

Sustainability Perceptions among Young Tennis Players: Insights from the Green Tennis European Project

María José Maciá Andreu^{1,2}, Juan Alfonso García Roca^{1,2}, M^a de la Trinidad Morales Belando¹, Eva Vegue Parra³ & Cem Tinaz⁴

¹*Facultad de Deporte. UCAM Universidad Católica de Murcia*

²*Centro de Estudios Olímpicos. UCAM Universidad Católica de Murcia*

³*Facultad de Enfermería. UCAM Universidad Católica de Murcia*

⁴*International Sport Management (ISPM). The Hague University of Applied Sciences*



THREE MAIN PILARS

Environmental

Preservation of natural resources, reduction of pollution and mitigation of climate change.

It is the most commonly used approach.



Social

Promotes wellbeing, equality, social justice, and citizen participation.

Economic

Responsible economic development that balances growth and environmental stewardship.

These dimensions are interrelated and must be addressed collectively.

AGENDA 2030: A GLOBAL COMMITMENT

In September 2015, 193 countries approved the 2030 Agenda for Sustainable Development.

Global action plan to eradicate poverty, protect the planet and ensure the well-being of all through environmentally, socially and economically sustainable development.



It includes 17 Sustainable Development Goals and 169 associated targets. Each country adapts the Agenda to its national context and commits to mobilising the necessary resources for its implementation.

CURRENT STATUS OF THE SDGs

50%

Delayed goals

More than half of the goals are
not progressing as planned

30%

Setback

Especially in poverty, hunger and
climate change

2023

Midpoint towards 2030

The pandemic, climate change and armed conflicts have
aggravated the global situation.



SPORT AS A DRIVER OF CHANGE TOWARDS A MORE SUSTAINABLE FUTURE

Sport and recreation are fundamental human rights recognized by UNESCO since 1978 – International Charter of Physical Education and Sport.

The UN defines sport as all forms of physical activity that contribute to physical, mental and social well-being.

Sport is an effective tool for sustainable development. It promotes health, generates sustainable behaviors and fosters social integration in various contexts.



INEXORABLE LINK WITH THE 2030 AGENDA

The Agenda itself details: "Sport is also an important enabler of sustainable development. We recognize the growing contribution of sport to the realization of development and peace in its promotion of tolerance and respect and the contributions it makes to the empowerment of women and youth, individuals and communities, as well as to the goals of health, education and social inclusion."

Sport and the SDGs. An overview outlining the contribution of sports to the SDGs



4%

The Sports Carbon Challenge

According to the UN Environment Programme, the sports sector is responsible for up to 4% of global carbon emissions.

Despite environmental concerns, **many players and coaches lack knowledge to make informed sustainable decisions in sports.**





GreenTennis Project Overview

Project ID

ERASMUS-SPORT-2024 – ID:
101184588

Focus

Tennis for a Greener Future

Goal

Environmental sustainability in
National Tennis Centres

International Partnership

- **Collective Innovation AS (Norway) - Coordinator**
- Hungarian Tennis Association
- Fundacion Universitaria San Antonio (Spain)
- European Tennis Federation (Switzerland)
- Centenary Tennis Clubs (Switzerland)
- Stiftelsen We Play Green (Norway)
- Airforlives GmbH (Germany)
- Mobile Adventure (Poland)



Study Design & Approach

The GreenTennis project employed an **observational, cross-sectional, multicentre study design**. This approach allowed for a broad snapshot of sustainability perceptions.

Our primary objective was to assess the environmental awareness and attitudes of young tennis players using a specifically adapted and validated questionnaire.

This robust methodology ensured we gathered consistent and comparable data across all participating National Tennis Centres and clubs.



Participants

454

Total Players

Young tennis players
aged 10-20 years

14.14

Mean age $\pm$ 2.14 years

Europe

Countries

Clubs, academies and
sports schools
represented

89.9%

Compete

Participate in
competitions
regularly



53.5%



46.3%



Questionnaire Design

The GreenTennis-SUSYOUTH questionnaire, adapted from Salahange et al. (2024), served as the primary instrument for assessing young tennis players' sustainability perceptions. It comprised 33 items across six distinct dimensions.

KNOWLEDGE

4 items

$\alpha=0.741$

ATTITUDES

10 ítems

$\alpha=0.895$

WILLINGNESS TO ACT

4 ítems

$\alpha=0.901$

BEHAVIOUR

6 ítems

$\alpha=0.835$

SELF-EFFICACY

7 ítems

$\alpha=0.915$

EMOTIONAL DIMENSION

2 ítems

5-point Likert scale (1=strongly disagree; 5=strongly agree). The emotional dimension allowed participants to select up to three emotions describing their personal experiences with sustainable problems or actions. The estimated response time for the questionnaire was 12–15 minutes.

Procedure

01

Digital Administration

The GreenTennis-SUSYOUTH questionnaire was administered digitally via Webropol through collaborating clubs and academies.

03

Participant Engagement

Participants received standardised instructions, and their responses were anonymous and entirely voluntary.

02

Data Collection Period

The collection phase spanned two months, from August to September 2025.

04

Ethical Compliance

Data confidentiality was strictly maintained according to current ethical regulations, with approval from the Ethics Committee (CE062501).



Data Analysis

Descriptive Analysis

Initial assessment using frequencies, percentages, means, and standard deviations.

Normality Testing

Kolmogorov-Smirnov test indicated a non-normal data distribution, guiding subsequent analysis.

Inferential Statistics

Non-parametric tests (Mann-Whitney U, Kruskal-Wallis) were applied for variable relationships.

Significance & Software

Statistical significance was set at $p < 0.05$, with analysis performed using SPSS v.27.

Key Research Findings

1

Environmental Stewardship

There was high agreement among players that **"Protecting animals and nature is part of sustainability"** ($\bar{X}=4.61\pm0.64$).

2

Consumer Consciousness

The lowest agreement was observed for statements like **"I avoid buying products from brands that don't care about the environment"** ($\bar{X}=3.54\pm0.94$), indicating a gap between awareness and purchasing habits.

3

Gender Perception Gaps

Statistically significant gender differences were noted in 20 of 33 statements, with females consistently scoring higher in sustainability awareness and commitment.

4

Organisational Influence

Agreement on sustainability topics was significantly higher when these issues had been discussed within the players' associations, highlighting the importance of internal communication.

Detailed Results by Dimensions

Young tennis players' perception of sustainability, highlighting the elements with the highest and lowest average scores (scale 1-5).

1

KNOWLEDGE

- Protecting animals and nature is part of sustainability (4.61)
- Social equality and justice are part of sustainability (3.85)

2

ATTITUDES

- I am concerned about the impact of climate change on the future of the planet (4.48)
- It frustrates me that people don't take sustainability seriously (3.99)

3

WILLINGNESS TO ACT

- I am willing to participate in initiatives to protect the environment (4.34)
- I am willing to use public transport or bicycle instead of a car (4.28)

4

BEHAVIOUR

- I try to reduce my energy and water consumption (4.26)
- I avoid buying products from brands that do not care about the environment (3.54)

5

SELF-EFFICACY

- I believe my individual actions can make a difference in sustainability (4.20)
- My actions can contribute to a more sustainable future (3.59)

Moving Forward



Strong Foundation

Young tennis players demonstrate good environmental awareness and willingness to act sustainably.



Key Opportunity

Focus on translating awareness into concrete sustainable consumer behaviours and daily actions.



Future Impact

Gender-sensitive approaches and club-based sustainability discussions will amplify positive environmental change.





Be part of the change you want to see in the world

Prof. María José Maciá Andreu

e-mail: mjmacia@ucam.edu