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Are sport organisations environmentally sustainable? – A website analysis of sport federations in Belgium

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ABSTRACT

Research question: Sport is recognised as a significant contributor to a sustainable future. Sport federations (SFs) in particular can play an important role in this regard. However, literature that focuses on environmental sustainability (ES) in the sector is limited. To this end, the purpose of this study is to examine the institutionalised behaviour of SFs by analysing their environmental initiatives, environmental strategy and to detect and discuss opportunities for further development.

Research methods: For the study, all available websites of the SFs in Belgium were examined by means of a content analysis. To assess the current behaviour of SFs and determine their progress in terms of ES, an extended version of the environmental wave typology created by McCullough and colleagues (2016) is empirically applied.

Results and Findings: The results reveal a low commitment to ES, indicating that not dealing with the environment is still institutionalised in their natural behaviour. Only 37 of the 141 included SFs, communicated environmental initiatives or strategic considerations. The majority of the identified actions were low-intensity initiatives and only four federations provided a comprehensive strategic approach.

Implications: This study contributes to the emerging research on ES in sport by examining the underresearched SF sector and applying the institutional theory to understand which factors influences their environmental behaviour. Opportunities that can initiate a positive change in the sector are described and due to its methodological approach, the study can serve as a blueprint for future research on the environmental performance of sport and other organisations.

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Introduction

The study of sport and the environment is gaining momentum in academic research (Trendafilova & McCullough, 2018). Yet, despite the growing body of literature, an

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underrepresentation and lack of cohesion can still be observed compared to publications in other research fields (McCullough et al., 2020a). This underrepresentation is partly caused by the fact that the sport sector is lagging behind in terms of environmental sustainability (ES). In 2019, for example, 90 percent of the Standard and Poor's 500 companies released an annual sustainability report (Governance & Accountability Institute, 2020), compared to less than one percent of the professional North American sport organisations (McCullough et al., 2020b). Although, it is discussable whether the sport sector is comparable to other industries and should fulfil the same standards, Orr and Inoue (2019) pointed out that the sector is not immune to environmental challenges and warn that environmental actions should be taken.

Moreover, scholars and international organisations like the United Nations agree that sport has some unique characteristics that could make it an essential enabler of a more sustainable future (Hugaerts et al., 2021a; Ioakimidis et al., 2006; Trendafilova & McCullough, 2018; UN, 2015). Previous research, for example, has indicated that promoting ES through sport organisations can have a positive influence on the environmental behaviour intentions of its stakeholders (Alniacik et al., 2011; Casper et al., 2017, 2020; Inoue & Kent, 2012). In 1996, the International Olympic Committee took the lead among sport federations and organisations by addressing their concern for the environment and by stressing the importance of promoting sustainable development through sport (IOC, 2007; McCullough & Kellison, 2018). This achievement was the start of a global movement that resulted in the foundation of organisations like the British Association for Sustainable Sport in the United Kingdom, the Green Sports Alliance in North America, the Sports Environmental Alliance representing Australia and New Zealand and the Sport and Sustainability International organisation. These entities try to constitute a green mindset by introducing sustainability in sport, sharing best practices and by setting up debates (McCullough & Kellison, 2018).

Also, sport federations (SFs) and particularly SFs in Europe, can fulfil an important role in the creation of awareness for ES. Their intrinsic motivation to be an actor of societal change, broad membership network structure, publicly funded economy and strategical focus (Winand & Anagnostopoulos, 2017; Zeimers et al., 2019, 2020), make them well-suited to generate a meaningful impact. Furthermore, the United Nations have called for action with the publication of the Sports for Climate Action Framework and insisted that all individual sport entities, including SFs, should implement environmentally responsible practices (UN, 2017). Despite these efforts, limited research is available that addresses the environmental commitment of SFs. Gaining insights into the level of commitment of SFs, will be a necessary step to further their role in the promotion of ES and enhance their environmental progress (McCullough et al., 2016; Trendafilova et al., 2013).

To this end, the purpose of the study is to examine the commitment of SFs by analysing their environmental initiatives, environmental strategy and detect and discuss progression opportunities, using an extended version of the environmental wave typology presented by McCullough et al. (2016). The institutional theory is used as a theoretical guide to understand the institutionalised organisational behaviour of SFs and to determine which factors influence this behaviour (DiMaggio & Powell, 1983; McCullough & Cunningham, 2010; Oliver, 1992). In this study, SFs located in Belgium are targeted since their focus on long-term planning, dominant government involvement and their

social responsible nature are characteristics that also define SFs in other European countries (Henry, 2009; Nafziger, 2008). Accordingly, this context will yield insights into how the different institutional pressures can be leveraged to improve the environmental behaviour of organisations with similar configurations. The data for this study was collected by scrutinising the content on the websites of the federations, since websites are considered to be one of the most important means of communication with stakeholders (Kim et al., 2017; Parguel et al., 2011; Pedersen, 2015). As a result, this method is a frequently used technique (Barrett et al., 2019; Trendafilova et al., 2021; Wall-Tweedie & Nguyen, 2018), that has been stipulated for its adequacy to analyse the environmental commitment of sport organisations (McCullough et al., 2020b).

By focussing on the underresearched SF sector, this study contributes to the developing body of literature on ES in sport. As such, it aims to be a venture point for future academic research, to guide governments and administrations and to assist practitioners in the field to ameliorate their environmental performance.

Literature review and background

Literature review

Although ES can still be considered a rather new research topic in sport (Wall-Tweedie & Nguyen, 2018), some interesting academic contributions have emerged within the field. So far, however, a dominant focus on professional sport organisations like sport leagues and sport teams can be noticed. The study of Wall-Tweedie and Nguyen (2018), for example, assessed the ES efforts of 114 professional sport teams in seven countries in the Asia-Pacific region by means of a content analysis of their websites. They found that 14.9% of the investigated teams mentioned ES efforts on their website with a total of 28 initiatives. In 2020, McCullough and colleagues published a comparable study, in which they examined the ES performance-related signalling of 147 professional sport teams in five North American sport leagues. In the study, they focused on the type and the location of the initiative on the website of the team. The results showed that one team published an environmental report, 17.0% had a specific webpage and 7.4% made another reference to ES on their webpage. The authors concluded that most commitments were limited to raising awareness instead of taking profound actions (McCullough et al., 2020b). This is in contrast to the findings of Barrett and colleagues (2019), who observed that sport teams are moving from a low-intensity approach to larger integrated activities. They investigated 140 professional sport teams in North America and found that all the teams in the study had implemented at least one environmental initiative. However, it has to be mentioned that they did not differentiate between the website of the sport teams and that of their venues (Barrett et al., 2019).

The studies provide interesting insights on how ES-related behaviour is finding its way into for-profit sport organisations, however, the results are not directly applicable to the non-profit sector. Some literature is available for the non-profit sector like research on pro-environmental behaviour of sport club members (Braksiek et al., 2021; Thormann & Wicker, 2021), but articles that examine the non-profit sector compared to the profit sector are seriously outnumbered. Especially, research that focusses on ES in the non-profit SF sector is close to non-existing. The important role that SFs can play in

the promotion of ES among their numerous stakeholders is, therefore, overlooked and unexploited. Against this backdrop, this study will investigate ES-related behaviour in the SF sector and explore opportunities to increase their sustainability.

Institutional theory and environmental wave typology

In general, the results presented in the previous paragraph indicate a low commitment for ES in professional sport organisations. Despite some efforts, it can be noticed that progress in the field remains slow and Trendafilova and colleagues (2013) observed that sport managers are reluctant to go the extra mile for various reasons like financial constraints, lack of knowledge, absence of momentum or a lack of passion to maintain the efforts. McCullough and Cunningham (2010) added that most sport organisations aspire to different outcomes and have other priorities than deliberately minimising their environmental impact. As a result, environmental initiatives are rather the exception than the norm in the sport sector (McCullough & Cunningham, 2010). Thus, passivity in terms of environmental actions and strategic planning is also expected to be the most common organisational behaviour in SFs.

Even though passivity towards environmental matters can be seen as the expected norm within sport organisations, it can be noticed that some organisations are deviating from this norm by taking environmental actions (McCullough & Cunningham, 2010). Institutional theory can provide an appropriate lens (Trendafilova et al., 2013) and helpful support to understand and explain such deviant environmental behaviour (DiMaggio & Powell, 1983). More precisely, the concept of deinstitutionalisation is often used to describe 'the erosion or discontinuity of an institutionalised organizational activity or practice' (Oliver, 1992, p. 563). When research can identify why and how SFs deinstitutionalise, it can further the understanding how this process can be set in motion in the remaining institutionalised organisations.

According to Oliver (1992) three pressures, that can be both internal and external, can account for this deviation from the institutionalised organisational behaviour. First, political pressure, which can result from diminishing performance or innovation opportunities within the organisation or due to a change of expectations or interest of key stakeholders outside the organisation (Dacin et al., 2002; Oliver, 1992). Second, changes in social values from outside the organisation or diversification and dispersion within the organisation can cause deinstitutionalisation through social pressure. Lastly, functional pressure, which can occur due to inefficient practices within the organisation or as a result of competition for resources between organisations (Dacin et al., 2002; Oliver, 1992).

The environmental wave typology presented by McCullough and colleagues (2016) is used as a basis to analyse and visualise a possible deinstitutionalisation-trend of the SFs in this study. Each wave in the typology encompasses a set of characteristics and practices that reflects a new level in the environmental progress of an organisation. As such, the waves outline a pathway that represents pro-environmental behavioural changes (McCullough et al., 2016; Trendafilova et al., 2021). Central in *the first wave* of the typology is the development of awareness for ES due to internal or external pressures. The resulting low-intensity actions are most often a reaction to perceived pressure without being rooted in the strategic planning of an organisation. According to McCullough

et al. (2016) early-stage efforts like energy, waste and water reduction programmes can be defined as low-intensity activities. *The second wave* is characterised by an increased knowledge of sustainability within the organisation, the implementation of targeted actions, which are often based on a positive assessment of previous initiatives, and more formalised strategic planning like the mentioning of sustainability in the values of an organisation. Lastly, *the third wave* is reached when sustainability is fully integrated in the strategic planning of an organisation and actions have become routinised and normative. The organisations themselves will become leading examples for external stakeholders and will influence them to show sustainable behaviour (McCullough et al., 2016). The profound environmental strategy of an organisation should translate itself particularly into a mission and/or vision and/or values and strategic (long term) and operational (short term) goals (O'Brien et al., 2019; Rodrigues & Franco, 2019). Due to the different waves, the typology reflects institutional behavioural changes that can foster a better understanding of the origin of these changes and of the progress opportunities to increase sustainability in the sector (McCullough et al., 2016; Trendafilova et al., 2021).

Sport federations in Belgium

Belgium encompasses a relatively small, but densely populated area of approximately 11.5 million inhabitants on 30.6 thousand square kilometres (Statbel, 2021). Despite the small size of the country, it contains three different communities, i.e. the Flemish community (Dutch-speaking), the Walloon community (French-speaking) and the German-speaking community. Belgium is a federal state, but as a result of constitutional revisions, sport became one of the competences of the above-mentioned communities (Scheerder et al., 2011). This initiated the formation of separate SFs for each community. Currently, 152 SFs can be counted in Belgium, of which 75 are Flemish federations, 62 are Walloon federations and 15 are German-speaking federations (Scheerder et al., 2021).

Despite this rather complex structure, the overarching goal of the federations is the same, which is to promote and provide sport activities for a large audience (Claes et al., 2017; Winand & Anagnostopoulos, 2017; Zeimers et al., 2020). A task in which they appear to be rather successful, since they are currently able to reach more than two million people in Belgium (ADEPS, 2019; Scheerder et al., 2021). Each community's government defines its own policy objectives in a decree that the SFs have to fulfil according to their own capacities. The federations' strategy to fulfil these objectives is often put in writing on their website and/or in a policy plan. For the Flemish federations, a policy plan has to contain both a mission/vision and strategic and operational goals (Flemish community, 2016), which is not the case for the Walloon and German-speaking federations. As such, the question arises whether the different pressures (i.e. political, functional and social), that are associated with the configuration of SFs in Belgium and by extension in Europe, influence environmental behaviour within the organisation.

Research questions

The aim of this study is to examine SFs' level of commitment to ES and assess their institutionalised behaviour by analysing the websites of the SFs located in Belgium. To reach

this aim and structure the paper, the following three research questions (RQ) are proposed:

RQ 1: What is the profile of the ES initiatives that are communicated on the websites of the SFs?

RQ 2: What is the profile of the ES strategies that are communicated on the websites of the SFs?

RQ 3: What is the institutionalised environmental behaviour of the SFs and which pressures might influence this behaviour?

Methodology

Data collection

The data collection took place between June 2020 and November 2020 (Hugaerts et al., 2021b). To start, a list of all 152 recognised federations was generated based on information provided by the relevant sport administrations (ADEPS, 2020; Das Sportportal, 2020; Sport Vlaanderen, 2020). Thereafter, the websites of the SFs were checked for their accessibility and it appeared that 11 out of the 152 SFs did not possess a website. Accordingly, 141 federations' websites were included in the study, of which 73 were Flemish, 61 were Walloon and seven were German-speaking SFs.

The websites were thoroughly screened for information about accomplished ES initiatives and links to ES in the SFs' strategy following a two-step procedure. First, the researchers read the entire website (i.e. all webpages and, if provided on the website, policy plans) and noted every reference to ES. Second, specific keywords were entered in the respective website's search bar to ascertain that all relevant information was found. The following keywords were used in either Dutch, French or German: sustainability, environment, ecology, green, nature and climate. Blog or news sections on the websites were not examined because this was most often temporary information and not part of a systematic communication unless it was also linked to other parts of the website.

The data collection was performed by native speakers for the Flemish (Dutch-speaking) and the Walloon (French-speaking) federations. The Dutch-speaking researcher also scrutinised the websites of the German-speaking federations in close collaboration with a native German speaker. To ensure the quality of the data collection and of the categorisation, inter-rater reliability (IRR) tests were performed at the start and halfway through the coding procedure. Since both researchers were proficient in the other language, the Dutch-speaking researcher analysed four randomly chosen websites of Walloon SFs and vice versa. The testing moments resulted in IRR scores of 0.73 and 0.84, respectively, which can be perceived as a good to very good agreement according to Jakobsson and Westergren (2005). Moreover, all uncertainties that occurred during the search and the coding were discussed within the research team to uphold the inherent logic and consistency of the study.

Data analysis

As this study is methodologically inspired by the papers of Wall-Tweedie and Nguyen (2018) and McCullough et al. (2020b), it also employs a content analysis. This method

enables scholars to systematically identify, code and classify information (Graneheim et al., 2017) with the ultimate goal ‘to provide knowledge and understanding of the phenomenon under study’ (Downe-Wamboldt, 1992, p. 314). Hereafter, a general overview of the approaches used to answer the different RQs is given and the different topical analyses (i.e. environmental initiatives, environmental strategy and the environmental wave typology) are explained.

To answer RQ 1 and RQ 2, categorisations were used as an initial characterisation of the SFs’ websites. In the analyses, ‘inductive category development and deductive category application’ (Mayring, 2000, p. 3) were combined. This means that some of the categories used for the analyses were based on academic literature (deductive) and others were developed based on the information provided on the websites (inductive). In addition to the categorisations, the profoundness of the different environmental initiatives and environmental strategies was also assessed as a basis for answering RQ 3.

- The first step was to determine how many federations did and did not communicate about accomplished initiatives on their website. To determine whether these groups differed systematically, Fisher’s exact test was performed for the overall sample as well as for the three different communities. Fisher’s exact test was preferred over the Pearson’s chi-square test, since the expected frequencies in each cell were less than five (Field, 2011).
- In a second step, an analytical grid was used to classify the location of ES-related communication on the website. Four separate categories were created which were based on the study of McCullough et al. (2020b): (i) *other location(s)*, (ii) *dedicated webpage*, (iii) *dedicated webpage and other location(s)*, (iv) *environmental report*. The first category encompasses federations that only mentioned one or more environmental initiative(s) somewhere on their website without having a dedicated webpage. If SFs only had a specific webpage dedicated to their ES initiatives, they were listed in category (ii). The third category *dedicated webpage and other location(s)* includes all those federations that had a specific webpage and mentioned at least one other environmental initiative somewhere else. The fourth and last category encompasses all the federations that mentioned an environmental report on their website. The categories constitute different levels of engagement in terms of ES. In other words, all federations that are assigned to any of these categories show a higher commitment to ES than those who did not mention the topic on their website.
- In a third step, the initiatives that were found on the websites were categorised on the basis of Wall-Tweedie and Nguyen’s (2018) study on sport teams in the Asia-Pacific region. To adapt their ‘themes’ to the topic, the term ‘sport team’ was replaced by ‘sport federation’. The themes that did not fit the context of this research were not included (i.e. Team community engagement, Player philanthropy). If initiatives found on the websites could not be assigned to any theme using this deductive approach, further themes were developed inductively by abstracting from the websites (Könecke et al., 2016; Mayring, 2000).
- Finally, a qualitative assessment of the initiatives was conducted to distinguish between low and high-intensity initiatives. In literature, low intensity initiatives are described as actions that are relatively inexpensive, easy to implement and have a high visibility to stakeholders (Barrett et al., 2019; McCullough et al., 2016). High-

intensity initiatives represent larger-scale integrated activities from within the organisation that require substantial resources (Babiak & Trendafilova, 2011; Barrett et al., 2019).

Two steps were taken to analyse the communication related to ES strategy and, therefore, address RQ 2. For these analyses, no initiatives examined in RQ1 were taken into account.

- The first step was to differentiate between SFs that did and did not include ES in their strategical considerations. Again, Fisher's exact test (Field, 2011) was performed for the overall sample and the different communities.
- Next, an analytical grid was developed to classify the different degrees to which an environmental strategy was identified on the SFs' websites. It consisted of the following categories: (i) *mission/vision/values*, (ii) *strategic/operational goals* and (iii) *strategic/operational goals and mission/vision/values*. The first category incorporates federations that exclusively mention ES in their mission, vision or values. The second category includes federations that only mentioned ES in their goals. The final category represents all the federations that mentioned ES in their goals and their mission and/or vision and/or values, indicating an advanced level of commitment.

Finally, the results of the previous analyses were combined to categorise the SFs according to the extended environmental wave typology to answer RQ 3:

- In this analysis, the typology was extended by an additional *wave zero*, which constitutes an addition to the original research by McCullough et al. (2016). This wave comprises all federations that did not communicate anything related to ES on their website. As such, the wave represents the federations in which passivity with regard to environmental matters is still the institutionalised norm.
- The federations that showed commitment to ES were assigned to waves one, two or three based on the following logic:
 - *Wave one* comprises the federations that have started to show first signs of deinstitutionalisation. More precisely, it comprises federations that communicate one or more low-intensity action(s) on a dedicated webpage or on another location on their website, but do not show any strategical commitment to ES in their mission/vision/values or goals. It also includes federations that only communicate about ES in their mission or vision or values without mentioning ES-related initiatives on their website. In other words, the federations show signs of awareness for ES or first strategical considerations, but lack internal consistency.
 - *Wave two* includes federations that mention ES initiatives (low or high intensity) on a dedicated webpage or somewhere else and underline their commitment by recognising ES in their mission or vision or values. This expresses first signs of consistency between more coordinated actions and a strategic approach, but there is still considerable room for further growth and structural implementation.

- *Wave three* encompasses federations that reveal a profound commitment to ES, therefore, representing SFs in which ES has become institutionalised in their natural behaviour. These federations report high-intensity initiatives on a dedicated website while also integrating ES into their mission/vision/values and strategic/operational goals. As such, profound environmental actions have become fully integrated and strategic long-term planning is embedded in the federations.
- Fisher's exact test (Field, 2011) was performed for the overall sample and the communities to examine the difference between the number of federations that did not communicate about ES at all (*wave zero*) and those that did (*wave one*, *wave two* and *wave three*).

Results

RQ 1: Profile of the environmental initiatives

In total, 29 SFs (20.6%) mentioned ES initiatives on their websites (Table 1). Accordingly, 112 (79.4%) out of the 141 federations included in the analysis did not communicate ES initiatives. As could be expected, this numerical difference turned out to be highly significant when Fisher's exact test was conducted ($p < .001$). Table 1 presents the outcome for the Flemish and the Walloon federations ($p < .001$), of which 72.6% and 86.9%, respectively, did not communicate regarding ES on their websites. Of the German-speaking federations, all but one (85.7%) did not mention ES, but this turned out not to be significant. So, except for the German-speaking federations in particular, it is the statistical norm that federations do not communicate ES initiatives on their websites.

Table 1 also provides an overview of the location of the initiatives on the websites. Fifteen federations (10.6%) mentioned one or more environmental initiative(s) without having a specific webpage, while seven federations (5.0%) had a dedicated webpage regarding ES, but did not refer to ES anywhere else on their website. Another seven federations (5.0%) had a dedicated webpage and mentioned other environmental initiative(s) on their website. None of the federations published an environmental report. In this study, higher percentages were found for the Flemish federations for all categories

Table 1. Results of website analyses for the environmental initiatives.

	No initiative on website	Initiative(s) on website	Sig.	Other location(s)	Dedicated webpage	Dedicated webpage & other location(s)	Environmental report
Flemish SFs ($n = 73$)	53 (72.6)	20 (27.4)	***	9 (12.3)	6 (8.2)	5 (6.9)	0 (0.0)
Walloon SFs ($n = 61$)	53 (86.9)	8 (13.1)	***	5 (8.2)	1 (1.6)	2 (3.3)	0 (0.0)
German- speaking SFs ($n = 7$)	6 (85.7)	1 (14.3)		1 (14.3)	0 (0.0)	0 (0.0)	0 (0.0)
All SFs ($n = 141$)	112 (79.4)	29 (20.6)	***	15 (10.6)	7 (5.0)	7 (5.0)	0 (0.0)

Note: Value count with percentage in brackets. Results of Fisher's exact test with *** indicating highly significant results ($p < 0.001$) between no initiatives and initiatives on websites of sport federations.

than for the Walloon federations. A detailed comparison with the German-speaking federations did not seem feasible because of their low number.

In total, 31 specific ES initiatives were communicated (Table 2). These initiatives were initially categorised based on the work of Wall-Tweedie and Nguyen (2018). However, it was not possible to assign all the initiatives to one of the pre-determined themes. Accordingly, two additional themes were inductively developed. The first, *federations' stakeholder engagement*, comprised initiatives aimed at the creation of awareness for ES among SFs' stakeholders. In other words, members of the federation were asked to respect the environment while performing their sport. The other new theme is *recycling of sport equipment*. It comprised initiatives that specifically focused on the recycling and reuse of sport equipment.

As can be seen in Table 2, *federations' stakeholder engagement* was the category to which most initiatives could be assigned with 12 (38.7%) actions. The *packaging* theme, on the contrary, is only reported once (3.2%). The other initiatives were categorised as *sustainable agriculture* with eight (25.8%) initiatives, the *recycling of sport equipment* and *facility management* with three (9.7%) initiatives and *climate change* as well as *transportation* with two (6.5%) initiatives each. The themes energy, water, marketing communications, food, paper, green cleaning supplies, green procurement, green merchandise, air quality and green sponsorship identified by Wall-Tweedie and Nguyen (2018) were not reported on the websites.

Finally, a qualitative assessment of the initiatives was conducted to determine the intensity of the initiatives. Most initiatives (83.9%) can be classified as low-intensity initiatives and five (16.1%) as high-intensity initiatives (Table 2). Low-intensity initiatives

Table 2. Theme description based on Wall-Tweedie and Nguyen (2018) and results of website analyses for the environmental initiatives categorised by theme.

ES themes ¹	Theme description	SFs that report initiatives	Intensity of initiative
Federations' stakeholder engagement ²	This includes SFs that focus on creating awareness for ES among their stakeholders.	12	Low
Sustainable agriculture	These activities include the promotion of biodiversity preservation and managing the impact on ecosystems.	8	Low
Recycling of sport equipment ²	This theme describes initiatives that focus on sport equipment recycling and reuse programmes.	3	Low
Facility management	Facility management includes activities to track and reduce environmental impact from building practices.	3	High
Climate change	Federations were identified as reporting on climate change issues if they reported efforts to address emission-related concerns or climate change mitigation efforts.	2	High
Transportation	SFs that reported on this category promoted the use of sustainable transport.	2	Low
Packaging	Packaging ES efforts were recognised as those promoting to minimise packaging, recycle used packaging materials and the use of biodegradable packaging materials.	1	Low
Total number of initiatives		31	

¹The themes energy, water, marketing communications, food, paper, green cleaning supplies, green procurement, green merchandise, air quality and green sponsorship described by Wall-Tweedie and Nguyen (2018) were not included in the table since no initiatives could be found on the websites.

²Inductive developed themes based on the website analyses.

promote environmentally minded behaviour among the federations’ stakeholders, without profound efforts being carried out by the federation itself. In this study, for example, federations initiated a week in which members have to use sustainable transportation to commute to their sport club, without providing the transportation (i.e. *transportation* theme). *Federations’ stakeholder engagement* can also be classified as low intensity since these initiatives were focused on creating awareness for ES by communicating in one or two sentences that sport people should respect the environment while performing their sport. Examples of *sustainable agriculture* were the promotion of beach clean-up days or suggestions for alternative products and materials that are not harmful to the environment. *Recycling of sport equipment* were initiatives that initiated the collection of old tennis balls, sport rackets and fishing equipment for recycling projects. The low-intensity initiative categorised as *packaging* was the promotion of reusable water bottles.

High-intensity initiatives, on the other hand, require considerably more resources of the federations. For example, planting a tree for each new member of the federation (i.e. *climate change* theme). The *facility management* theme was also considered a high-intensity initiative. In this study, it comprised the provision of a computer program that sport clubs could use to ameliorate the environmental performance of their facilities.

RQ 2: Profile of the environmental strategy

As can be seen in Table 3, only 15 SFs included ES in their strategy-related communication (vision/mission/values and/or goals). Fisher’s exact test showed highly significant differences between the full sample and the Flemish and Walloon SFs ($p < .001$).

Nine (6.4%) federations indicated that ES was a core aspect of their organisation in their mission/vision/values. This was mostly done by communicating that the environment is one of their key values and/or that respecting the environment when practicing sport is important. Only two (1.4%) federations exclusively formulated concrete long- or short-term goals regarding ES. Four (2.8%) federations communicated comprehensive strategical considerations by not only mentioning ES in their mission or vision or values, but also by phrasing strategic or operational goals that reflected their future environmental ambitions. The concrete goals that could be found on the websites were to limit the use of paper by printing less or to increase support for recycling

Table 3. Results of website analyses for the environmental strategy.

	No environmental strategy	Environmental strategy	Sig.	mission/vision/values	strategic/operational goals	strategic/operational goals and mission/vision/values
Flemish SFs (n = 73)	61 (83.6)	12 (16.4)	***	7 (9.6)	2 (2.7)	3 (4.1)
Walloon SFs (n = 61)	58 (95.1)	3 (4.9)	***	2 (3.3)	0 (0.0)	1 (1.6)
German-speaking SFs (n = 7)	7 (100)	0 (0)		0 (0)	0 (0)	0 (0)
All SFs (n = 141)	126 (89.4)	15 (10.6)	***	9 (6.4)	2 (1.4)	4 (2.8)

Note: Value count with percentage in brackets. Results of Fisher’s exact test with *** indicating highly significant results ($p < 0.001$) between no environmental strategy and environmental strategy on websites of sport federations.

actions like the ‘paddle against plastic’ initiative. However, the other goals were formulated more generally, like the plan to introduce an environmentally friendly policy without specific actions being mentioned.

RQ 3: Institutionalised environmental behaviour

Figure 1 displays the graphical classification of the federations according to the extended environmental wave typology based on McCullough et al. (2016). The graphic and Table 4 shows that the vast majority of the SFs (73.8%) were located in *wave zero*. This reveals that only a minority of the federations have evolved to a subsequent wave, with diminishing numbers when the waves evolve. In other words, most federations had not communicated any activity or strategic consideration regarding ES on their websites. Table 4 reveals that 30 (21.3%) federations were assigned to *wave one*, four (2.8%) to *wave two* and three (2.1%) to *wave three*. A more detailed look at the results shows that out of a total of 37 (26.2%) federations that had surpassed *wave zero*, 27 were Flemish, nine were Walloon and one was German-speaking. Table 4 indicates highly significant differences for the overall sample and the Flemish and Walloon SFs. Thus, it can generally be stated that not dealing with ES is still the institutionalised norm in the SFs included in this study.

Discussion

ES in sport organisations has received some academic attention, but research that focuses on the SF sector is currently lacking. Therefore, the present study assesses the level of environmental commitment of SFs in Belgium. This was done by means of a content analysis of the federations’ websites, that eventually allows a categorisation of the organisations in an environmental wave typology based on the work of McCullough and colleagues (2016).

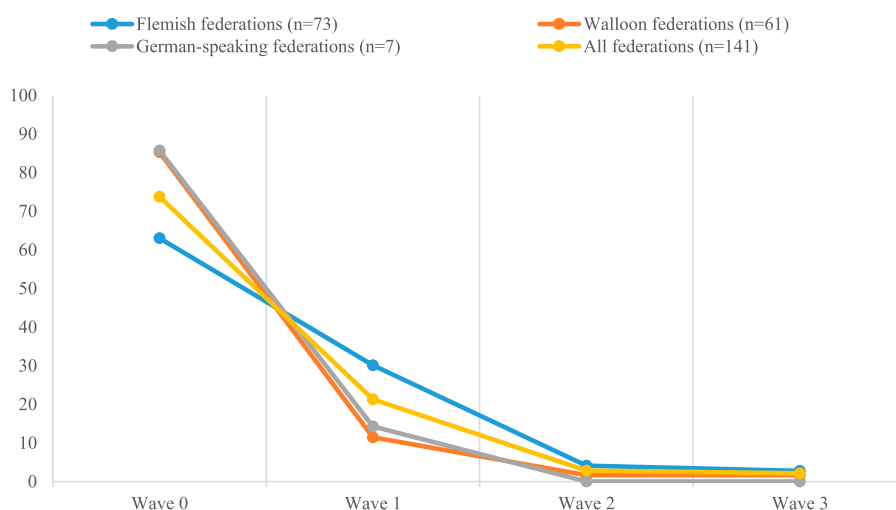


Figure 1. Graphical illustration of the results according to the extended environmental wave typology based on McCullough et al. (2016).

Table 4. Results according to the extended environmental wave typology based on McCullough et al. (2016).

	Wave 0	Sum of Wave 1, 2, 3	Sig.	Wave 1	Wave 2	Wave 3
Flemish SFs (<i>n</i> = 73)	46 (63.0)	27 (37.0)	***	22 (30.1)	3 (4.1)	2 (2.7)
Walloon SFs (<i>n</i> = 61)	52 (85.2)	9 (14.8)	***	7 (11.5)	1 (1.6)	1 (1.6)
German-speaking SFs (<i>n</i> = 7)	6 (85.7)	1 (14.3)		1 (14.3)	0 (0)	0 (0)
All SFs (<i>n</i> = 141)	104 (73.8)	37 (26.2)	***	30 (21.3)	4 (2.8)	3 (2.1)

Note: Value count with percentage in brackets. Results of Fisher's exact test with *** indicating highly significant results ($p < 0.001$) between wave zero and sum of wave one, two and three.

The results of this study demonstrate that 37 out of the 141 examined federations show commitment to ES by describing specific initiatives or including ES in their vision/mission/values or goals. This means that the remaining 104 federations are assigned to *wave zero* in the extended environmental wave typology. Moreover, when looking at the Flemish, Walloon and German-speaking SFs, no significant different trend is observed. These findings underscore McCullough and Cunningham's (2010) observation and indicate that ES is not (yet) institutionalised in the SF sector in Belgium. Despite the low number of deinstitutionalised federations, it should be noticed that one-fourth of the federations in this study took ownership of the issue at hand and went beyond the current governmental expectations and requirements.

The findings are broadly in line with the recent publications of McCullough and colleagues (2020b) and Wall-Tweedie and Nguyen (2018), who conducted similar studies on professional sport teams in North America and the Asia-Pacific region. However, when interpreting the outcomes of the studies, the organisational settings have to be kept in mind. While the papers of McCullough and colleagues (2020b) and Wall-Tweedie and Nguyen (2018) discuss a professional context, most SFs in Europe have a voluntary-driven logic and low professionalisation levels (Lang et al., 2020; Nagel et al., 2015; Zeimers et al., 2020). Therefore, it can be expected that SFs possess less organisational capacities than profit-oriented organisations (Nagel et al., 2015). Yet, SFs should not be exempted from acting sustainable due to their potentially large positive impact. When considering the three studies, it can be concluded that a low commitment to ES can be found in the different sport entities, which are spread over three continents. These consistent findings stress that considerable room for improvement is left for ES in sport, both in profit and non-profit organisations.

Following the logic of the institutional theory (Oliver, 1992), this study indicates that environmental passivity appears to be the institutionalised norm for the observed SFs in Belgium. Thus, the question arises how a SF's considerable potential to enhance its sustainability can be activated. According to Oliver (1992), the deinstitutionalisation of organisations is furthered by political, functional and social mechanisms. Hereafter, some of these mechanisms are discussed for the context at hand. If relevant differences are taken into account, these considerations can be transferable to other countries and other types of (sport) organisations.

Like most SFs, SFs in Belgium depend on their respective community government for their recognition and subsidies by means of a community-related decree (Scheerder et al., 2011). As political pressure can be an important cause for organisational change (McCullough & Cunningham, 2010), it has to be noted that such pressure often results from a shift in focus of the support system (Dacin et al., 2002; Zeimers et al., 2019). In

Belgium, a beginning shift can be observed since small adaptations are detectable in the relevant decrees in Flanders and Wallonia. The Flemish community, for instance, included the expression ‘environmentally friendly’ in the most recent version of the respective community-related decree. It is, however, only mentioned alongside adjectives like ‘healthy’ or ‘ethical’. Moreover, environmental friendliness is not a mandatory requirement for being subsidised (Flemish community, 2001, p. 2016). In the most recent decree in Wallonia, it was added that sport organisations should commit themselves to sustainable and environmentally friendly sport practices (French community, 2006, 2019). Despite the fact that neither of the two communities has formulated binding conditions related to ES, it can be argued that this slight shift in focus could already have some influence on organisational changes in the SFs. Nevertheless, considerable potential remains unexplored and including binding conditions regarding ES in the decrees can have a profound effect. Particularly, considering that so far, the German-speaking community does not refer to ES at all (German-speaking community, 2004), which could (partially) explain their performance.

Organisational finances are not only linked to political, but also to functional pressure (Dacin et al., 2002; Oliver, 1992). In Belgium, the different governments considerably contribute to financing the personnel costs of SFs if some basic requirements are fulfilled, (Flemish community, 2016; French community, 2019; German-speaking community, 2004), which is usually their biggest cost pool (Claes et al., 2017). In total, this public funding accounts for almost 50% of the SFs’ total income, with the number of affiliated members being one of the main determinants for calculating the funding (Claes et al., 2017). For the remaining income, the SFs mainly rely on membership fees paid by the sport clubs (Corthouts et al., 2020). Accordingly, securing membership loyalty is essential (Cuesta-Valiño et al., 2021) and since research shows that people are concerned with the environment (Thormann & Wicker, 2021), SFs should become more active regarding ES from a loyalty perspective. According to Cuesta-Valiño and colleagues (2021) is improving the service quality together with the promotion of environmental initiatives as a marketing strategy, the key to secure this loyalty.

Last, but certainly not least, social pressure has to be considered as a major factor regarding change in SFs. As noted by Zeimers et al. (2019) ‘[n]on-profit organisations are oriented toward social needs, influenced by public issues and changing public expectations’ (p. 955f.). Pursuing a social mission can, therefore, almost be considered a part of their core business (Lin-Hi et al., 2015). An example is the leading role of SFs in the establishment of a Sport-for-All policy in Europe (De Bock et al., 2021). Due to their social orientation are SFs’ susceptible to expectations from within and outside the organisation (Babiak & Trendafilova, 2011; McCullough & Cunningham, 2010). Trendafilova and colleagues (2013) stated that employees can have a considerable internal impact on the environmental actions of a sport organisation. They also observed external pressure by customers, fans and the media. In practical terms, this pressure can be leveraged by creating working groups or committees consisting of environmentally engaged personnel and/or members, which can initiate environmental progress.

When considering the results of this research and what has been discussed so far, some limitations have to be considered. One of the limitations is that this study was based on

information disclosed on the websites of the federations. It is likely that federations have unpublished strategy documents or undertake more initiatives than the ones they communicate on their website (Wall-Tweedie & Nguyen, 2018). Particularly from less professionalised federations it can be expected that their websites are not always up to date. It can, also, occur that some SFs present themselves in a more favourable light than what they actually deliver. To comply with the rising social expectations, organisations might put forth environmental initiatives or objectives, which they eventually fail to adequately implement (Johnson & Ali, 2018). Whether this is unintentionally or a part of greenwashing practices, evaluation methods, tailored to the SF sector, should be developed to assess their environmental behaviour. In time, this evaluation method can then be incorporated as a new requirement in the environmental wave typology. Another limitation is the fact that SFs might use other communication channels to spread their environmental actions and considerations to their stakeholders, which have not been assessed in this study. Despite these concerns, content analysis of websites is an accepted method to examine ES and other issues in the sport sector. Furthermore, it can be expected that relevant information should usually be present on the websites since they are one of the most important means of communication with stakeholders (Kim et al., 2017; Parguel et al., 2011; Pedersen, 2015).

Despite the limitations, this paper can be considered a valuable academic contribution on SFs' commitment to ES. As such, it can serve as a venture point for further research. Building on this study, research should continue to look into SFs and other organisations using surveys, interviews and other ways of collecting data besides content analyses. Bearing this in mind, it would be interesting to empirically investigate factors that determine environmental behaviour in sport organisations like human resources and financial capacities. These insights will help to better understand organisational change towards sustainability (Wall-Tweedie & Nguyen, 2018). The study is also a suitable basis for follow-up research that can give insights into the evolution of ES-related practices and strategies. As such, the extended environmental wave typology can depict the progress (or regress) of the environmental commitment and performance of SFs, so adequate measures can be undertaken to secure improvement.

Further developments of the environmental wave typology, an application in other contexts and, very generally, bridging ES-related research in sport and other domains are a promising research agenda. One example of such an agenda would be to scrutinise the introduction of ES-related management and reporting standards in sport contexts, like Alvarez-García and del RíoRama (2016) have done for companies. Linking this to the (further developed) environmental wave typology to scrutinise progress and regress in terms of ES even more profoundly is a possible next step. Results could then be mirrored back to settings other than sport to further intersectoral comparisons. Moreover, future research should consider that many sport organisations have a certain resemblance or actually are SMEs or family firms. Accordingly, looking at the research on the adaptation of ES in these domains is promising (for instance, see Breton-Miller & Miller, 2016; Cantele & Zardini, 2020; Gavana et al., 2017; Mullens, 2018). Due to the limited amount of research on ES in sport, review papers from other organisational settings (e.g. Broccardo et al., 2019) can also help to further ES-oriented research agendas in sport and, more generally, non-profit organisations.

Conclusions

Due to their central role in the sport landscape, SFs can be essential for furthering ES in the sport context and beyond. Yet, to date, little is known about the level of commitment of SFs to ES. To this end, this study examines the websites of SF in Belgium by means of a content analysis. The results illustrate that only a minority of the 141 SFs in Belgium, that had a website, referred to ES. In total, 31 initiatives were found of which most could be classified as low-intensity initiatives. The application of the extended environmental wave typology based on McCullough and colleagues (2016) shows that commitment to ES is not institutionalised in SFs located in Belgium as only 37 federations have surpassed *wave zero* so far, with 30 of them only reaching *wave one*.

Against this backdrop, it has to be kept in mind that sport organisations can have a considerable impact on the environmental attitudes of their stakeholders (Alniacik et al., 2011; Casper et al., 2017, 2020; Inoue & Kent, 2012). Therefore, it is of importance to institutionalise environmental behaviour and strategies in SFs. When SFs have reached *wave three* they will have the highest likelihood of influencing stakeholders like members, suppliers, sponsors, etc. (McCullough et al., 2016). Eventually, this could generate a snowball effect with a major positive environmental impact and a low chance of regression (McCullough et al., 2016).

This paper can support the deinstitutionalisation process by showing SFs an environmental pathway to reaching this high level of proficiency. The study shows how political, social and functional pressure can further be leveraged and presents opportunities to evolve to higher waves in the environmental wave typology. Hopefully, this can accelerate the environmental development of and open dialogue among federations. In the end, implementing ES in the strategy of sport organisations will be of utmost importance to facilitate environmentally minded long-term thinking and future decision-making (McCullough et al., 2016). However, pursuing sustainability will be a common goal since it is the responsibility of the SFs to acquire relevant competences, of academics to guide the process with scientific insights and of governments and administrations to support SFs along their environmental pathway.

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