "Waves of green sport". This framework provides different approaches to

environmental problems. They propose three environmental waves in sport as illustrated.

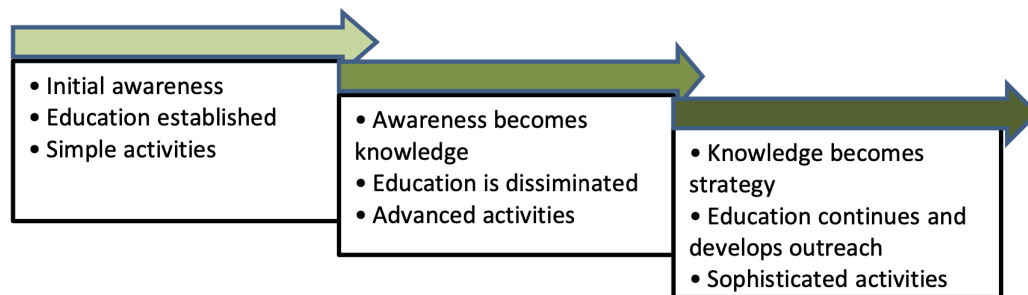


Figure 1: Waves of Green Sport

Source - McCullough et al., 2015

Wave one

In this wave, there is a need to take action which can stem from internal or external pressures (as was the case with the European Tour event and the ATCUAE events). Sport personnel develop an awareness of environmental issues within their context. Due to general awareness in the public sphere, knowledge begins to surface as to the causes of the problems and the alternatives available to correct and manage them. Part of this awareness and knowledge can be derived from sport-specific sources (for example, governing bodies such as the FIA) or they can be gained from education and training. Actions in this wave are generally reactionary or low intensity (low-hanging fruit) such as recycling programmes, and reduction in energy, water and waste as they are relatively easy to implement and are visible to a broad range of stakeholders. Consequently, sport personnel tend to be early adopters of these foundational activities. This first wave can therefore be considered a developmental

wave where awareness is created and foundational strategies emerge in the psyche of an organisation. Most of the events in the case study are operating in this first wave, so what can be done to move them towards the second wave?

Wave two

Building on the foundations of the first wave, in the second wave there are increasing levels of assessment and measurement accompanied by coordinated environmental efforts by internal and external stakeholders. In this wave, as competencies and relationships develop, knowledge gained from implementation and measurement is disseminated throughout the organisation by management. Communication is shared and transferred across organisational boundaries. Environmental organisations can work with sport organisations to formalise the process of integrating environmental sustainability efforts into daily organisational practice. For example, professional leagues in the US partnered with the National Resources Defense Council (NRDC), a national environmental action group advocating for strict environmental protection. The NRDC was able to leverage its network to advance the initial efforts of sports teams and the leagues benefited from the increased capacity and expertise the NRDC provided (see McCullough et al., 2016). Highly visible green weeks and internal changes at Major League Baseball and National Basketball Association were affected.

During this stage, internal efforts are benchmarked against institutional standards (for example, Global Sustainability Assessment System (GSAS), Leadership in Energy and Environmental Design (LEED) for green venues, Global Reporting Initiative (GRI) which is a standard for sustainability reporting) and the institutionalization of environmental sustainability initiatives occur through functional

and process systems, and the appointment of green teams to provide management and leadership structure to these efforts. More long-term strategic thinking occurs which may require consideration to overall organisational culture and structural changes. Tactical implementation and evaluation measures also become more robust from waves one to two; for example, moving from a waste management programme to a zero-waste management programme, with increasing waste diversion rates from landfills via trash audits.

The higher visibility and advanced environmental initiatives allow for other stakeholders such as fans and the media to assess the merits of such activities. Strategic planning becomes more robust and sport organisations increase the legitimacy of their environmental sustainability programs by partnering with environmental organisations.

Wave three

The third wave builds on previous developments, adding permanency to organisational planning and implementation of environmental activities. Strategic planning for environmental issues are more integrated into broader strategic planning. Due to close ties between organisation units, sport governing bodies and sport environmental alliances, the communication of knowledge accelerates. Certification and process evaluation techniques impart stability to strategy and implementation, and formalise assessment and the collection of environmental data.

The efforts progressed at each wave are the consequence of the implementation of specific levels of environmental innovation that are measurable and considered compatible with organisational strategy and operations. In the third wave,

sport personnel move from internal efforts to outreach with outside organisations and internal and external behavioural change. For example, the National Hockey League was the first professional league to publish a league-wide sustainability report in 2014, partnered with various environmental agencies and committed to being carbon neutral by partnering with Constellation Energy Group and purchasing carbon offsets. During this stage, sport personnel progress to the domain of environmental leadership and stewardship. Changing fan behaviours in everyday life becomes key.

The concept of waves acknowledges that future changes can create new needs and activities, permitting additional waves. Sports organisations should also be cautious of what is termed “green washing”, whereby environmental initiatives are associated with exaggerated claims. Organisational and stakeholder uptake of environmental sustainability initiatives are critical. The waves’ typology can assist sport personnel in the strategic understanding of their own organisation’s environmental efforts. Furthermore, it assists with developing short- and long-term strategic plans that incorporate environmental sustainability. The high-profile nature of sport events make them attractive to environmental sustainability-focused partners forging new strategic alliances, and offering a significant platform to promote environmental sustainability amongst spectators and fans. The waves’ typology promotes a deeper understanding of environmental sustainability within the sport industry, and provides a clearer pathway for environmental action.

Additional Resources:

FIA Environmental Accreditation Program. <https://www.fia.com/environmental-accreditation-programme>

FIFA World Cup Qatar 2022 Sustainability Strategy.

<https://resources.fifa.com/image/upload/fifa-world-cup-qatar-2022tm-sustainability-strategy.pdf?cloudid=p2axokh26lzaafloutgs>

IOC. Sustainability. <https://www.olympic.org/sustainability>

Jagemann, H. (2004). Sports and the Environment: Ways towards achieving the sustainable development of sport. *The Sport Journal*, January 10.

<https://thesportjournal.org/article/sports-and-the-environment-ways-towards-achieving-the-sustainable-development-of-sport/#post/0>
