October 2024

# ENVIRONMENTAL SUSTAINABILITY IN SPORTS CLUBS

Golf Vlaanderen

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# INTRODUCTION

The relationship between sport and environmental sustainability has gained increasing attention in recent years. Sports, by their very nature, have an impact on the environment (McCullough, Orr, & Kellison, 2020). From the construction and maintenance of sports facilities to the travel and participation of members in various activities, there is a growing need to adopt more sustainable practices within the sector (Wicker, 2019). At the same time, sports organizations have the potential to foster environmental awareness among their members and the wider community (Walker & Kent, 2009).

As sports federations, you play a crucial role in shaping the practices and values of the clubs and communities you serve. This report provides practical insights into the growing importance of environmental sustainability within non-profit sports clubs (NPSCs) and highlights how your efforts in this area can positively impact both your clubs and their members.

The present study aims to provide a clearer understanding of how sports club members view their club's environmental efforts and the impact these perceptions may have on their overall satisfaction and engagement. Drawing on data from several sports federations in Belgium, the study sheds light on the extent to which environmental sustainability is being integrated into the day-to-day operations of sports clubs and how members react to these efforts.

By outlining the broader context of environmental sustainability in sports, this report provides a foundation for understanding the motivations behind pro-environmental actions and the potential benefits they can bring. We hope this report will help you to better understand how environmental considerations can become an integral part of your federation's agenda, helping to strengthen the overall sporting community.

# METHODOLOGY

## Research Design

The study used a quantitative, cross-sectional research design to gather data from members of non-profit sports clubs (NPSCs) in Belgium.

## Data Collection

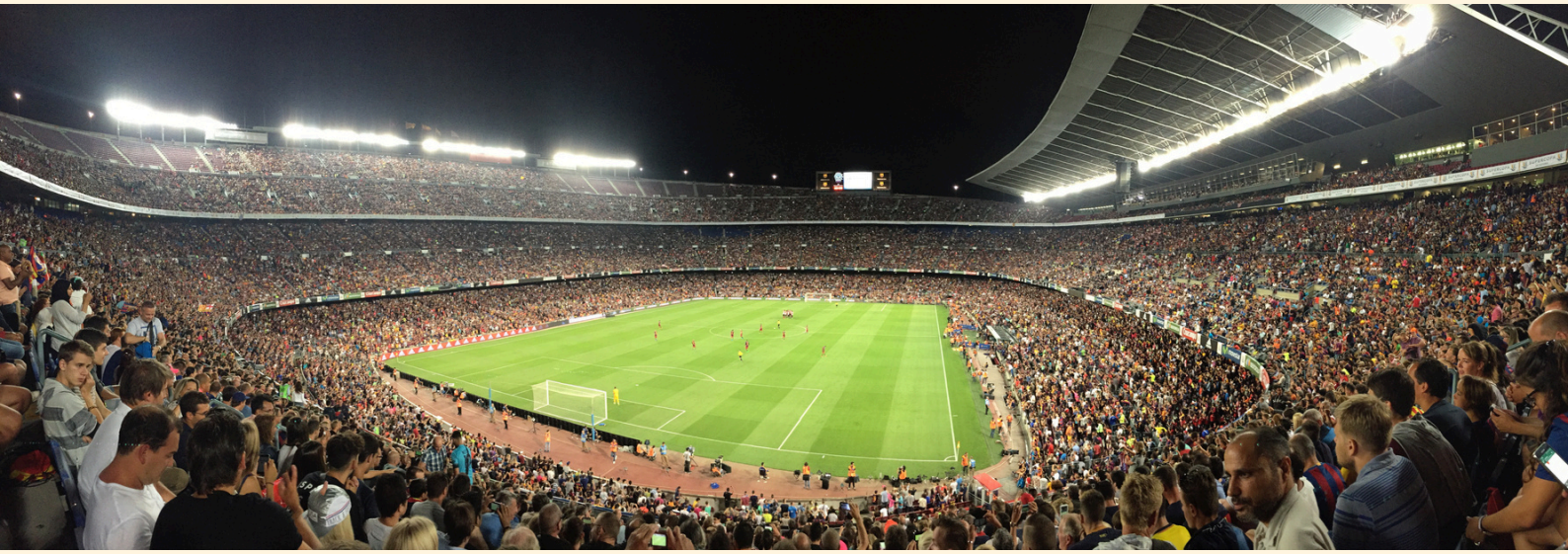
An online survey conducted from December 2023 to February 2024 through nine sport federations collected 1,751 valid responses from club members aged 18 and older.

## Measures

Ten quantitative variables related to sustainability were examined.. The scales used were adapted from existing, validated instruments in previous research. Definitions for each variable are provided on the next page.

## Data Analysis

Structural equation modeling (SEM) was used to analyze relationships between variables, providing a clear understanding of how members' perceptions of environmental efforts influence their satisfaction and loyalty to their clubs.



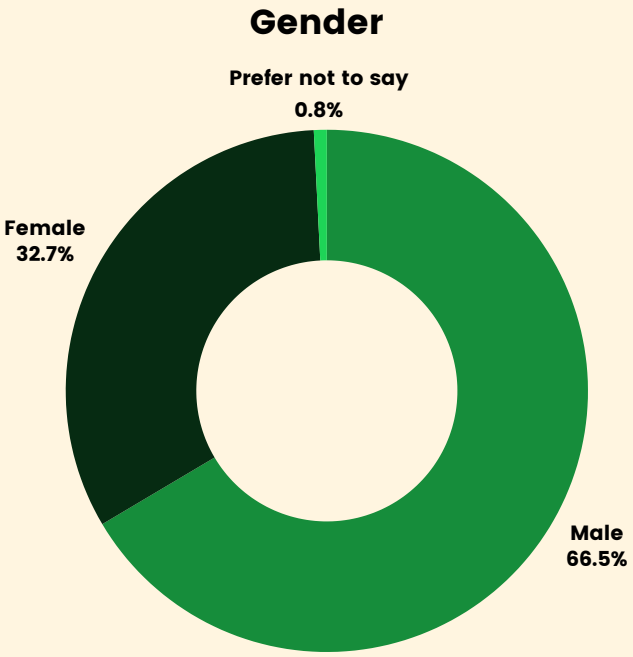
# MEASURES

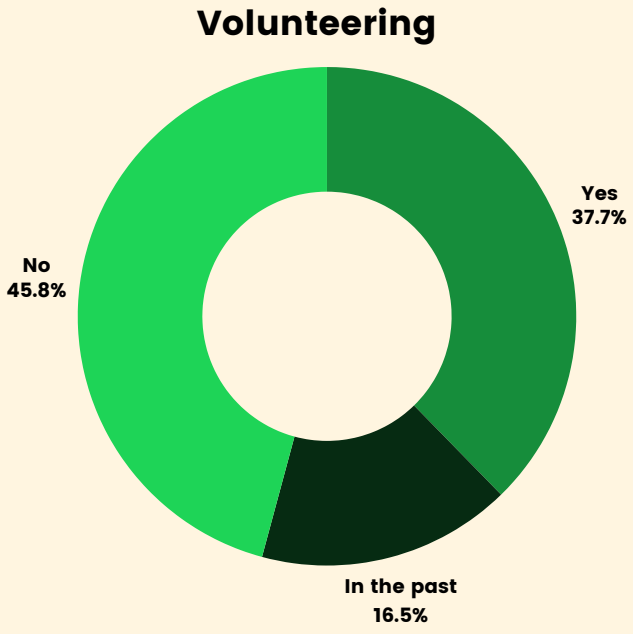
| Variable | Definition |
|---|---|
| Perceived environmental sustainability | The extent to which members of sports clubs believe that the club's practices and operations are environmentally friendly and sustainable. |
| Perceived value | Members' overall evaluation of a service's utility, based on the perception of what is received in exchange for what is given. |
| Satisfaction | The degree to which members feel content and pleased with their overall experience at the sports club. |
| Commitment | Members' intention to maintain their relationship with the club over time. |
| Loyalty intentions | Members' long-term engagement and positive attitude toward the club. |
| Word-of-mouth | The active promotion of the club to individuals who are not members. |
| Ascription of responsibility | Member's expectation about their club to address environmental sustainability issues. |
| Personal norm | Self-expectations and feelings of obligation to do what is morally right in terms of environmental sustainability. |
| Identification | It shows how much members see themselves as part of the sport club. |
| Environmental consciousness | The general attitude of members toward the environment, including cognitive (understanding environmental impacts like CO2 emissions), conative (willingness to act), and emotional (emotional responses to environmental issues) components. |

# RESULTS

## General results

The study encompassed a total of 1,751 respondents, considering solely complete survey responses. Within this cohort, 66.5% (n=1164) of the individuals identified as male, 32.7% (n=573) as female, and 0.8% (n=14) of the respondents chose not to disclose their gender. The gender distribution of the sample is representative of the global population. Regarding volunteering, 45.8% (n=802) of the respondants have never volunteered in their club, 37.7% (n=660) are currently volunteering, and 16.5% (n= 289) volunteered in the past.



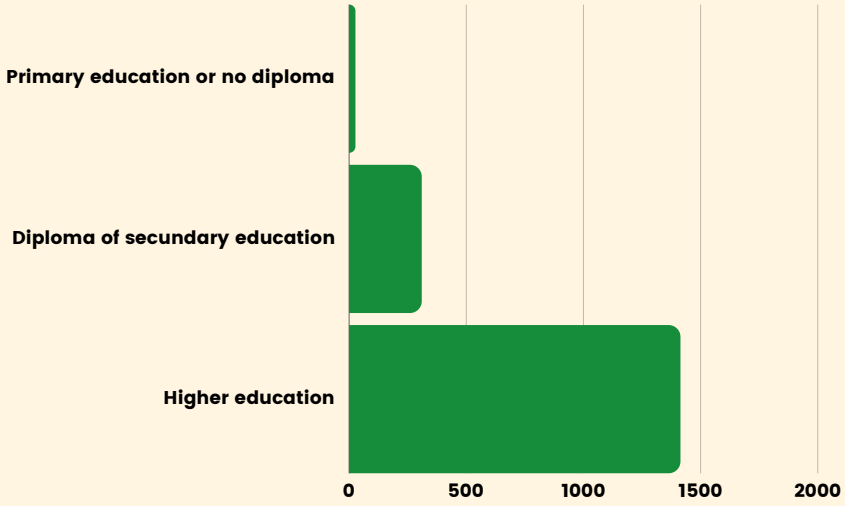



# RESULTS

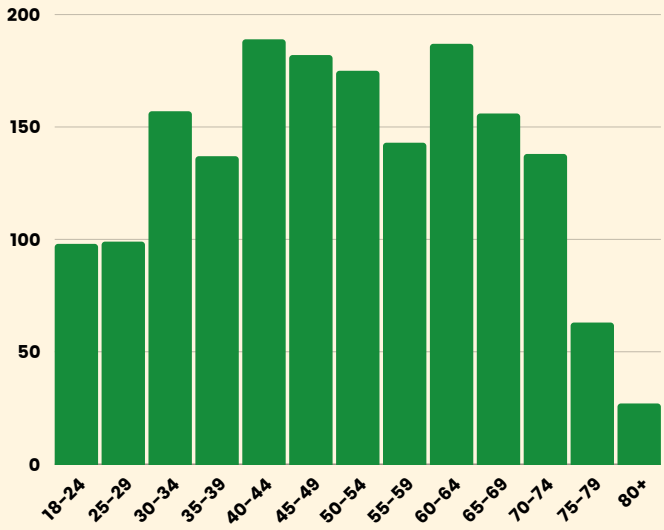
## General results

Regarding educational level, 80.7% (n=1,414) of participants held a higher education degree, 17.7% (n=310) possessed a secondary education diploma, and 1.6% (n=27) either completed primary education or had no formal education. In terms of age distribution, 11.3% (n=197) were under 30 years old, 16.8% (n=294) fell within the 30-39 age bracket, 21.2% (n=371) were aged 40-49, 18.2% (n=318) belonged to the 50-59 age group, 19.6% (n=343) were between 60-69 years old, and 10.6% (n=228) were over 70 years old.

**Educational level**




**Age distribution**



# RESULTS

## General results

The following table presents the descriptive results for the 10 variables used in the study, measured on a 7-point Likert scale ranging from “strongly disagree” to “strongly agree.”

| Variable | Mean score (standard deviation) |
|---|---|
| Perceived environmental sustainability | 4.42 (1.18) |
| Perceived value | 5.23 (1.05) |
| Satisfaction | 5.95 (0.95) |
| Commitment | 4.98 (1.09) |
| Loyalty intentions | 5.54 (1.09) |
| Word-of-mouth | 5.61 (0.99) |
| Ascription of responsibility | 5.93 (0.98) |
| Personal norm | 5.69 (0.96) |
| Identification | 4.44 (1.28) |
| Environmental consciousness | 5.24 (0.96) |

# RESULTS

## General results
## Focus on Perceived Environmental Sustainability

| Variable | Mean score (standard deviation) |
|---|---|
| My sport club takes action to reduce pollution related to its activities (e.g., tracking and reducing environmental impact of building through the choice of materials and eco-design). | 4.84 (1.46) |
| My sport club invests in clean technologies and renewable energies. | 4.42 (1.53) |
| My sport club contributes toward saving resources and energy (e.g., recycling, waste management). | 4.88 (1.38) |
| My sport club respects and promotes the protection of biodiversity (e.g., park cleans-up). | 4.87 (1.56) |
| My sport club encourages its members to adopt eco-friendly behavior (sort trash, save water and electricity) to protect the natural environment. | 5.05 (1.52) |
| My sport club measures the impact of its activities on the natural environment (e.g., carbon audit, reduction of greenhouse gas emissions). | 3.88 (1.48) |

# RESULTS

## General results
## Focus on Perceived Environmental Sustainability

| Variable | Mean score (standard deviation) |
|---|---|
| My sport club makes investments to improve the ecological quality of its services (e.g., Water refill stations). | 4.35 (1.52) |
| My sport club has initiatives that focus on sport equipment recycling and reuse programs. | 4.32 (1.49) |
| My sport club promotes the use of sustainable transport (e.g., bike, carpooling). | 4.26 (1.64) |
| My sport club communicates their efforts to address climate change issues (e.g., on their website or social media). | 3.55 (1.57) |
| My sport club creates initiatives aimed at the creation of awareness for environmental sustainability (e.g., environmental awareness campaign). | 3.75 (1.58) |
| My sport club seems to be environmentally responsible. | 4.80 (1.44) |

# RESULTS

## General results
## Indirect impact of Perceived environmental sustainability on loyalty

The following table, along with the model presented on the next slide, illustrate the indirect impact of perceived environmental sustainability on sports club member loyalty. Perceived environmental sustainability affects both satisfaction and perceived value, which, in turn, lead to increased loyalty. Satisfaction plays a key role, enhancing loyalty by influencing its key dimensions—commitment, loyalty intentions, and word-of-mouth (WOM). Each relationship in the model is represented by correlation coefficients (e.g., .76***, .69***), demonstrating the strength and statistical significance of these links, all of which are highly significant (p-value < 0.001). The RMSEA and SRMR indices indicate a good statistical fit for the model. Overall, the model highlights the positive effect of perceived environmental sustainability on satisfaction, ultimately driving member loyalty.

| Relationship | Confirmed | Coefficient | Z-value |
|---|---|---|---|
| Perc. Env. Sust. -> Sat. | YES | 0.14*** | 6.99 |
| Perc. Env. Sust. -> Perc. Val. | YES | 0.48*** | 23.26 |
| Perc. Val. -> Sat. | YES | 0.76*** | 45.40 |
| Sat. -> Com. | YES | 0.69*** | 49.65 |
| Sat. -> Loy. Int. | YES | 0.70*** | 45.18 |
| Sat. -> WOM | YES | 0.31*** | 7.31 |
| Com. -> WOM | YES | 0.39*** | 15.55 |

*** p < 0.001

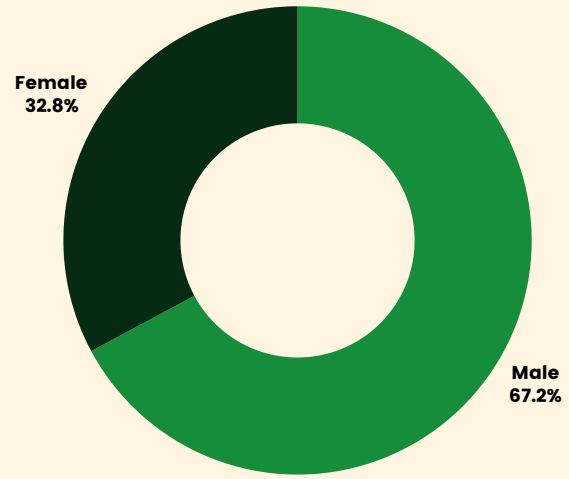
Commitment
Loyalty intentions
WOM
Perceived value
Satisfaction
Perceived environmental sustainability
.39***
.31***
.69***
.7***
.31***
.76***
.48***
.14***
RMSEA= .065 ; SRMR= .059

# RESULTS

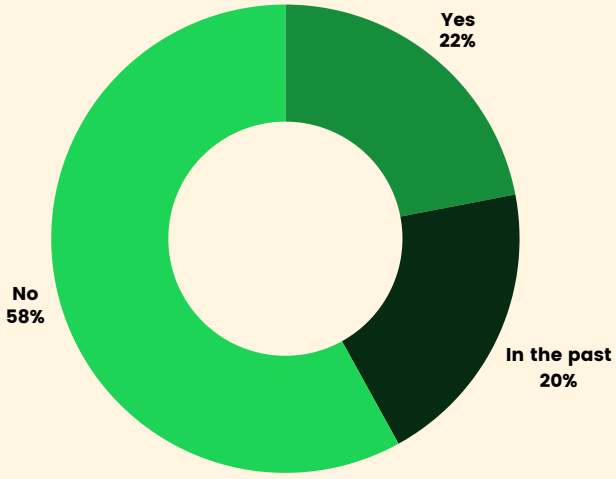
## Federation results

The number of respondents affiliated with Golf Vlaanderen was 405, considering solely complete survey responses. Within this cohort, 67.2% (n=272) of the individuals identified as male, and 32.8% (n=133) as female. The gender distribution of the sample is representative of the global population. Regarding volunteering, 58% (n=235) of the respondants have never volunteered in their club, 22% (n=89) are currently volunteering, and 20% (n= 81) volunteered in the past.

**Gender**




**Volunteering**

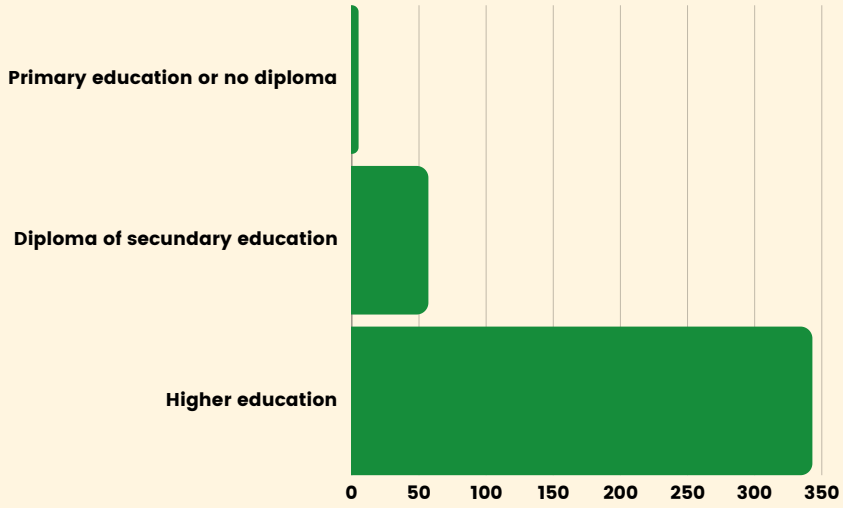


# RESULTS

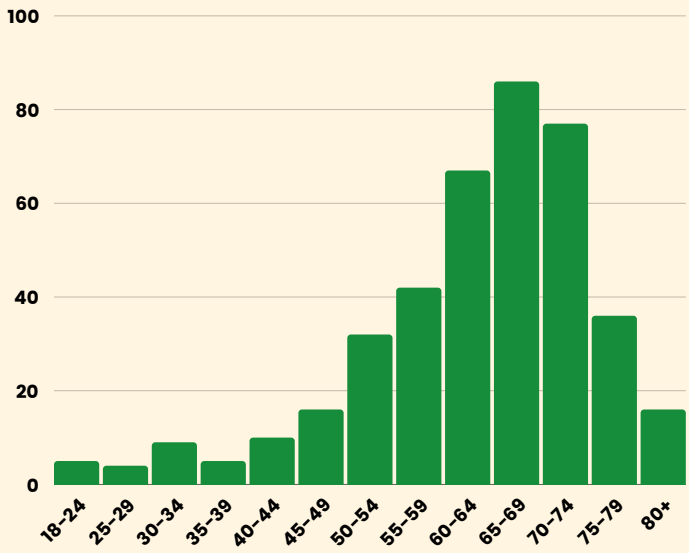
## Federation results

Regarding educational level, 84.7% (n=343) of participants held a higher education degree, 14.1% (n=57) possessed a secondary education diploma, and 1.2% (n=5) either completed primary education or had no formal education. In terms of age distribution, 2.2% (n=9) were under 30 years old, 3.4% (n=14) fell within the 30-39 age bracket, 6.4% (n=26) were aged 40-49, 18.3% (n=74) belonged to the 50-59 age group, 37.9% (n=153) were between 60-69 years old, and 31.8% (n=129) were over 70 years old.

**Education level**




**Age distribution**



# RESULTS

## Federation results

The following table presents the descriptive results for the 10 variables used in the study, measured on a 7-point Likert scale ranging from “strongly disagree” to “strongly agree.”

| Variable | Mean score (standard deviation) |
|---|---|
| Perceived environmental sustainability | 4.67 (1.05) |
| Perceived value | 5.26 (0.98) |
| Satisfaction | 6 (0.83) |
| Commitment | 4.81 (0.94) |
| Loyalty intentions | 5.42 (0.96) |
| Word-of-mouth | 5.57 (0.83) |
| Ascription of responsibility | 5.85 (0.97) |
| Personal norm | 5.59 (0.91) |
| Identification | 4.46 (1.13) |
| Environmental consciousness | 4.81 (1.13) |

# RESULTS

## Federation results
## Focus on Perceived Environmental Sustainability

| Variable | Mean score (standard deviation) |
|---|---|
| My sport club takes action to reduce pollution related to its activities (e.g., tracking and reducing environmental impact of building through the choice of materials and eco-design). | 5.31 (1.25) |
| My sport club invests in clean technologies and renewable energies. | 5.08 (1.40) |
| My sport club contributes toward saving resources and energy (e.g., recycling, waste management). | 5.15 (1.20) |
| My sport club respects and promotes the protection of biodiversity (e.g., park cleans-up). | 5.57 (1.22) |
| My sport club encourages its members to adopt eco-friendly behavior (sort trash, save water and electricity) to protect the natural environment. | 5.34 (1.30) |
| My sport club measures the impact of its activities on the natural environment (e.g., carbon audit, reduction of greenhouse gas emissions). | 4.21 (1.30) |

# RESULTS

## Federation results
## Focus on Perceived Environmental Sustainability

| Variable | Mean score (standard deviation) |
|---|---|
| My sport club makes investments to improve the ecological quality of its services (e.g., Water refill stations). | 4.79 (1.43) |
| My sport club has initiatives that focus on sport equipment recycling and reuse programs. | 4.33 (1.39) |
| My sport club promotes the use of sustainable transport (e.g., bike, carpooling). | 3.68 (1.34) |
| My sport club communicates their efforts to address climate change issues (e.g., on their website or social media). | 3.77 (1.51) |
| My sport club creates initiatives aimed at the creation of awareness for environmental sustainability (e.g., environmental awareness campaign). | 3.96 (1.46) |
| My sport club seems to be environmentally responsible. | 4.80 (1.39) |

# KEY FINDINGS

The discussion is based solely on the overall results, as the number of responses from each federation is too low to provide individual analyses with sufficient statistical power. Consequently, the key findings of the study are presented below.

## 01 Environmental Sustainability Perception

Members' perceptions of environmental sustainability were relatively low compared to their satisfaction with the clubs, indicating a gap. This suggests they may be unaware of the club's sustainability efforts or that such initiatives are lacking.

## 02 High expectations

The variable 'ascription of responsibility' measured members' expectations for their club to engage in eco-friendly behavior. The high mean score indicates that members have strong expectations for such environmentally conscious actions.

## 03 Satisfaction and Loyalty

Our findings show that when people think a club is environmentally friendly, they tend to be more satisfied, which makes them more loyal. This highlights that being eco-friendly should be seen as an additional dimension of the service of the sport club.



# CONCLUSION

This study reveals the significant impact of environmental sustainability on member satisfaction and loyalty in Non-Profit Sports Clubs (NPSCs). While members are generally satisfied with their clubs, they perceive the clubs' environmental efforts as lacking, indicating a clear area for improvement.

Key findings show that:

- Enhancing environmental sustainability practices directly increases member satisfaction and perceived value.
- Satisfaction, in turn, strongly influences loyalty, including members' commitment and word-of-mouth (WOM) promotion.

Practically, NPSCs must focus on two critical areas:

- Improving environmental sustainability initiatives.
- Communicate effectively these efforts to members.

Low awareness of existing initiatives suggests a need for better visibility. Clear communication through social media, newsletters, and events can help bridge this gap, making environmental efforts more engaging and tangible for members.

By integrating stronger sustainability practices and promoting them effectively, NPSCs can not only meet growing environmental expectations but also increase member satisfaction and long-term loyalty. This will contribute to stronger member retention and ensure the club's continued success in a competitive landscape.

# ABOUT THE AUTHORS



Pierre Léonard is a PhD student in sports management and policy at KU Leuven and Université catholique de Louvain (Belgium). His PhD focuses on the issue of environmental sustainability in non-profit sports organizations.



Géraldine Zeimers is a Professor in sport management in the Faculty of Motor Sciences (Faculté des Sciences de la Motricité) at Université catholique de Louvain (Belgium). Her research focuses on sport governance and social change (social responsibility) by non-profit sport organizations, including sport federations and community sport clubs.



Jeroen Scheerder is a Professor of Sport Policy, Sport Politics and Sport Sociology in the Department of Movement Sciences at KU Leuven (Belgium). His research focuses on management-related, political, and sociological aspects of sport and leisure-time physical activity, including sport governance and sport participation. He has (co-)supervised eighteen doctoral theses in these fields and is the lead editor of the KU Leuven Sport, Policy & Management Studies.

# ACKNOWLEDGEMENTS

Organizations linked to this project:

- Académie Nationale Olympique Française
- AFGOLF
- Golf Vlaanderen
- Association des Clubs Francophones de Football
- Voetbal Vlaanderen
- Ligue Francophone de Hockey
- Vlaamse Hockey Liga
- Tennis Wallonie-Bruxelles
- Club Alpin Belge
- Klim- en Bergsport federatie

**We thank you for your help in the data collection.**

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