



Green Games

WP2 Scientific Literature

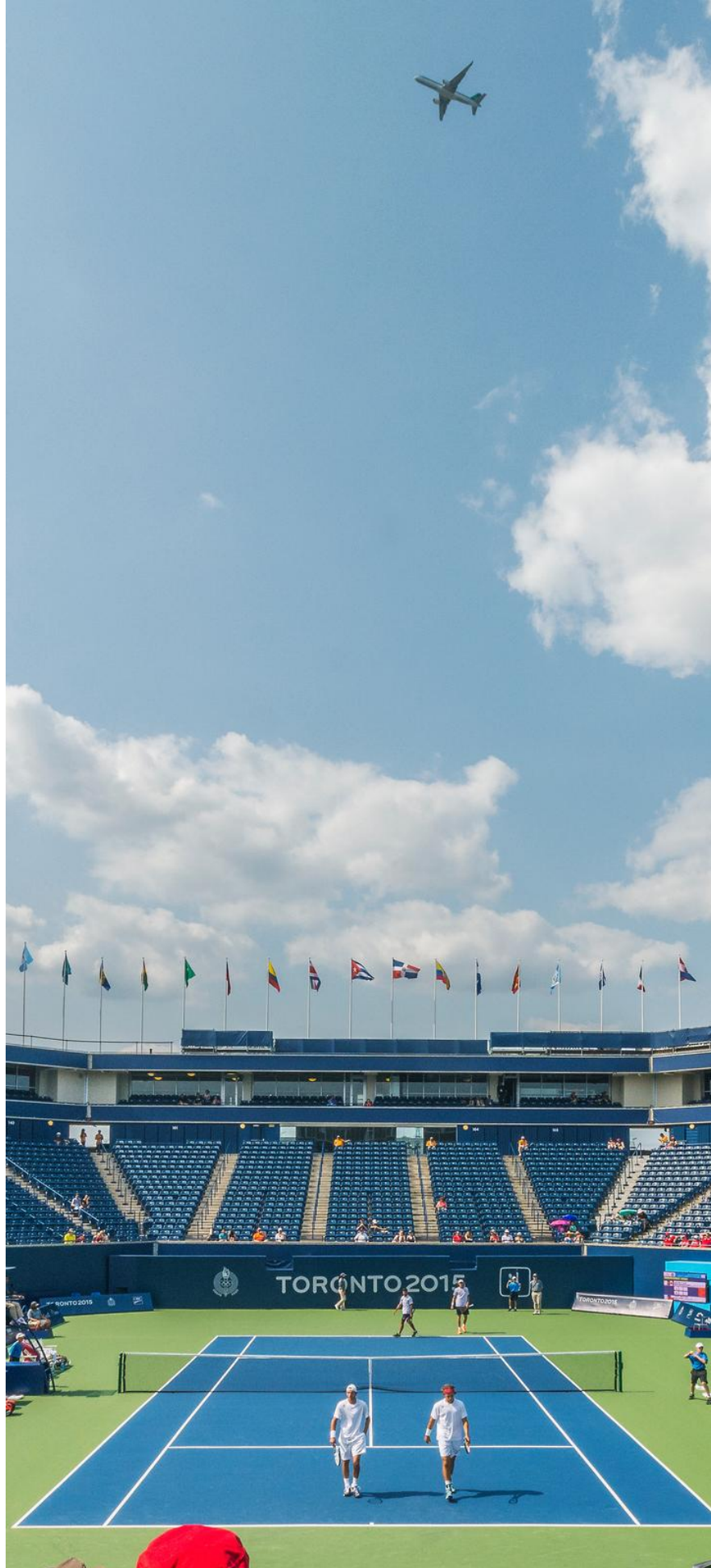
Results – Project ID. 101181048

National Institute of Physical Education of Catalonia (INEFC)
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Introduction

Sporting events can generate significant environmental pressures, social changes, and economic effects, with studies highlighting that negative impacts often outweigh positive ones if sustainability is not prioritized (Al-Muhannadi et al., 2024; Gogishvili and Müller, 2025).

- **Growing relevance of sustainability in sport:** The organization of sporting events increasingly faces the need to integrate sustainable practices to reduce environmental, social, and economic impacts (Rajagopal et al., 2025; Konstantopoulos & Manoli, 2023; McCullough et al., 2020).
- **Challenges in implementation:** Many sport organizations lack clear tools and protocols to guide the sustainable planning and management of their events (Gonçalves et al., 2025; Kim and Grix 2021).
- **Need for standardization and institutional support:** The absence of common methodologies and training support limits the transition towards more sustainable sport (Hudáková and Varmus 2025; Guidotti et al., 2023).



The Project

Green Games is an Erasmus+ Sport Project that focuses on promoting sustainability, learning and mobility of sport staff, and cooperation, quality, inclusion and innovation for sport institutions and policies.

Through best practice identification and sharing, and the creation of a Green Games Protocol, it intends to contribute to the green transformation of sport by providing effective tools for organisations to increase the sustainability of their events.



General Objective

To raise awareness on the importance of sustainability promotion as well as sustainable strategies and policies in sport events, contributing to the green transformation of the sport sector.





Work Packages

WP1: Project Management and coordination

WP2: Research and Mapping of good sustainable practices at sporting events in Europe

WP3: Definition of a Protocol for Organizing Green Sport Events

WP4: Creation of a Green Sport Event Network web-app

WP5: Impact and Dissemination





Objective WP2

This research aims to **obtain an accurate picture of the level of implementation/use of sustainability strategies** in European sport events and collect good practices.



Methods to achieve the objective

Scoping review

to identify theoretical advances in the field of sustainability in sporting events (scientific literature).

Review of grey literature

to detect practices advances in the field through the analysis of reports, policies, and documents not published in the formal academic literature.

Semi-structured interviews with event organizers

to explore in depth the practical experiences and results obtained in the adoption of sustainable practices.

Interviews with sustainability managers at different levels

to understand how these practices are implemented in varied contexts

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Scoping Review



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Methodology

1

Database

Two databases were selected for the search of scientific articles:

Web of Science and Scopus.



2

Criteria

Search in Topic (**title, keywords, abstract**).

Based on the previous systematic review "Sport Events and Sustainability: A Systematic Review (1964–2020)", it was decided to focus the **current search on the period from 2020 to 2024.**



Sport Events and Sustainability: A Systematic Review (1964-2020)

Maïra Ulloa-Hernández¹, Estela Fariás-Torbidón¹ & Jordi Seguí-Urbaneja¹

¹National Institute of Physical Education of Catalonia (INEFC) (Spain).

Cite this article
Ulloa-Hernández, M., Fariás-Torbidón, E. & Seguí-Urbaneja, J. (2023). Sporting events and sustainability. A systematic Review (1964-2020). *Apunts Educación Física y Deportes*, 153, 101-113. <https://doi.org/10.5672/apunts.2014-0983.es.2023/3.153.09>





Methodology

3 String

("Sport events" AND ("Sustainable" OR "Sustainability" OR "Environmental" OR "Social" OR "Economic")).

Results:

Web of Science: 270 - Scopus: 706 =Total: 976 articles

(Without duplicates: 768 articles)





Methodology

4

Screening Process 1

Articles were reviewed in Rayyan to determine inclusion or exclusion based on the established criteria, which required that they refer to sport events and address at least one area of sustainability (environmental, social, or economic), reducing the final selection to **260 articles**.



5

Screening Process 2

From the selected articles, a full-text analysis was conducted in Excel to identify and compile all relevant variables into a database. After this in-depth review, the final number of events included in the study was reduced to **251 articles**.





Results





Publication

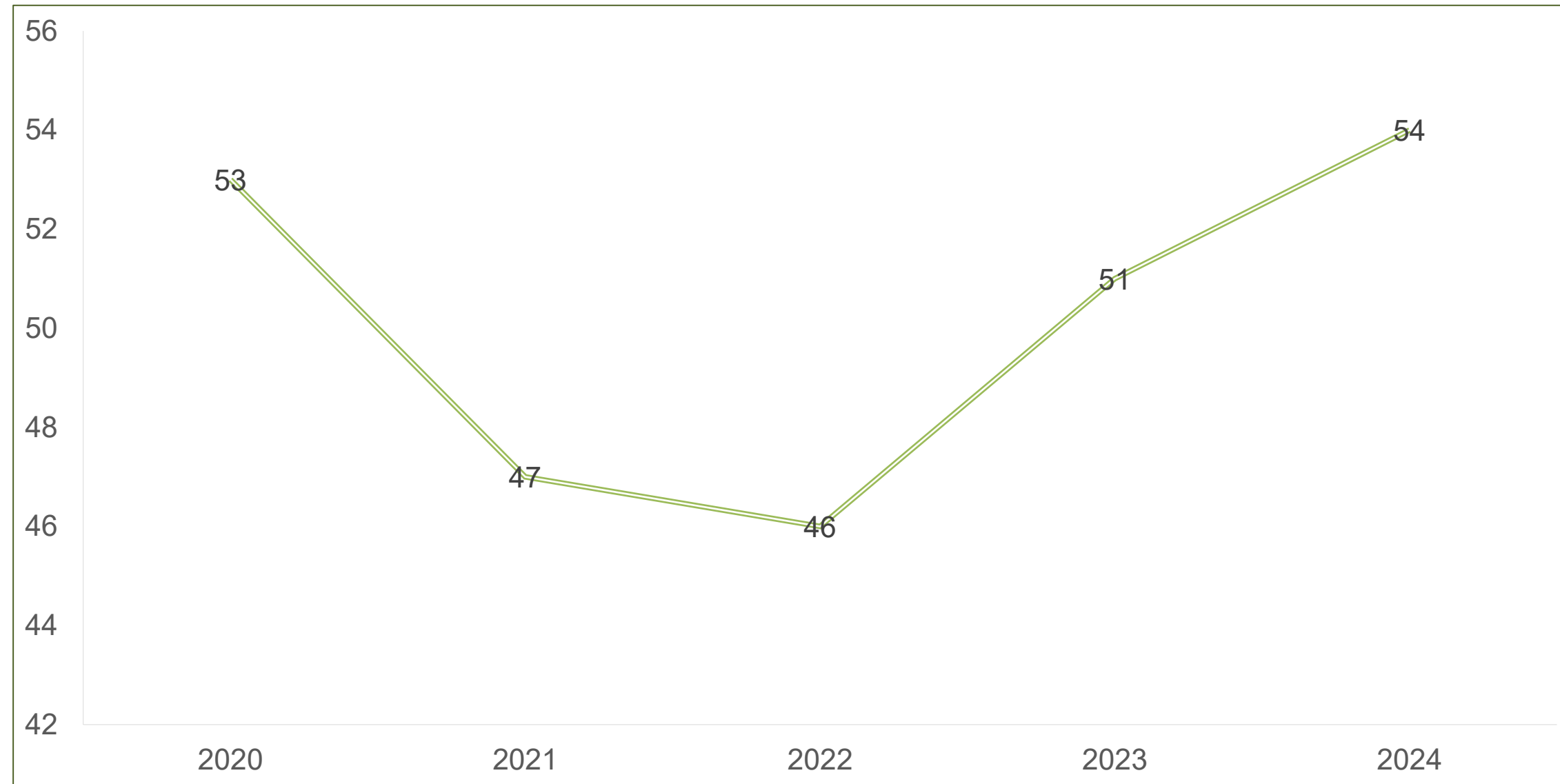
Name of the journals



From a total of 251 articles, **Sustainability** (11.2%) and **Event Management** (8.4%) were the leading journals publishing on this topic.



Publication Evolution last 5 years



From a total of 251 articles, publication output **decreased from 2020 to 2022, then rose again in 2023 and 2024**, reaching 54 articles in the last year.

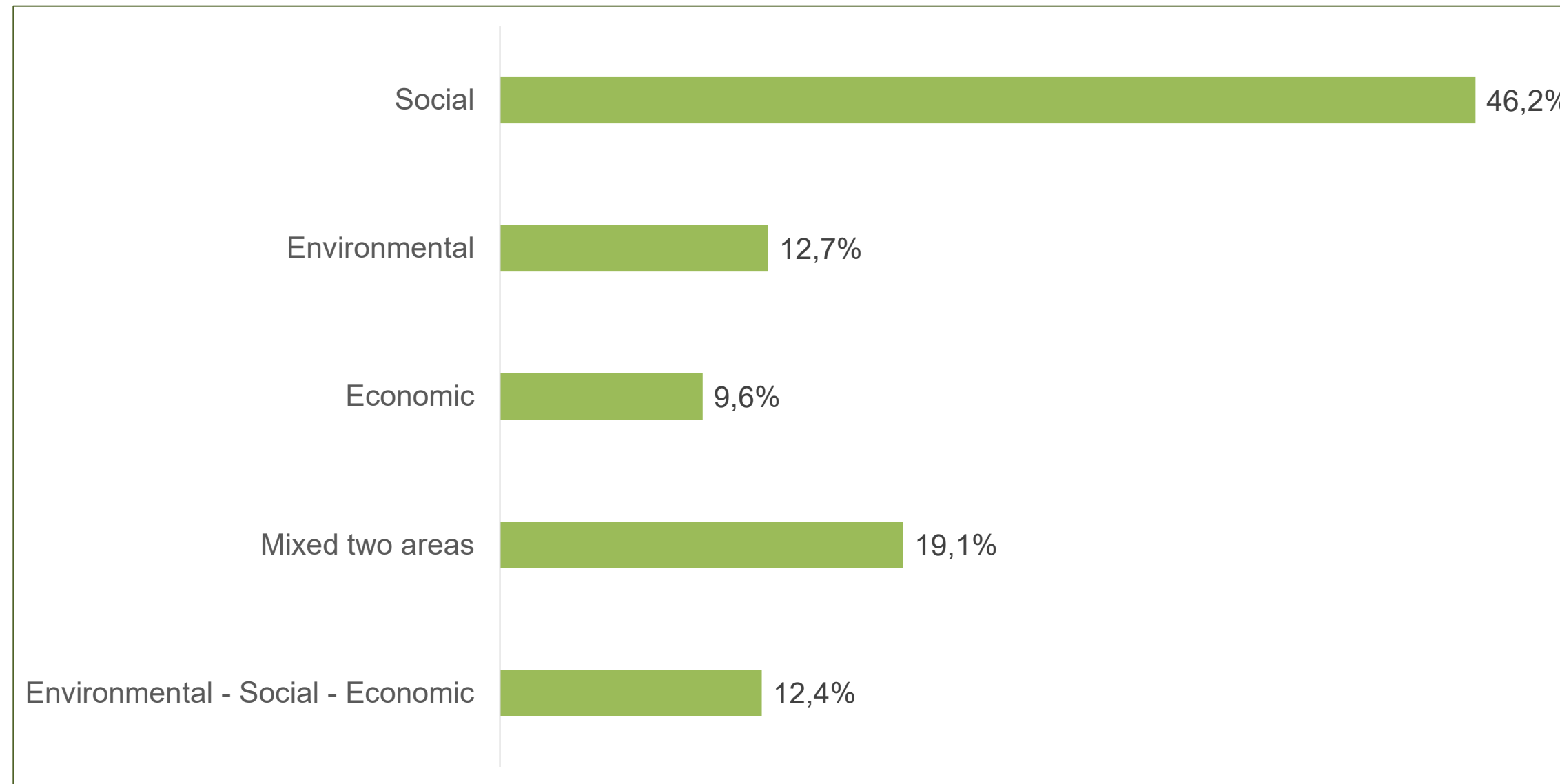


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Publication

Sustainability areas in articles



From a total of 251 articles, **most focused on the social dimension of sustainability** (46.2%), followed by mixed approaches (19.1%).

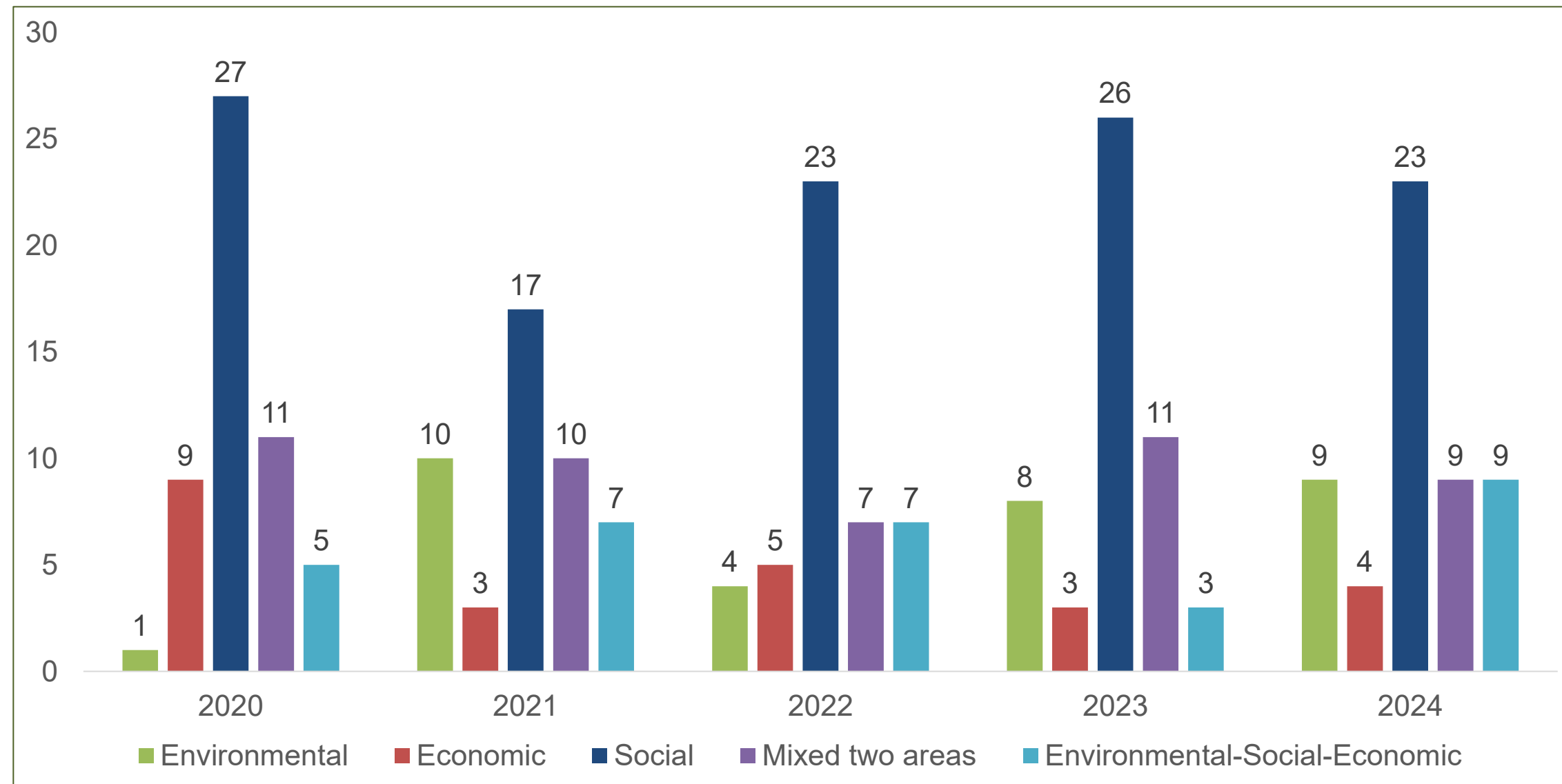


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Publication

Sustainability areas and year of publication

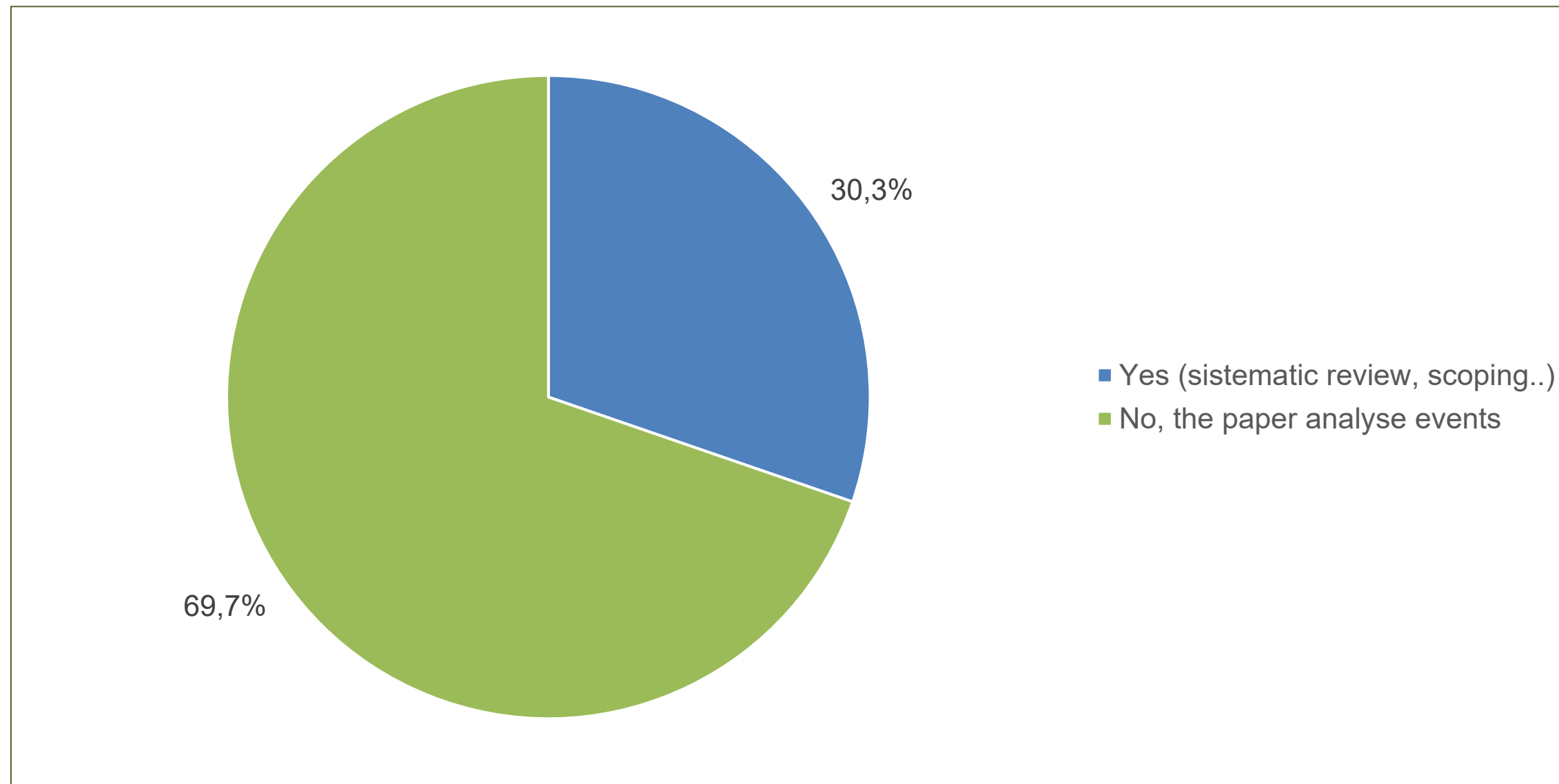


From a total of 251 articles, the number of publications each year was **highest for the social dimension**, while environmental and economic aspects had fewer articles.



Sport Event Characteristic

Tipology of research approaches



From a total of 251 articles, **69.7% (n=175) analyzed specific sport events**, while 30.3% were review studies (systematic, scoping, etc.).

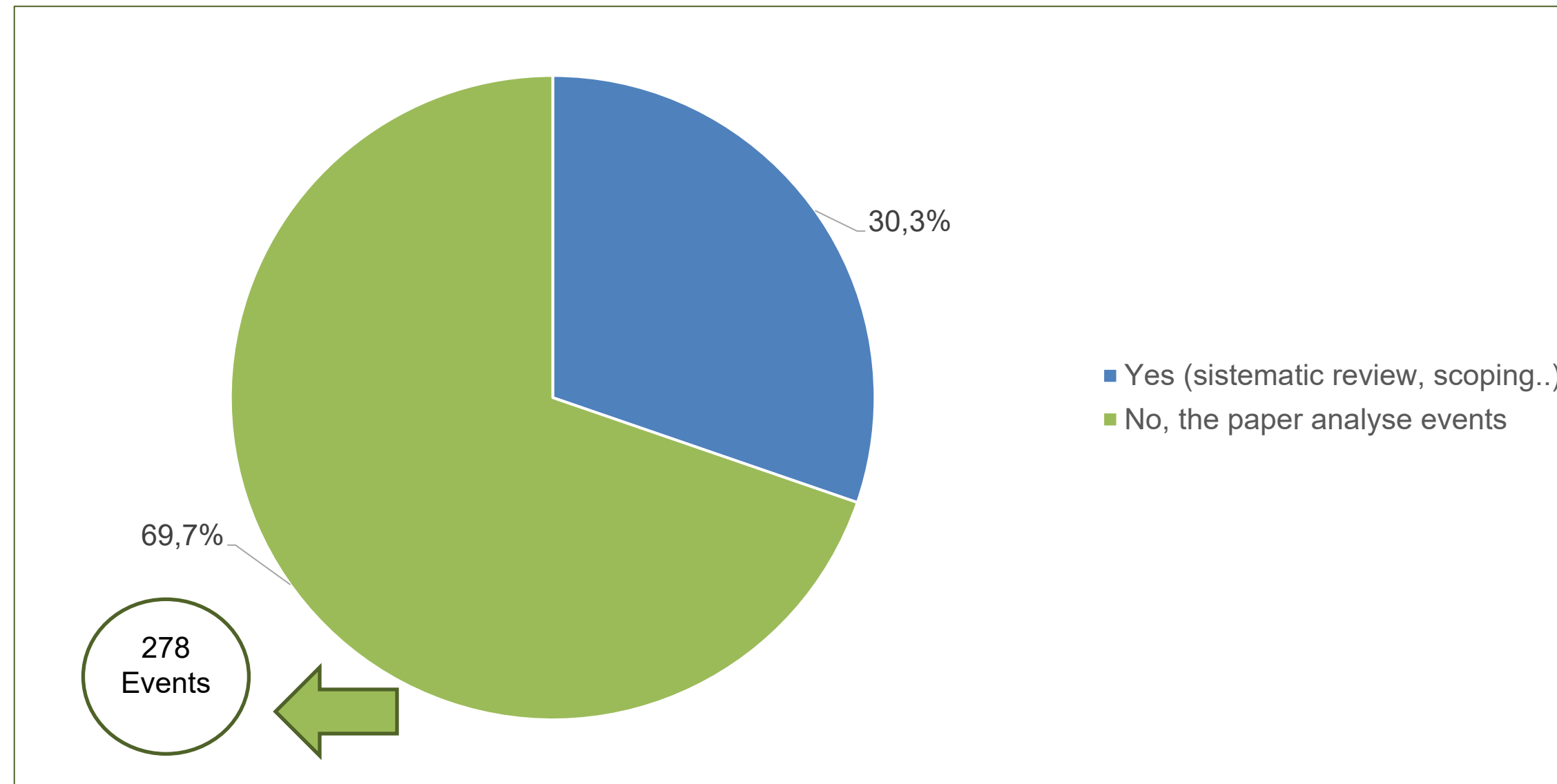


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Sport Event Characteristic

Number of events analyzed

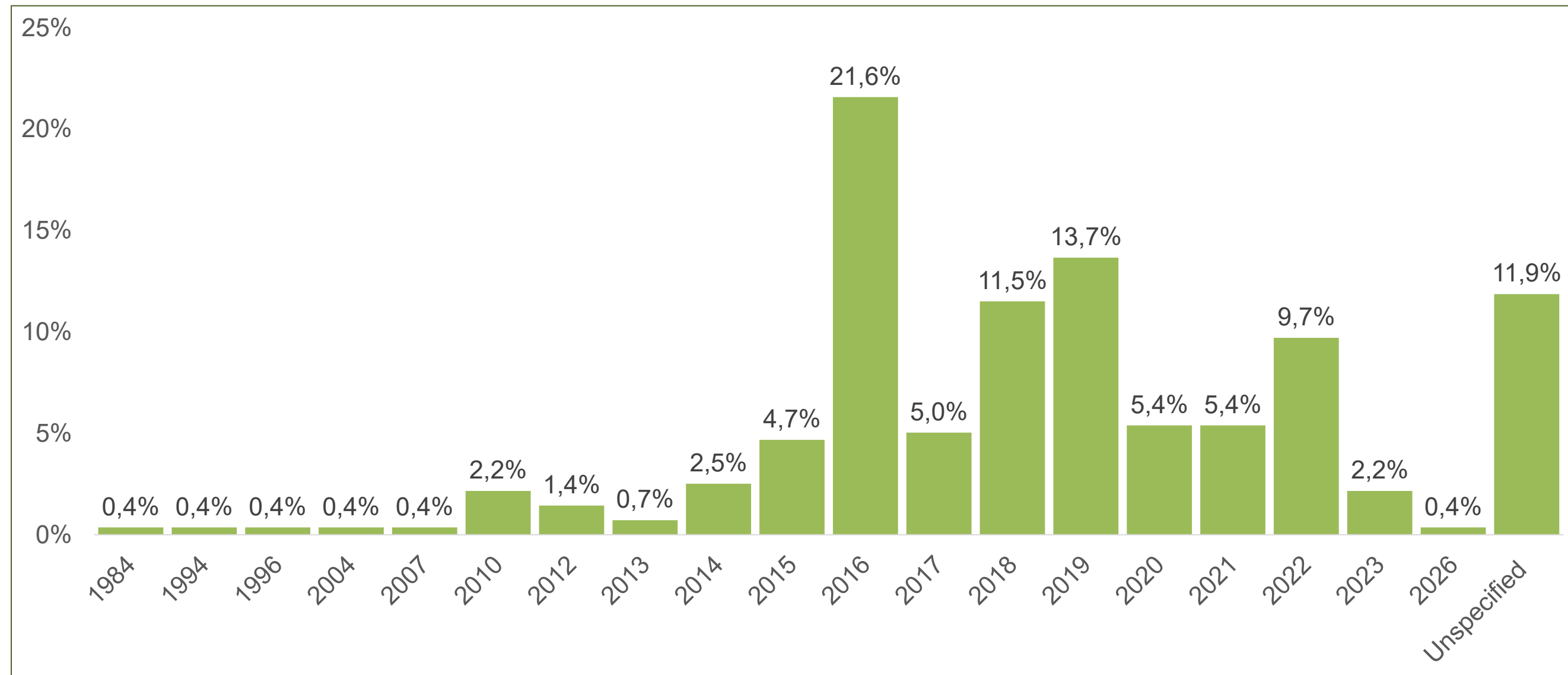


From a total of 251 articles, 69.7% (n^o= 175) analyzed specific sport events, from which **278 events were identified.**



Sport Event Characteristic

Years of events analyzed



From the 278 identified events, most were held between 2016 and 2019, with 2016 having the highest share (21.6%).

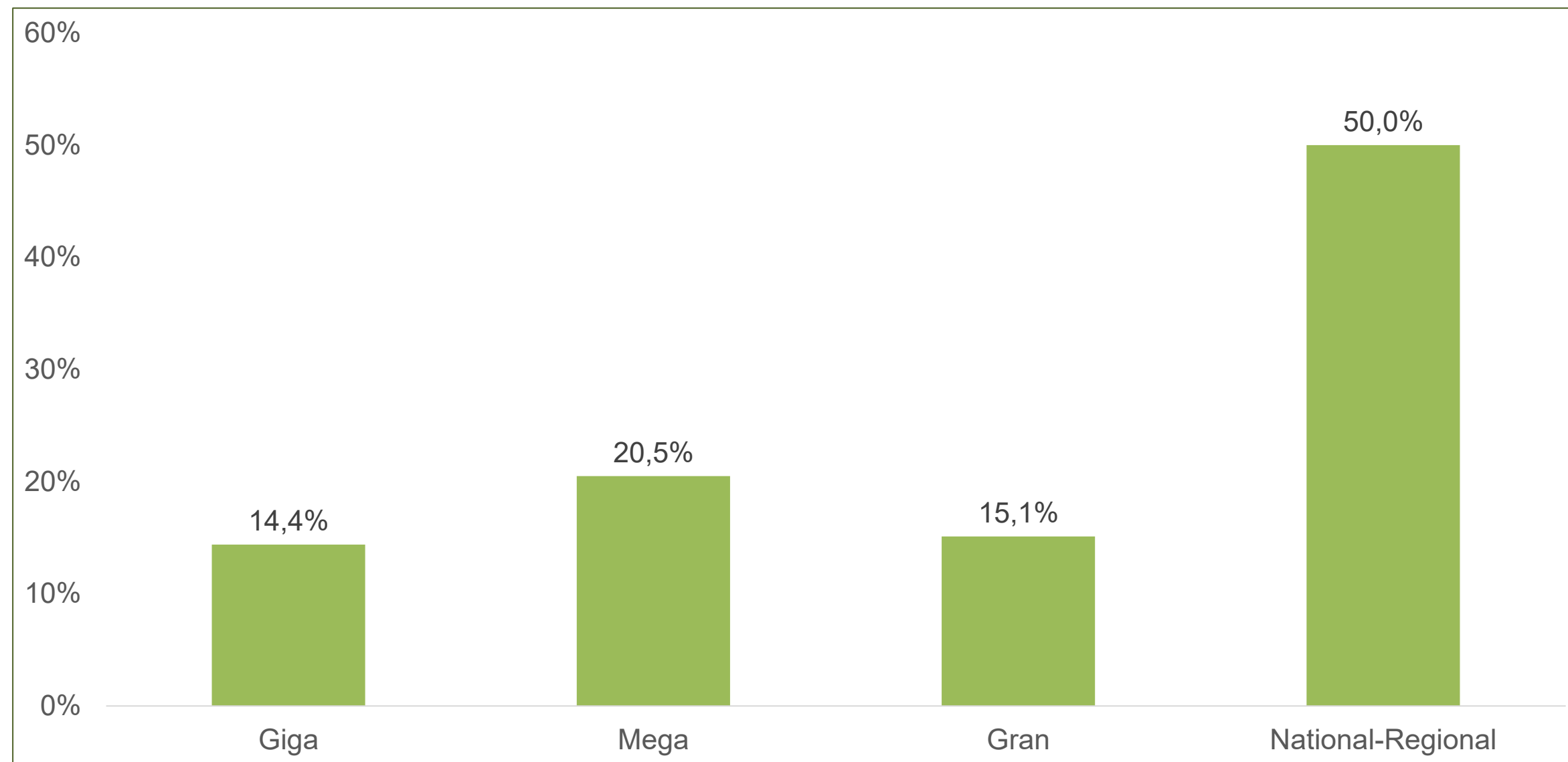


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Sport Event Characteristic

Size of events



From the 278 identified events, **50% were classified as National-Regional**, 20.5% as Mega, 15.1% as Gran, and 14.4% as Giga events, following Müller's typology (2015) of event scale.

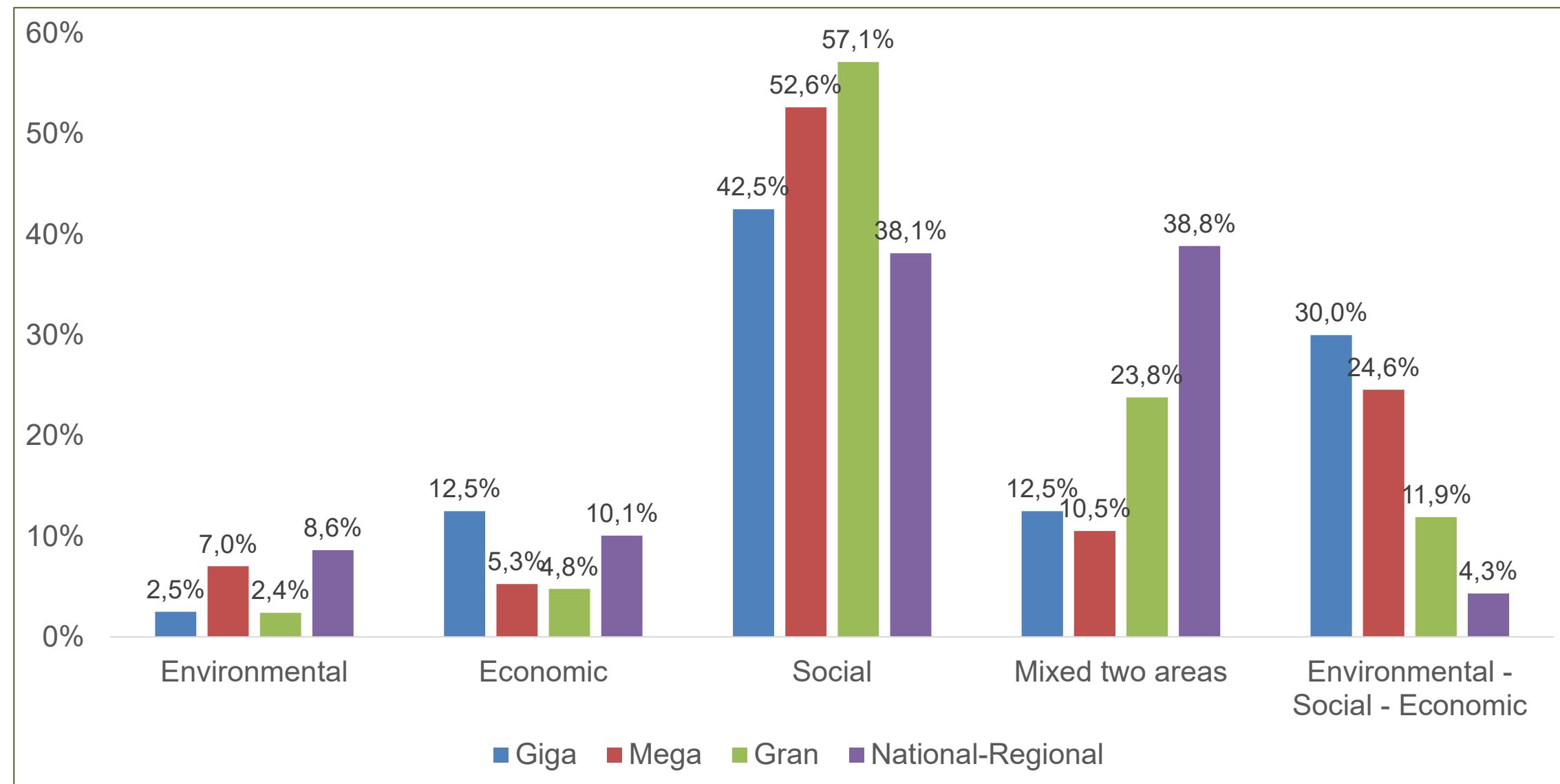


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Sport Event Characteristic

Size of events and areas of sustainability

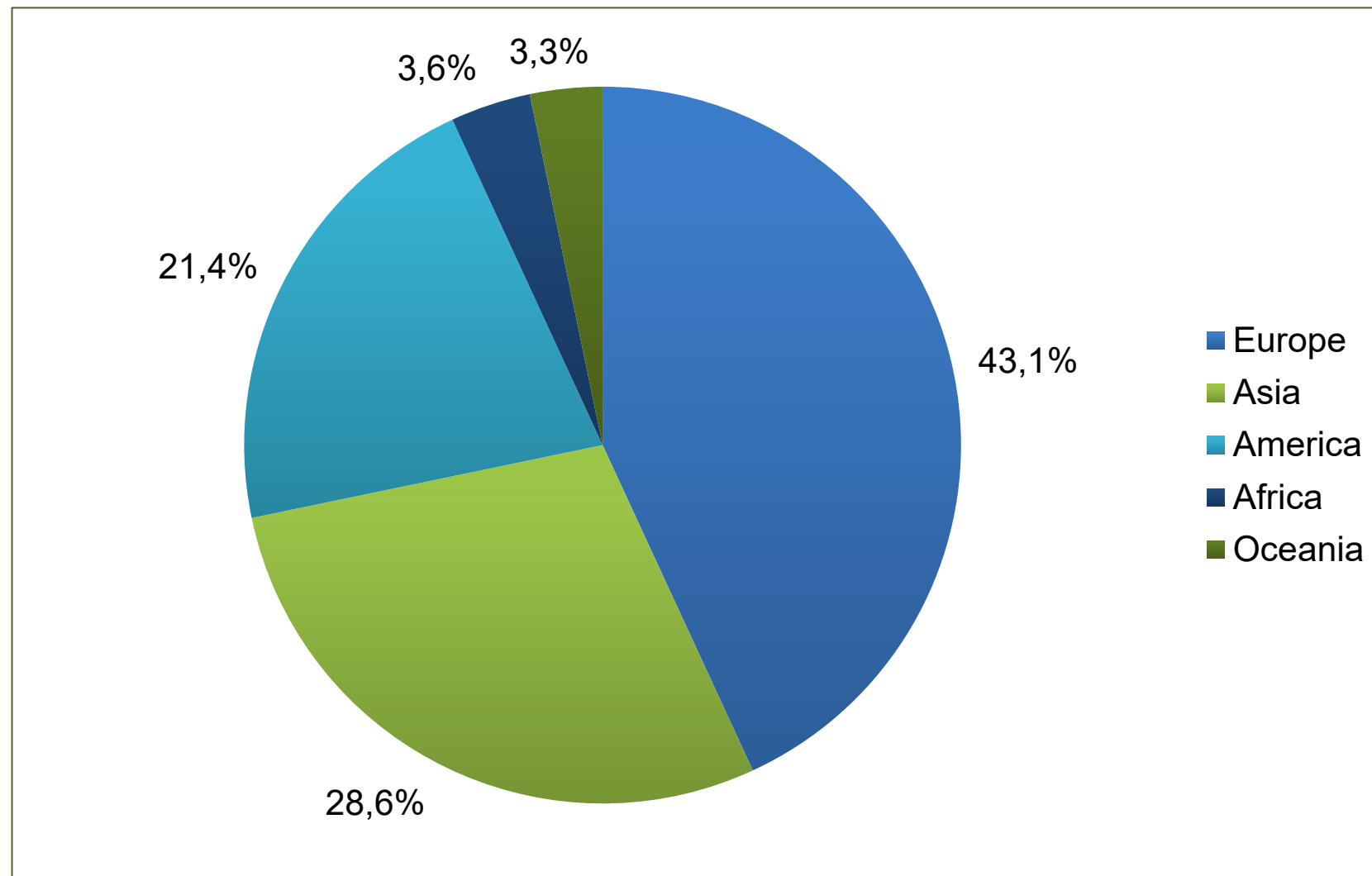


From the 278 identified events, **the social dimension dominated across all event types** according to Müller's (2015) typology.



Sport Event Characteristic

Continent and country



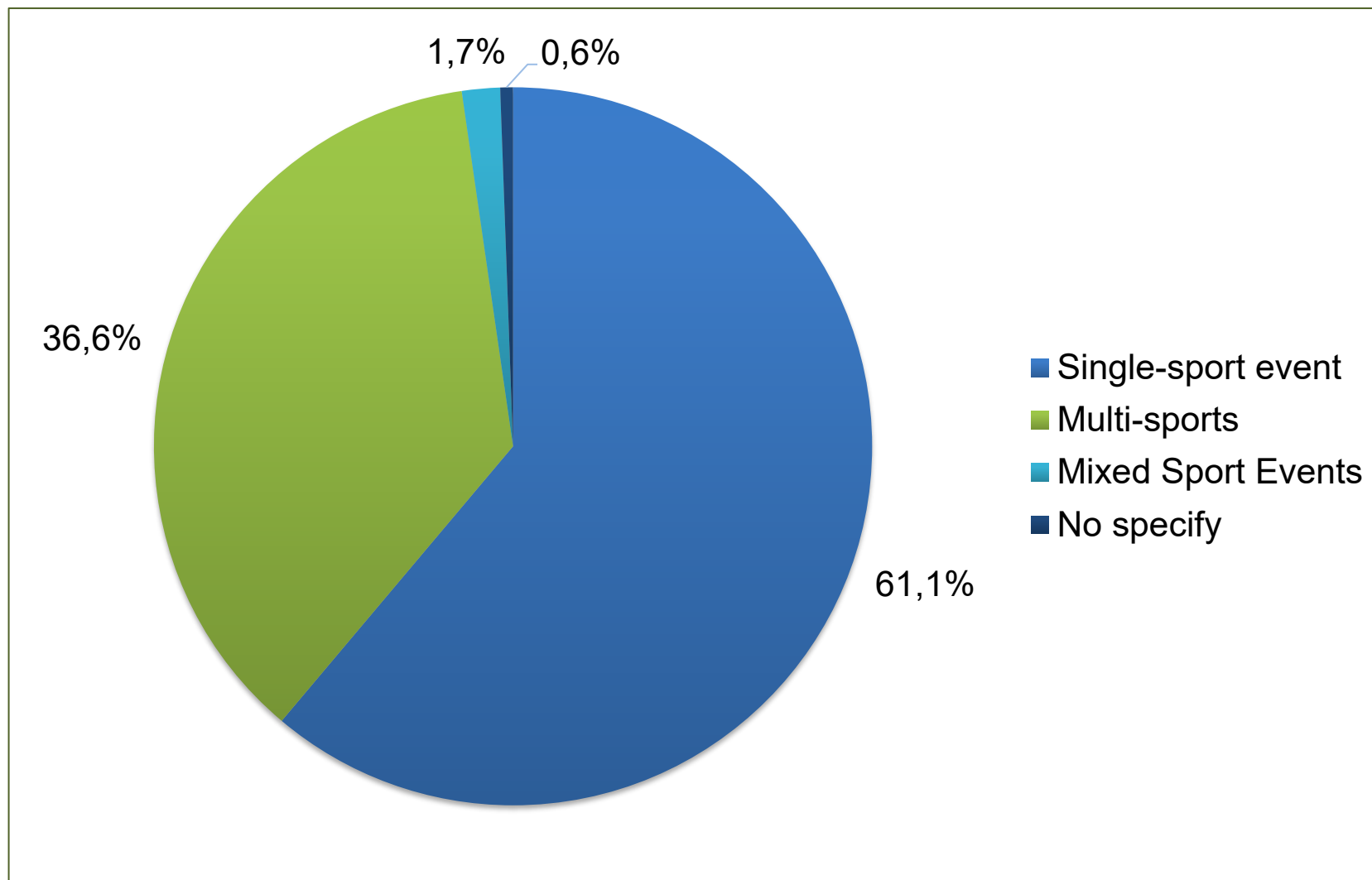
Ranking	Country	nº	Percentage
1	Japan	37	13,3%
2	Spain	33	11,9%
3	Brazil	19	6,8%
4	China	17	6,1%
5	Croatia	17	6,1%
6	United States	17	6,1%
7	Canada	15	5,4%
8	Qatar	10	3,6%
9	Belgium	9	3,2%
10	Portugal	7	2,5%

From the 278 identified events, most were hosted in **Europe**, followed by **Asia**, with **Japan (13.3%)** and **Spain (11.9%)** leading the ranking.



Sport Event Characteristic

Event tipology



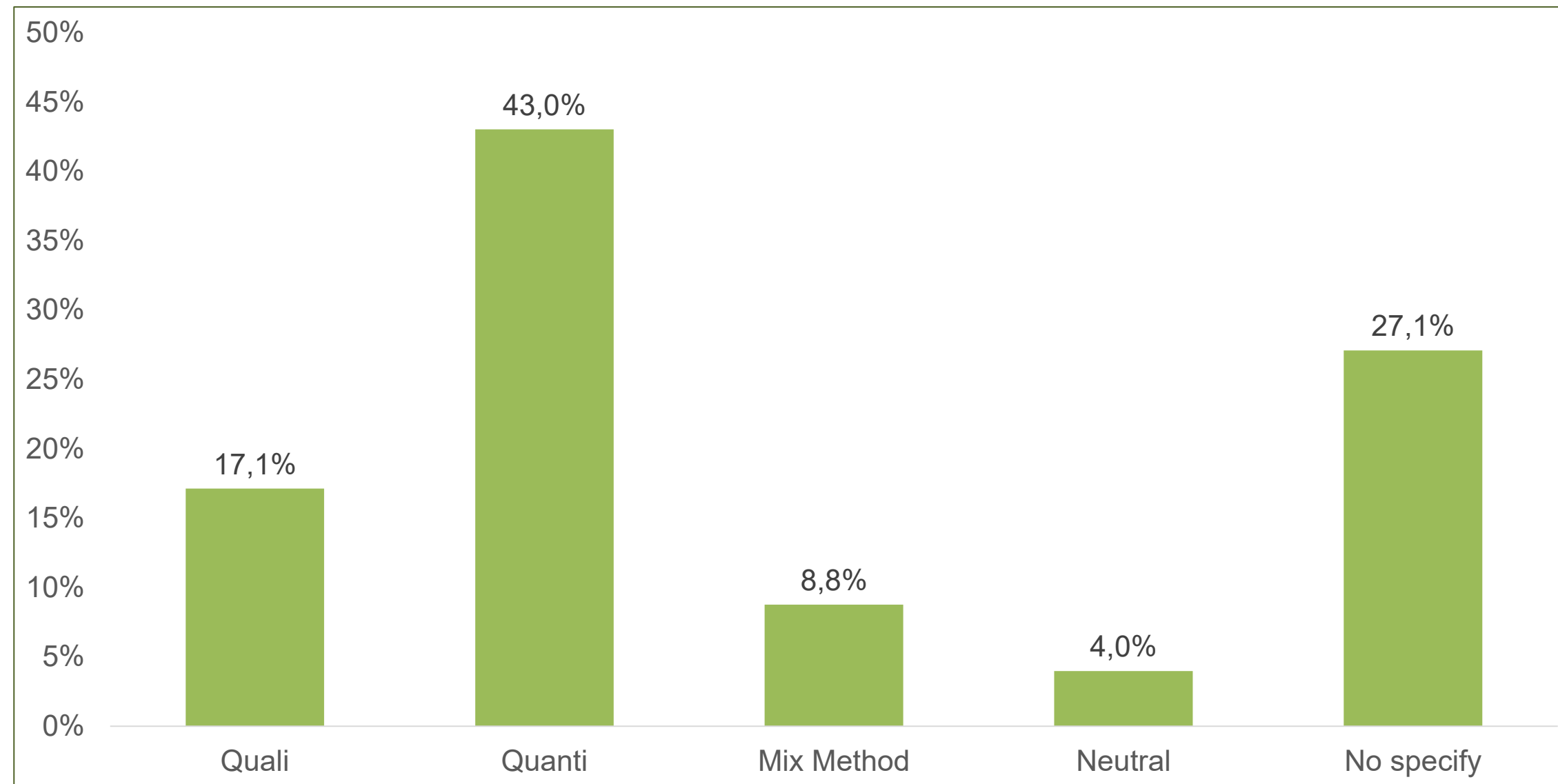
Ranking Single Sports Events	n°	Percentage
Athletics	26	24,3%
Football	17	15,9%
Cycling	12	11,2%
Motoring	5	4,7%
Trail running	5	4,7%

From 175 articles analyzing events, **61.1% focused on a single event (lead by Athletics)**. "Multi-sport" refers to events with two or more sports modalities, while "Mixed sports" refers to articles analyzing different events from various modalities separately, which may include both single-sport and multi-sport events.



Study Methodology

Research approach



From 251 articles analyzed, **most (43%) used a quantitative approach**, followed by qualitative (17.1%) and mixed methods (8.8%).

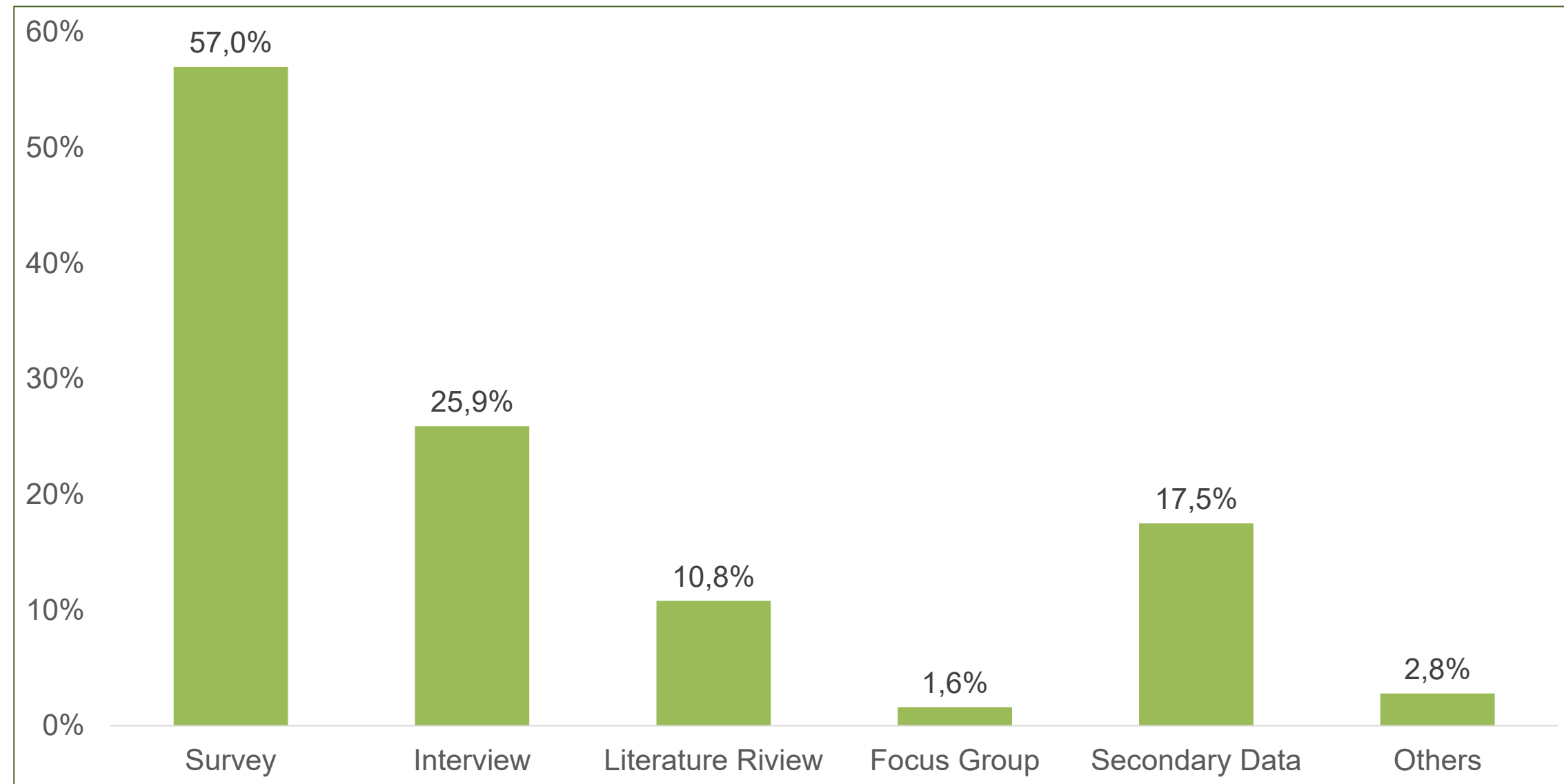


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Study Methodology

Methodologies



From **290 methodologies used across 251 articles**, surveys were the most frequent (**57%**), followed by interviews (25.9%) and secondary data (17.5%).

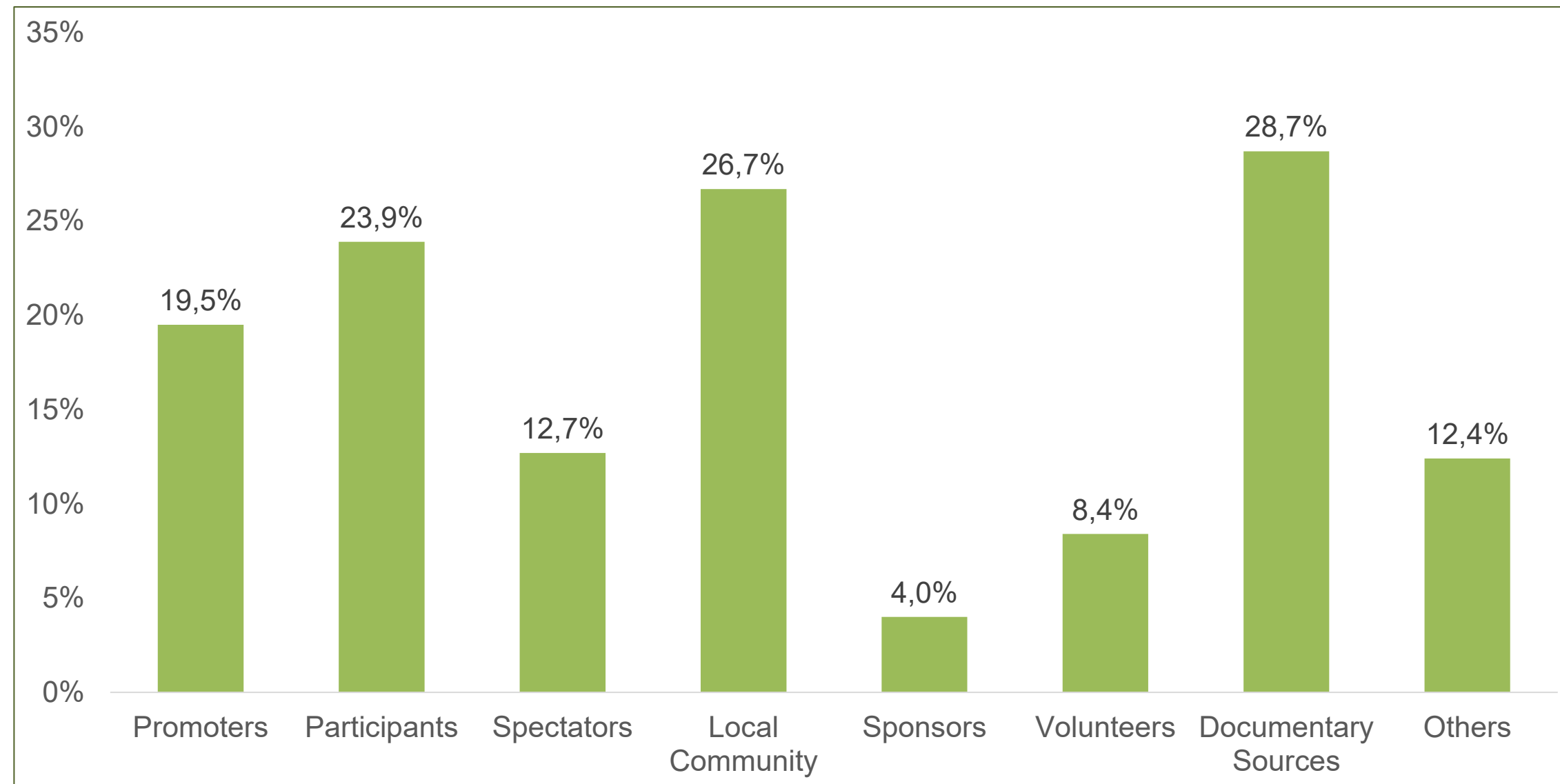


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Study Methodology

Object of study



From **342 study objects identified in 251 articles, documentary sources (28.7%) and the local community (26.7%)** were the most frequently analyzed.

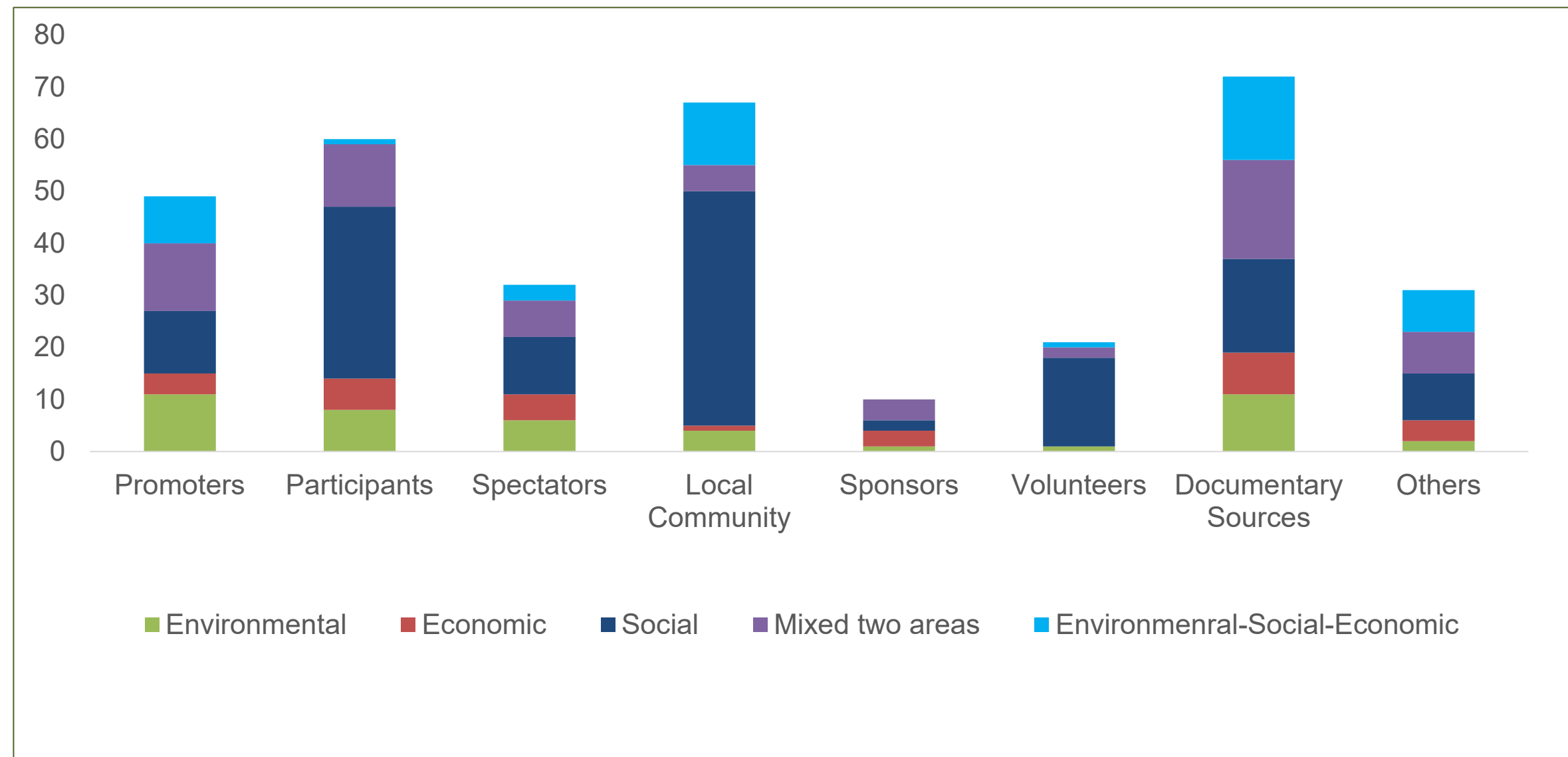


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Study Methodology

Object of study and areas of sustainability



From 342 study objects identified in 251 articles, **most analyses focused on the social dimension** across all groups, **particularly in the local community and documentary sources.**



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**Green
Games**

**Making
sport events
sustainable for
a greener future**