

**Identification of Key Factors of Organisational Leadership for the
Development and Delivery of Environmental Sustainability Practices
in Australian Sport**

Xu He

**Thesis submitted for the fulfilment of the requirements for the
degree of Doctor of Philosophy**

Victoria University, Australia

Institute for Health and Sport

September 2025

Abstract

Sport has a critical role to play in the health of people and the planet. While the International Olympic Committee is leading the promotion of environmental sustainability (ES), climate change and failure to mitigate carbon emissions threaten the future of sport. This research investigated how organisational leadership influences the development and implementation of ES practices in Australian sport organisations. Guided by a constructivist-interpretivist paradigm, this qualitative research adopted a two-stage case study methodology. Study One consisted of a preliminary document analysis of publicly available policies, strategies, and reports from Australian national sport organisations (NSOs) to understand the extent to which Australian sport engages in ES from a strategic and organisational perspective. Study Two expanded on these findings through semi-structured interviews with 16 senior managers across 14 Australian sport organisations, along with additional internal document analysis and field notes. Reflexive thematic analysis was used to identify key themes across all data sources. The research drew on a conceptual framework that integrated the responsible innovation framework (Scherer & Voegtlin, 2020), dynamic capabilities framework (Harris et al., 2021), and Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1994) to guide data collection, analysis, and interpretation. The Study One findings revealed that only a small proportion of Australian NSOs publicly reported ES strategies or initiatives, and where documents existed, they often lacked operational detail or accountability structures. Five major ES themes were identified in these documents: individual action or advocacy for ES; (whole of sport actions and initiatives for ES; ES policy and strategy development; societal and cultural views about ES; and environmentally sustainable infrastructure and facility operations. These themes were supported by a total of 18 sub-themes, reflecting the considerable variation in how organisations defined and articulated their ES responsibilities. Study Two provided deeper insights into the organisational conditions, leadership drivers, and structural barriers that influenced ES development and implementation. Six central themes emerged: the bidirectional relationship between sport and the environment; organisational actions and planning for ES; drivers and motivators for ES practices; stakeholder collaboration and engagement; challenges in implementing ES practices; and risk assessment and reporting. The findings revealed that while

some sport organisations are advancing proactive ES strategies, which are often driven by passionate individuals or external events, many lack the internal capacity, governance integration, or long-term planning required to institutionalise environmental sustainability. Organisational leadership plays a critical role in determining ES priorities, facilitating cross-department collaboration, and aligning actions with national and international policy agendas. However, organisations continue to face persistent cultural, capacity, and resource constraints when it comes to implementing ES practices. This research advances existing knowledge by clarifying how organisational leadership mechanisms or factors intersect with environmental challenges and opportunities in the sport sector. It offers practical guidance for sport organisations who wish to embed ES into their strategic operations and leadership development through their governance, education, and stakeholder engagement. Moreover, this research will raise awareness among the sport community at large, with the intention of encouraging more sport organisations to participate in sustainable development practices as part of the future-proofing of sport.

Student Declaration

I, Xu He, declare that the PhD thesis entitled Identification of Key Factors of Organisational Leadership for the Development and Delivery of Environmental Sustainability Practices in Australian Sport is no more than 80,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

This thesis has been edited for clarity of expression, punctuation and grammar using AI tool. This use complies with VU guidelines on use of editors in HDR theses and overall VU policy on use of AI in research.

I have conducted my research in alignment with the [Australian Code for the Responsible Conduct of Research](#) and [Victoria University's Higher Degree by Research Policy and Procedures](#).

Ethics Declaration

All research procedures reported in the thesis were approved by the Victoria University Human Research Ethics Committee (VUHREC). Approval number HRE23-043 provided on the 20th of March 2023.

Signature

Date: September 2025

Acknowledgements

First and foremost, I would like to express my deepest gratitude to my principal supervisor, Camilla. Your guidance, encouragement, and patience throughout my PhD journey have been invaluable. You have not only shaped my research but also helped me grow as an emerging independent researcher. I truly appreciate your support and care at every step of this journey.

I am also deeply grateful to my co-supervisors, Elisabeth and Catherine. While I have not yet met Elisabeth in person, our regular online conversations have been invaluable, and I look forward to the chance to collaborate in person. Catherine, thank you for your thoughtful advice, particularly in supporting me through the challenges of studying in a new cultural and academic environment. Your support has made a real difference whenever I needed guidance or perspective.

To the staff and colleagues at Victoria University, thank you for creating a friendly and welcoming environment. I am also grateful to the members of my PhD milestone panel for their constructive feedback and encouragement, which greatly improved this thesis.

I want to acknowledge and thank all the sport organisations that participated in this research. Thank you for your generosity in sharing your time, expertise, and stories, which made this study possible. Through this journey, I have been inspired by the inclusivity and openness of the Australian sport community.

Finally, to my family: thank you for your unwavering love and support, even from afar. Your encouragement gave me the confidence to pursue my studies in Australia, and I carry your care with me every day. Completing this PhD has been a deeply meaningful experience, not only academically but also personally. I am grateful for everyone who has been part of this journey.

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List of Abbreviations

UN	United Nations
ASC	Australian Sports Commission
CSR	Corporate Social Responsibility
CEO	Chief Executive Officer
ES	Environmental Sustainability
FIA	Fédération Internationale de l'Automobile
IOC	International Olympic Committee
KPI	Key Performance Indicator
NASSM	North American Society for Sport Management
NCAA	National Collegiate Athletic Association
NSO	National Sport Organisation
RTA	Reflexive Thematic Analysis
SMAANZ	Sport Management Association of Australia and New Zealand
SMEs	Small and Medium-sized Enterprises
SSOs	State Sport Organisations
SOP	Sense of Place
UNFCCC	United Nations Framework Convention on Climate Change
VUHREC	Victoria University Human Research Ethics Committee

Chapter 1 - Introduction

This study investigates what and how organisational leadership factors intersect with environmental challenges and opportunities in the sport sector. Despite the increasing expectations for sport to contribute to sustainability and climate action, there remains limited empirical analysis of how leadership within sport organisations enables or constrains ES practices. This lack of focused research highlights an important knowledge gap in understanding the role of organisational leadership in developing and implementing ES policies and practices in this context. The aim of this chapter is to introduce the background to the study, articulate the research problem, and present the research aim and questions. The chapter concludes with an outline of the structure of the thesis.

Background

Sport has a critical role to play in the health and wellbeing of people and the planet. While the United Nations (UN) and the International Olympic Committee (IOC) have provided frameworks and guidelines to support sport's efforts towards environmental sustainability (ES), climate change and failure to mitigate carbon emissions continues to threaten the future of sport. In the context of Australian Olympic sport, sustainability initiatives are frequently limited in number and scope, implemented in an ad hoc and uncoordinated fashion, and highly dependent on the efforts of individual actors rather than being embedded within formal strategic planning and governance mechanisms (Cury et al., 2023). These characteristics raise concerns about the systemic capacity of sport organisations to deliver on environmental responsibilities.

A lack of structural integration reflects broader tensions within sport management between commercial imperatives and environmental priorities. Many sport organisations operate within institutional logics that privilege economic growth, competitive performance, and media visibility, all of which may marginalise or displace long-term ES planning (McCullough & Bramley, 2025). Even where sustainability policies exist, they may be overlooked during operational decision-making processes in favour of short-term financial or reputational objectives. In addition, research

in sport ecology has often concentrated on individual attitudes and event-specific interventions, and insufficient attention has been paid to organisational structures, leadership practices, and systemic governance processes (Trendafilova & Ziakas, 2025). This focus has resulted in a theoretical and empirical gap in understanding of the internal mechanisms that enable or constrain ES development and implementation in sport organisations.

Emerging evidence suggests that organisational leadership plays a central role in how and whether ES efforts are enacted. In Australia's Olympic sport system, recent findings show that environmental initiatives are often driven or hindered by individual actors in leadership and intermediary positions (Cury et al., 2024). Of these actors, the roles of custodians, coordinators, and amplifiers are particularly relevant to leadership, as they capture how individuals in decision-making and intermediary positions legitimise and operationalise ES within organisational practices (Cury et al., 2024). Similarly, in the context of public sport venues, progress toward ES has often depended on the presence of a motivated internal actor. While this individual actor, described as a "motivated doer", may not hold a formal leadership title, they may possess the power, legitimacy, and urgency required to initiate and sustain environmental practices (Ross et al., 2024). These findings indicate that leadership should not be regarded merely as a background contextual influence, but rather as an essential organisational condition for the realisation of environmental outcomes in sport.

Insights from other sectors further strength the importance of leadership in achieving ES outcomes. In the United Kingdom's construction industry, research has demonstrated that organisational leadership contributes to sustainability delivery by aligning strategic vision with internal processes, facilitating collaboration, and embedding sustainability into organisational culture (Opoku et al., 2015). In Australian local government contexts, leadership commitment has been identified as a key enabler of adaptation to climate change, and especially for addressing governance ambiguities, navigating resource constraints, and shaping leaders' mindsets (Rogers et al., 2024). These findings suggest that ES policies are most likely to be realised when they are supported by engaged leadership and integrated into the routine structures that underpin organisational operations.

While such leadership dynamics have been examined in business and public administration settings, there remains limited empirical analysis as to what and how organisational leadership factors intersect with environmental challenges and opportunities in the sport sector. Organisational behaviour research offers additional support for the proposition that leadership is paramount to fostering sustainability-related changes within an organisation. For example, transformational leadership involves practices such as inspiring others, encouraging critical thinking, and supporting individual needs. These behaviours have been linked to stronger employee commitment to change and more innovative work practices (Jun & Lee, 2023). Furthermore, this link is strengthened when the organisation provides a supportive climate for creativity. These insights are particularly relevant to ES strategies because they often require behavioural innovation and cross-department coordination to develop and implement. While such leadership dynamics have been examined in business and public administration settings, there remains limited empirical analysis as to what and how organisational leadership factors intersect with environmental challenges and opportunities in the sport sector. This absence highlights the importance of further research into how organisational leadership in Australian sport organisations influences the development and implementation of ES practices. This identified gap forms the basis of the study's rationale and provides a clear argument for investigating the role of organisational leadership in advancing ES for sport.

Research Aim and Research Questions

To achieve the overarching aim of this research, which was to investigate how organisational leadership influences the development and implementation of ES practices in Australian sport organisations, the study was conducted in two phases. Accordingly, the research questions were grouped into two sets, reflecting the document analysis (Study One) and the case study (Study Two). Study One focused on analysing how ES is represented in the strategic and policy documents of Australian NSOs, and addressed the first two questions. Study Two built upon the findings of Study One by exploring how organisational leadership and key actors influence the development and implementation of ES practices in practice. This second phase addressed four

further questions. The following questions were posted:

1. What publicly available strategic plans and policies documents exist in Australian NSOs related to ES?
2. How do NSOs define ES in their strategic plans and policies?
3. What organisational leadership factors influence ES policy in sport?
4. What is the mechanism of influence of the major organisational leadership factors to shape ES policy?
5. What are the facilitators and barriers to developing and implementing ES policy in Australian sport?
6. What role does organisational leadership play in removing or creating barriers to the development and implementation of ES policy in sport organisations?

To answer the research questions and achieve the research aim, a two-stage approach was adopted. Study One (document analysis) and Study Two (case study) were designed to be complementary, thereby ensuring that insights from multiple sources provided a comprehensive understanding of the research topic. This approach was well-suited for this research because the intent was to understand the social behaviours and processes involved in ES policy development and implementation. The qualitative design used in this research included conducting semi-structured interviews with a purposive sample of sport organisations, analysing organisational documents, and incorporating researcher field notes. The case study method allowed for a comprehensive exploration of each sport organisation's unique context and the specific leadership factors influencing their ES plans and initiatives. This methodology ensured that the research captured contextual insights necessary to understand the complex nature of ES policy development and implementation in Australian sport organisations.

Study One consisted of a preliminary document analysis of publicly available policies, strategies, and reports from Australian NSOs, in order to understand the scope and extent of environmental policies and practices those NSOs have adopted. The purpose of this work was to establish a foundation of understanding in relation to the current state of ES practices and policies in Australian sport organisations. Study Two further investigated and expanded the findings from

Study One, using a qualitative case study approach, and integrating data insights from semi-structured interviews, additional document analysis, and field notes. Semi-structured interviews were conducted with senior managers across different Australian sport organisations responsible for ES policy and practices, in order to gain an understanding of the organisational context and views of individuals about the key characteristics, attributes, processes, and procedures associated with developing and implementing ES policies and practices in Australian sport organisations. Document analysis extended beyond the publicly available policies identified in Study One, and included internal organisational reports, ES action plans, and other related ES information that provided additional evidence of the organisational ES policy, plans and/or practices shared by interview participants. In addition to interviews and document analysis, researcher field notes were used as a supplemental data source. These notes captured observations on participant behaviour, non-verbal cues, and organisational settings, as well as informal interactions that provided additional contextual understanding of the individuals responsible for developing and/or implementing ES practices.

Significance of the Research

Sport organisations are under increasing pressure to address the impact of climate change and environmental sustainability. Given the bidirectional relationship between sport and environment, the challenge is much more than just social responsibility; it is a challenge that sits at the heart of future-proofing sport for generations to come. This research advances existing knowledge by determining what, and how, organisational leadership factors intersect with environmental challenges and opportunities in the sport sector. By focusing on the intersection of leadership, strategy, and ES, this research addresses a critical gap in the literature and responds to calls for more applied, context-specific research in sport management and environmental governance.

Theoretically, this research contributes to the field by integrating three key frameworks – responsible innovation (Scherer & Voegtlin, 2020); dynamic capabilities (Harris et al., 2021); and ecological systems theory (Bronfenbrenner, 1994) – to develop a multi-layered conceptual model. This model facilitates a deeper understanding of how organisational leadership influences, and is

influenced by, organisational capacity, stakeholder relationships, and broader environmental systems. This integrated approach offers a new lens through which to understand ES development and implementation in sport organisations. Practically, this research offers guidance for sport organisations to embed ES into their strategic operations and leadership development via governance, education, and stakeholder engagement. Moreover, it is intended that this research enhances awareness among the sporting community at large in Australia, with the hope of encouraging more sporting Australian organisations to participate in sustainable development practices as part of their work to protect the places where sport is played and enjoyed.

The scope of this study was however limited in a number of ways. First, the empirical focus was on Australian NSOs, and the findings may not be directly transferable to other levels of the sport system or to sport organisations in different national contexts. Second, the study draws on a purposive sample of 14 NSOs and senior managers within those organisations, rather than including frontline staff or broader stakeholder groups. Third, the research design is qualitative and case-based, relying on interviews and document analysis rather than quantitative survey data. These methodological choices are appropriate for the aims of this exploratory study, but may limit the types of generalisations that can be made about the wider sport sector.

Thesis Structure

This thesis consists of five chapters. Following this introductory chapter, Chapter 2 presents a literature review. Chapter 2 explores the current state of ES in sport organisations and examines four intersecting bodies of knowledge: ES in sport, organisational leadership, relevant theoretical frameworks for explaining the association between leadership and sustainability, and a synthesis of these perspectives in developing a conceptual framework to guide this research.

Chapter 3 outlines the study design and methodology employed in this research. The chapter discusses the philosophical underpinnings of the research, the rationale for adopting a qualitative case study design, and the two-stage approach used to collect and analyse data, including document analysis, semi-structured interviews, and field notes.

Chapter 4 presents the results of the two empirical studies. Study One reports findings from a document analysis of publicly available ES strategies and policies from Australian NSOs. Study Two builds upon these findings by drawing on insights from interviews with senior managers, supplemented by internal documents and researcher field notes. The chapter identifies major themes related to ES development and implementation in Australian sport organisations.

Chapter 5 provides a discussion of the research findings in relation to the existing literature and the integrated conceptual framework and concludes this thesis. The chapter interprets the results thematically, highlights how organisational leadership interacts with internal and external factors to influence ES practices, and reflects on the implications of the findings for theory and practice. The chapter then summarises the key findings, contributions, and limitations of this research and makes recommendations regarding future research and practical considerations for sport organisations that seek to embed ES into their governance and operations.

In summary, this chapter has outlined the broader sustainability context, identified the problem of limited empirical understanding of organisational leadership in ES within Australian sport organisations, and articulated the research aim and questions that guide the study. Addressing this problem is significant because it responds to a clear knowledge gap at the intersection of sport management, leadership and ES. By delineating the study's scope, limitations and structure, the chapter establishes the foundation for the subsequent analysis. The following chapter presents a review of literature on environmental sustainability, organisational leadership and sport.

Chapter 2 - Literature Review

This chapter presents a review of the research literature and investigates the role of ES initiatives in sport organisations. The dual purpose of a literature review is, first, to identify current knowledge and opportunities for new knowledge within contemporary literature, and, second, to explore theories and models that could explain the relationships between key constructs. The primary objective of this literature review is to collate and interpret the evidence that relates to the relationship between organisational leadership and ES within the context of sport. The literature review commences with an exploration of current research on ES within national/international sport organisations. Four interacting bodies of empirical and theoretical literature are examined and integrated: ES and sport, organisational leadership, theories and models to investigate the association between leadership and sustainability, and the determination of a newly defined conceptual framework to explore the constructs of organisational leadership and the development of ES in sport.

The first section explores ES within the sporting domain and sheds light on the reciprocal relationship between sports and the natural environment. The section examines the ways in which sporting activities affect the environment, and, in turn, how the environment exerts influence on how sport is played and spectated.

The second section demonstrates the role of organisational leadership as a foundation for environmental action within sports. Organisational leadership is defined, emphasising its paramount importance in driving sustainability across multiple industries. This section enquires as to how leadership influences the adoption of environmentally sustainable practices within organisations, and explores various leadership approaches that facilitate environmental action.

The third section examines the theoretical foundations that are used to assess the understanding, development, and application, of ES in sport. This section provides an overview of three selected theoretical foundations: the responsible innovation framework; the dynamic capabilities

framework; and ecological systems theory. Each of these theoretical foundations offers a unique perspective from which to identify key constructs to conceptualise sustainable practices within the context of a sport organisation. The section concludes with the outline of a new conceptual framework to guide the empirical research in this thesis.

Section One: Environmental Sustainability and Sport

The Environment and Sport: a Bidirectional Relationship

Sustainability refers to meeting the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987). While the ‘Brundtland’ (1987) definition is widely cited, ‘sustainability’ has been defined in numerous ways. For example, it has been defined as, “that state that results from the process of sustainable development” (Benn & Kearins, 2012). In contrast, Parkin (2000) defined sustainability as the “capacity for continuance” of a given organism or object. Reflecting the variety of perspectives of sustainability, it has been noted that there are between 100-200 definitions of this threshold concept (Moscardo et al., 2013; Parkin, 2000). The Brundtland definition is adopted in this study because it is a clear, contemporary, and widely accepted framing that is relevant across disciplines, including sport, policy, and organisational research. It also underpins the United Nations Sustainable Development Goals (UN SDGs) and provides a holistic foundation that aligns well with the multi-dimensional nature of sustainability in sport and organisational contexts, where environmental impact, social responsibility, and economic viability are closely interconnected.

By extension, ES relates to responsible stewardship of the natural environment for future generations, or more specifically, the responsible use of natural resources and effective protection of the environment (Kuhlman & Farrington, 2010). The negative impact of human activities on earth’s ecosystems has significantly contributed to the depletion of natural resources, climate change, and air and water pollution, which are, in turn, fuelling growing concerns about ES (Scherer & Voegtlin, 2020). While commercial/industrial companies are among the key contributors to socio-environmental crises (Schembera & Scherer, 2017), there is increasing

recognition across all facets of business and society that proactive measures and sustainable practices are required to alleviate the negative impact of human actions on the environment. Building upon this perspective, McCullough et al. (2020) stated that all sport organisations have an impact on the natural environment and are also impacted by the natural environment, which means that there is a bidirectional relationship between sport and the environment. Sport organisations contribute to environmental degradation through their operations, including energy consumption, transportation emissions, and waste generation associated with sporting events, facilities, and fan activities (Dolf & Teehan, 2015; McCullough et al., 2020). For example, large-scale sporting events can cause environmental issues such as carbon emissions and waste generation. Conversely, environmental factors, such as weather conditions, natural disasters, and climate change, can affect sports activities, schedules, and infrastructure at all levels. Taken together, these insights underscore a bidirectional relationship that frames subsequent discussions of ES strategies, facilitators, and barriers in sport.

While academic research on environmental impacts and sustainability practices in the sports sector began gaining traction in the early 2000s, it has since entered what scholars have described as a diversification phase, characterised by thematic expansion, methodological plurality, and increasing relevance to practice and policy (Mallen et al., 2011; Steiger et al., 2019). For example, Roe et al. (2014) examined the tourism industry's development of methods to assess and manage risk responses related to ES, and proposed a conceptual model for characterising ES in tourism. Similarly, Park and Kim (2014) investigated key factors influencing environmental initiatives in the hospitality industry from an organisational perspective, and revealed a positive association between managerial attitudes and organisational commitment to green practices, based on data from 235 participating managers.

Despite publicised stories of ES initiatives being adopted by various sport organisations, there was limited academic literature prior to the year 2000 on ES within the sport business and management fields (Mallen et al., 2011). In particular, there is relatively little empirical research on the bidirectional relationship between sport and the environment from a strategic or organisational perspective, which means there is little understanding about why and how sport organisations

respond to environmental challenges. McCullough et al. (2016) proposed an environmental wave typology, which describes how sport organisations can move from low-intensity awareness-raising activities to more routinised and strategic forms of environmental engagement. Building on this conceptual approach, Hugaerts et al. (2023) examined institutional commitment to ES by applying an extended environmental wave typology to 141 sport federations in Belgium. The authors found that only a minority of institutions had progressed beyond initial low-intensity initiatives, with most demonstrating limited or no integration of sustainability into their strategic planning approach.

Over the past two decades, scholars have increasingly examined the bidirectional relationship between sport and the natural environment (McCullough & Kellison, 2018). These examinations consider both how sport contributes to environmental impacts, through its events and operations, and how environmental conditions, such as climate, geography and ecological changes, impact sport organisations and sport events (Cury et al., 2023; Mallen et al., 2011; Martins et al., 2021; Sotiriadou & Hill, 2015; Trendafilova & McCullough, 2018; Wall-Tweedie & Nguyen, 2018). However, research in the area of sport ecology remains limited, and is primarily focused on fan behaviour and the management of sport facilities (Trendafilova & McCullough, 2018). These authors undertook the first rapid review in this area and their work highlighted the importance of ongoing communication among stakeholders for organisations who are seeking to identify emerging areas of ES. Open dialogues are essential for successful collaboration and the fostering of ES in the sports sector. Expanding on these insights, McCullough (2023) recommended that future academic efforts focus on three areas: evaluating the environmental impacts of sport organisations; effectively communicating climate action to stakeholders; and developing strategies to ensure the sector's long-term adaptation to environmental change. The aim of this strategic approach to future research is to develop a comprehensive understanding of the bidirectional relationship between sports and ES.

Empirical studies have examined the environmental impact associated with hosting sporting events, including resource consumption, waste generation, air and water pollution, and the overall ecological footprint associated with delivering sport events at either a local, national, or

international level (Orr & Inoue, 2019; Trendafilova et al., 2013; Trendafilova et al., 2017). In particular, research has explored the environmental impact of sporting events across various levels, from professional leagues to collegiate sport. For instance, Babiak and Trendafilova (2011) analysed environmental responsibility and green management practices across major North American professional leagues, identifying both strategic and institutional motives for adopting sustainability initiatives. Their findings emphasised the growing relevance of corporate social responsibility (CSR) in professional sport organisations and highlighted the influence of stakeholder expectations in driving environmental action.

At the collegiate level, Casper and Pfahl (2015) investigated sustainability practices within National Collegiate Athletic Association (NCAA) Division III athletic departments, highlighting operational constraints such as limited budgets, reduced staffing, and competing administrative priorities that constrained environmental initiatives. Additionally, Cooper (2020) conducted a carbon footprint analysis of University of Tennessee football gameday tourism, estimating 154.7 million kg of CO₂-equivalent emissions across four seasons, with fan transportation, accommodation, food consumption, and waste generation identified as primary contributors to environmental impact. Collectively, these studies extend the sustainability discourse beyond global mega-events, providing a more nuanced understanding of how environmental practices are shaped by organisational scale, resource availability, and contextual constraints at professional and collegiate levels.

The term “sport ecology” has been introduced to define the study of the bidirectional relationship between sports and the natural environment as a subdiscipline of sport management (McCullough et al., 2020). Specifically, the sport ecology concept focuses on relationships within the sport ecosystem and the examination of interactions among components of an ecosystem, such as natural environments, built environments (e.g., stadiums and facilities), human actors (athletes, coaches, spectators), and organisations (sports leagues, clubs, governing bodies). Researchers from disciplines, such as sport development, business management, tourism, and recreation, collaborate with sport practitioners (‘sport ecology designers’) to better understand relationships between law, governance, marketing, sponsorship, management, organisational behaviour, sociology,

environmental justice, event management, and facility management. The framework facilitates a better understanding of how sports activities, events, and organisations interact with and impact the natural environment at local, national, and global scales. In addition, certain sport management journals and associations, such as the North American Society for Sport Management (NASSM) and the Sport Management Association of Australia and New Zealand (SMAANZ), have begun to separately categorise sport ecology research in their respective conferences (Breitbarth et al., 2023; McCullough, 2023). This recognition reflects the growing attention and resources devoted to environmental issues in sport and indicates the emergence of sport ecology as an important concept within academic discussions on ES. Collectively, this positioning has fostered cross-disciplinary opportunities for research on organisational barriers and enablers to delivering ES in sport.

Environmentally Sustainable Sport: Organisational Challenges and Barriers

Sustainable sport is dependent on having a sustainable natural environment. Different sports – international, national, or local community – will have varying impacts on the environment and the related sport organisations will have similarly varied resources and capacities to undertake sustainability initiatives (McCullough & Cunningham, 2010). This section has presented how decisions about ES strategies in sports are dependent on understanding the unique challenges and barriers that different sport organisations face in delivering ES sport.

Current ES in sports research focuses on the challenges of understanding fan attitudes and behaviours regarding environmental awareness. To date, the primary emphasis of academic research has been on professional sports, such as sports leagues and teams. Loewen and Wicker (2021) conducted a survey on 539 football fans to explore the relationship between fans' environmental awareness and their environmental impact. The authors highlighted the complex relationship between (sport fans') environmental consciousness and the real impact of (professional) sport on the environment. The authors found that the attitudes and behaviours of fans represent a barrier for sports that want to achieve ES. At the facility level, a Delphi study of

16 North American venues reported low current and projected funding for ES, indicating a lack of financial investment to support quick and impactful advancements in ES initiatives (Mallen et al., 2010). In addition, not only do professional sporting events cause damage to the environment, the environment also affects the performance of sports events (Ross & Orr, 2021). Contrary to the findings of some studies that have reported changes in consumer behaviour due to increasing urban air pollution, recent research has suggested that the spending habits of sports consumers remain unchanged. Watanabe et al. (2019) examined the factors influencing attendance rates at Chinese Super League matches and found that air pollution did not have a statistically significant effect on fan attendance. They also explored whether pollution might reduce game quality and thereby influence spectator interest, but found no evidence to support this relationship. In summary, the above research indicated that fan attitudes and behaviours present challenges to the achievement of ES in sports, particularly for professional sports leagues and teams. This aspect represents one of the barriers that sport organisations face in their efforts to address environmental concerns and implement sustainable practices.

This section has examined the challenges faced by sport organisations in managing spectators' participation in sustainable activities and has emphasised the need for comprehensive ES plans and initiatives at the strategic level. The negative effect of sports on ES has been explored primarily through the perspective of fans and athletes participating in sporting events. However, previous research has shown that encouraging fan participation in sustainable activities is difficult for sport organisations (Casper et al., 2020). Given the significance of environmental considerations in the sports industry, it can be suggested that it is necessary for sport organisations to formulate ES plans and initiatives. One of the ways to mitigate the negative influence of climate and greenhouse gases on the environment is for sport organisations to lead initiatives focussing on environmental issues at the strategic level (Pfahl et al., 2015). This approach involves not only recognising the environmental challenges posed by the sport industry but also implementing initiatives at the strategic level to face these challenges. In conclusion, addressing the complexities associated with spectators' participation, and implementing strategic environmental initiatives, are crucial steps that sport organisations must take to effectively tackle ES challenges.

The high costs of operation and concerns about deliverables also represent barriers to industries effectively adopting environmental initiatives. In many industries, including the global airline industry, the adoption of environmental initiatives has been made difficult by barriers, such as high costs and concerns about survival (Amankwah-Amoah, 2020). Also, in the hospitality industry, a lack of knowledge about environmental matters is a key challenge. It has been argued that, to tackle these issues, organisations should enhance environmental awareness among their different departments (Martínez-Martínez et al., 2019). Once an organisation has built up its environmental knowledge, it's crucial to keep that knowledge up to date, especially when dealing with new global challenges. The sport industry faces similar challenges and is not exempt from environmental concerns. The futures of some sports activities depend heavily on taking prompt climate action (Breitbarth et al., 2023). While there may be debate as to whether the sport industry should follow the same standards as other industries, Orr and Inoue (2019) have emphasised the importance of all sport organisations taking environmental challenges seriously.

Many sport organisations lack ES knowledge, which hinders their ability to effectively implement sustainable practices across various aspects of their operations and initiatives (McCullough et al., 2016). It is crucial to rely on credible sources of information, such as industry organisations like the Green Sports Alliance and the Sport Environmental Alliance, and academic research, to guide these efforts (Trendafilova & McCullough, 2018). Research indicates that sport organisations are increasingly motivated to adopt environmental management practices not only to meet stakeholder expectations but also to achieve strategic benefits. These include enhanced operational efficiency, improved resource management, and long-term competitiveness (Babiak & Trendafilova, 2011). In addition, ES initiatives can contribute to improvements in return on investment and they can facilitate the achievement of sport organisations' objectives (McCullough & Cunningham, 2010). Therefore, it can be argued that sport managers should be open to incorporating ES throughout the entirety of their organisation, rather than confining it to a single areas, like facility operations (McCullough & Kellison, 2018).

Addressing knowledge barriers also requires universities and sport management educators to consider how future sport professionals are educated for ES leadership. A recent study of sport

management students across 23 higher education institutions found that personal norms were the strongest predictors of pro-environmental behaviour (Pelcher et al., 2024). Students participating in the study also indicated that they expect sport organisations to take a leading role in addressing environmental issues. The authors concluded that improving environmental education in sport management curricula is essential to prepare graduates for the future demands of the sport industry.

A sport organisation's commitment to environmental action, and its development of effective sustainability policies, can be enhanced by appointing sustainability officers (Pfahl et al., 2015). This approach aligns with findings by Babiak and Trendafilova (2011), who reported that sports managers were actively engaged in ES efforts, not only because it saved money for the organisation but also because it built relationships with stakeholders, including community and commercial groups. These studies demonstrated the important role that sport organisations play in driving ES development in sport by providing leadership, advocating policy, and building partnerships.

Environmental Sustainability in the Sport: Policy Frameworks and Considerations

Despite the challenges outlined in the previous section, it is important to note that sport organisations can find support for their efforts to address ES. While challenges exist, there are notable policies and frameworks showing progress. International bodies, including the United Nations Framework Convention on Climate Change (UNFCCC) Sport for Climate Action framework and the IOC, have taken the lead in promoting ES within sports, and they offer valuable guidance for sport organisations who are striving to advance their ES goals. The increasing global concern for ES has led to the establishment of policies and initiatives within sport organisations. Trendafilova and McCullough (2018), and Babiak and Trendafilova (2011) outlined the international efforts to address environmental concerns, including organisations like the UNFCCC inviting sports sectors to play an active role in reducing carbon emissions.

Various functional, political, and social pressures are compelling sport organisations to adopt

environmentally sustainable policies and practices as is reflected in McCullough and Cunningham (2010) theoretical framework. These policies provide a framework for an organisation's objectives and they also possess the potential to positively influence the behaviour of the organisation's members. The development of an environmental policy within sport organisations serves the purpose of establishing concrete and measurable objectives for environmental conservation (Ross & Leopkey, 2017). While the existing literature has extensively discussed environmental policies in the sports domain, it has focused predominantly on IOC environmental policies and the Olympic movement (Cantelon & Letters, 2000; Paquette et al., 2011; Ross & Leopkey, 2017). Specifically, Cantelon and Letters (2000) outlined the creation of an environmental policy as the third pillar of the Olympic movement, and addressed both the immediate and long-term environmental impacts of mega-sport events. These studies highlight the importance of environmental policy in shaping sport organisations' approaches to sustainability, but they also reveal a gap in understanding how such policies are developed and implemented beyond the Olympic context, particularly within national and state-level sport organisations.

Opportunities exist for sport to use its unique influence to provide leadership in the establishment of environmentally sustainable practices in the sports and societal ecosystems. There has been a steady rise in sport organisations adopting environmental protection measures and strategies to help them shift to greener practices and reduce their associated carbon footprints as part of the future-proofing of sport (Trendafilova et al., 2013). External forces also encourage sport organisations to respond to environmental change. For example, Trendafilova and McCullough (2018) presented supporting evidence that the UNFCCC has invited sport organisation and its governing bodies to participate in their goals and be responsible for the environment, and has compelled the signatories to take systematic measures to reduce carbon emissions. Furthermore, a study using data from 17 interviews with professional sports teams and league executives found that achieving goals and obtaining strategic advantages were important driving factors for environmental practice in professional sports (Babiak & Trendafilova, 2011).

Critically, the above studies demonstrated that sport organisations can be positive driving forces behind the achievement of sustainable development goals by leveraging their platforms to promote

environmentally responsible behaviours among sports participants and their stakeholders. However, when attempting to effectively implement ES practices and planning, actors face the challenge of understanding and navigating the complex relationships between sport organisations and their various stakeholders, especially at the organisational level (Casper et al., 2012). Before they can develop effective ES policies and practices, sport organisations needed to identify the environmental impacts and climate change initiatives to which they will give priority. Collectively, Pfahl et al. (2015), McCullough and Cunningham (2010), and Babiak and Trendafilova (2011) highlighted for the vital role of sport organisations in leading ES through proactive efforts, emphasising strategic-level initiatives, sustained commitment, and the appointment of sustainability officers.

Environmental Sustainability in the Sport: Strategies and Facilitators for Good Practice

Building upon the frameworks and policy considerations discussed earlier, this section considers the evidence relating to the strategies and facilitators that contribute to effective ES practices within sport organisations. While policy development lays the groundwork for environmental initiatives, the successful implementation of these policies requires a comprehensive approach that encompasses various strategies and facilitators. To illustrate how ES is approached in practice, Cury et al. (2024) examined the Australian Olympic sport network through an actor–network lens and identified seven actant roles: interrogators, custodians, coordinators, providers, amplifiers, bottlenecks, and distant disruptors. They characterised ES action as a dynamic process shaped by human and non-human actants and organised around three moments of translation: economic imperatives (e.g., recognising competitive advantages, sponsor expectations, anticipating policy change), environmental enlightenment, and the redesign of sport experiences.

In exploring the factors that facilitate the adoption and management of environmental initiatives, scholars have identified various strategies aimed at mitigating the barriers to these initiatives. These facilitators encompass a range of elements, including: a high level of commitment to

implementing ES measures (Mallen et al., 2010); the availability of adequate resources for executing environmental plans (Casper et al., 2012); the development of strategic plans for setting goals and monitoring implementation strategies (Pfahl, 2010); proactive and innovative strategic thinking, such as funding strategies (Choi, 2016; Kellison & Hong, 2015); the formation of cross-functional sustainability teams within organisations (Pfahl, 2010); and collective efforts involving multiple stakeholders (Pfahl et al., 2015; Trendafilova et al., 2014). Building on the discussion of formal leadership roles, it is also important to consider how informal actors contribute to ES action. In examining ES practices in sport venues, evidence showed that change was often driven by motivated “doers” who were not always in formal leadership roles. When they possessed power, legitimacy, and urgency, such actors advanced environmental initiatives and shaped organisational decisions. This challenged assumptions about purely top-down implementation and suggested that informal leadership could initiate sustainability actions within complex venue operations (Ross et al., 2024). Collectively, these arrangements enabled coordinated planning and execution across functions and partners. Despite the growing interest in the ES within sport management researchers, little research has been published that addresses the characteristics of organisational policies, strategies, and processes that influence ES practices, and their outcomes.

To better understand the driving forces behind the deployment of environmental management practices in sport organisations, several studies have explored the drivers of these practices under the lens of CSR (Babiak & Trendafilova, 2011; McCullough & Trail, 2023; Trendafilova et al., 2013; Trendafilova et al., 2017). Mainly in North America, these empirical studies employ surveys, interviews, and document reviews as their data collection methods. In addition, initiatives aimed at engaging environmentally conscious fans have been in operation for several years (Mallen & Chard, 2011). Despite the challenges associated with managing fan activities, sport organisations have been formulating strategies to promote sustainable fan behaviour. It is noteworthy that spectators’ affinity with athletic departments and universities can be strategically leveraged to promote sustainable behaviours, such as recycling, during large-scale sporting events (McCullough, 2013). However, there has been limited discussion of the intricate relationship between fan identification and actual fan behaviours.

McCullough and Kellison (2016) proposed a conceptual model – and provided practical illustrations – to explain how a sense of place (SOP) and fan identification can effectively enhance sustainable behaviours during sporting events. Kellison et al. (2024) challenged the assumption that ES messages might alienate sport fans. A large-scale survey of season ticket holders from two professional sport organisations found that non-environmentalists, who made up a significant portion of the sample, did not express particularly negative attitudes toward sustainability. Instead, their attitudes were more strongly shaped by the extent to which they identified themselves as environmentalists (active, passive, or non-environmentalists) than by team affiliation. The authors indicated that sport organisations had more flexibility to promote sustainability messages and did not need to fear widespread resistance (Kellison et al., 2024). In addition to understanding fans’ receptivity to environmental messages, it is also important to consider how their expectations develop over time. A longitudinal study (Cayolla et al., 2024) analysed 2,390 professional football club fans’ suggestions collected over two seasons, and identified five key suggestion areas: venue design; matchday operations; sponsorship; communication; and overall experience. Some themes, including recycling and waste reduction, became more prominent over time, indicating growing environmental awareness among fans. The authors suggested that sport organisations could develop more responsive and effective sustainability strategies by obtaining fan input.

Section Two: Organisational Leadership: The Foundation for Sport Environmental Action

Organisational Leadership for Sport Environmental Action

Leadership is a process of social influence that maximises the efforts of others to achieve a goal (DeChurch et al., 2010). Effective leadership for environmental action in sport goes beyond management; it requires deep knowledge of sustainability practices, adaptable problem-solving attributes, and a commanding ability to empower and positively influence a range of different stakeholders. Building on this general notion, organisational leadership refers to the specific enactment of leadership within formal structures to drive collective performance. It is a process of influence aimed at facilitating individual and collective efforts to accomplish shared organisational

objectives, serving as the mechanism through which individuals in positions of responsibility shape an organisation's direction, interpret environmental conditions, and mobilise resources to achieve these goals (Yukl, 2001). In the context of this thesis, organisational leadership is conceptualised as the process by which leaders within sport organisations interpret, prioritise, and act on ES, and how their decisions and practices influence the development and implementation of ES policies and initiatives.

Casper et al. (2012) identified that, due to a prevalent lack of prior knowledge and awareness, managers in the sports sector face challenges when they seek to effectively drive sustainable practices. To address these challenges, leaders in sport organisations must both possess managerial authority and also actively embed “sustainability” into their organisational activities. This contention aligns with the findings of Frawley et al. (2018), who emphasised that effective leadership in sports requires a proactive stance towards sustainability and its incorporation into overall organisational strategy. Similarly, the increasing complexity of the social, economic, and environmental context, together with the growing emphasis on sustainability from governments, industry bodies, and wider society, highlights the need for organisational leadership to foster innovation. Opoku et al. (2015) also stressed the growing attention to organisational leadership's role in promoting innovation in response to evolving environmental and institutional pressures. Therefore, effective leadership in sport organisations involves not only responding to current challenges but also adapting to emerging trends, particularly the imperative for sustainability and innovation.

Organisational change refers to the ongoing process of adapting an organisation's direction, structure, and capabilities to address evolving internal and external needs (By, 2005). Organisational change can take various forms, including changes in leadership, culture, technology adoption, or the introduction of new policies. Scholarly investigations into the hospitality sector, elite team sports clubs, and a sustainability review, highlight the intricate dynamics of organisational change and stress the crucial role of leadership, effective communication, and strategic decision-making. In the hospitality sector, Ramos-Maçães and Román-Portas (2022) explored the interplay between organisational communication, leadership, and employee

commitment, and revealed the positive influence of effective organisational communication on leadership and employee commitment, and its contribution to organisational change. Similarly, Matic (2022) study on elite team sports clubs in Serbia enriched the understanding of organisational change by examining the impact of leadership styles, organisational learning culture, and climate for innovation on sports clubs' marketing concepts. The author revealed that organisational learning culture directly shaped the marketing concept and emphasised its significance in strategic decision-making for sustainability. Offering a broader perspective, Millar et al. (2012) undertook a review on sustainability, which prompted reflection on the managerial and policy dilemmas faced by organisations striving for sustainability. The review provided insights into how organisations, including sports entities, can balance short-term priorities with a long-term vision, manage brand reputation, and influence policies to foster sustainable practices. These studies collectively offered interpretations of the literature, and they provided evidence of the challenges and opportunities associated with implementing organisational change for ES in sports. They emphasised the critical role of leadership, effective communication, and strategic decision-making in navigating the complexities of this transformative process.

Strategic Planning and Decision-making for Environmental Sustainability in Sport organisations

Strategic planning is a systematic process through which organisations identify and commit to mission-critical priorities while engaging stakeholders and responding to environmental conditions (Morrison & Misener, 2021). This study examined how contextual factors and managerial actions shape strategic planning in nonprofit community sport organisations (CSOs). Using a multiple-case study of six CSOs, the authors found that strategic planning was influenced by environmental pressures such as changing community demographics, inter-club competition, and expectations from governing bodies. The study highlighted how CSO leaders used strategic planning to navigate demographic change, maintain legitimacy, and plan for growth, providing a contextualised understanding of strategic planning practices in nonprofit sport. Furthermore, the incorporation of ES issues into business strategy is increasingly recognised as an opportunity to

provide organisations with a competitive edge (Dangelico & Pujari, 2010). This incorporation of ES into strategy meets societal expectations and it also positions sport organisations as leaders in promoting environmental responsibility within their industry; potentially attracting environmentally conscious consumers and investors while enhancing brand loyalty and revenue. To mitigate the negative effects of climate change and greenhouse gases on the environment, it is necessary for sport organisations to play the role of sports leaders and address environmental issues from a strategic planning level (Pfahl, 2011).

Sports policies, which are often shaped by government, influence the behaviours of athletes, coaches, administrators and other stakeholders, and guide sport organisations' broader ES commitments. Kellison and Kim (2014) emphasised the importance of institutionalising proenvironmental initiatives, such as sustainable venue design, and integrating these initiatives into organisational strategy through coordinated commercial and social marketing efforts, rather than treating them as piecemeal environmental measures. Growing interest in proenvironmental policies within professional sport organisations highlights the potential environmental, social, and economic benefits that could be gained from embracing sustainable practices. In the United States, Casper et al. (2021) found that although political ideology strongly predicts ES perceptions and behaviours, awareness of, engagement with, and the perceived influence of collegiate-sport sustainability initiatives were largely politically neutral across party affiliation. In China, Chen et al. (2018) reported that the government acknowledged the need for more balanced sport policies in the post-Olympic period, signalling greater emphasis on sustainable development. Collectively, these studies suggest that sports policies should be viewed as adaptive governance tools, evolving in response to changing social expectations and the increasing salience of sustainability in sport.

With stakeholders playing a crucial role in shaping ES policies, ES became an indispensable tool prioritised by governments and organisations. Thormann and Wicker (2021) emphasised the importance of considering club members' attitudes and behaviours towards ES in sport organisations, and they highlighted the need for sports entities to integrate these factors into policy formulation and implementation. The authors noted the crucial role of individual stakeholders, particularly sport club members, in contributing to ES efforts within the sporting community. By

focusing on club members' attitudes and behaviours, the authors provided valuable insights into the determinants of pro-environmental behaviour among voluntary sport club members, with significant implications for promoting sustainability within sport organisations. In addition, Casper and Pfahl (2015) explored the ES practices of the NCAA, and focused specifically on the impact of these practices on strategic planning processes and competencies. The authors gained insights into how ES considerations influenced the strategic planning processes within sport organisations, thereby contributing to the broader discourse on sustainable sport development.

Recent studies focusing on sustainable development within international sport federations have provided insights into key decision-making processes and strategic priorities. In examining the sustainability practices of international sport federations, Moon et al. (2022) contributed insights into key decision-making processes and considerations for the development of sustainable sport. The authors explored the definition of sustainability within the context of international sport federations, identified various approaches, including implementing sustainability pilot events and creating sustainability committees, and highlighted the strategic choices made in pursuit of sustainability goals. Similarly, the study led by (Glibo et al., 2022) provided valuable input for decision-makers in international sport organisations by identifying 20 strategic priorities for sustainable development. These priorities, grouped into various levels of the Framework for Strategic Sustainable Development, highlighted the intricacies and considerations in decision-making related to the incorporation of sustainability into the strategic planning of international sport organisations.

Leadership Theories and Models for Environmental Sustainability

Understanding leadership theories and models for ES is crucial for effectively addressing environmental challenges within sport organisations. Leadership plays a vital role in shaping organisational culture, decision-making processes, and strategic priorities, all of which significantly influence the adoption and implementation of ES policies and practices (Zaccaro & Klimoski, 2002). By examining various leadership theories and models, such as transformational leadership and shared leadership (Jones et al., 2018; Smith et al., 2017), insights can be gained

into how different leadership styles and approaches impact the development and delivery of ES policies and practices in sport organisations. Furthermore, Jun and Lee (2023) found that transformational leadership influenced employees' innovative behaviour by increasing their commitment to change, and that this relationship was stronger when organisational support for creativity was high. These findings suggest that organisational leadership can both shape strategic direction and contribute to the internal conditions necessary for innovation, thereby providing a foundation for sport managers and policymakers to strengthen leadership strategies, enhance environmental governance, and advance the sustainable development of the sports industry.

Studies have found that organisational leadership is essential for sustainability, and it has been embraced in some industries, including construction and hotels. For example, empirical research findings on UK construction companies reported that organisational leadership had a vital role in construction companies adopting sustainability practices, thereby providing empirical evidence of the link between organisational leadership and sustainability practices in construction (Opoku et al., 2015). A survey focusing on environmental sustainable innovation in the hotel industry found a significant relationship existed between environmental opinion leadership and the adoption of sustainability innovation (Smerecnik & Andersen, 2011). With environmental opinion leaders advocating sustainability innovations to multiple audiences, it is expected that sustainability practices will become even more prevalent within the hotel and resorts sector. These findings highlight the growing trend of innovative hotels incorporating ES practices, which in turn encourages other hotels to adopt similar initiatives. Furthermore, a study investigating the adoption and implementation of formal environmental management systems among small and medium-sized enterprises (SMEs) in Hong Kong revealed various organisational obstacles to such changes (Chan, 2011). These obstacles included employee attitudes, poor communication, past practices, and insufficient senior management leadership. Given the limited research on organisational barriers to ES implementation in the hotel industry, Chan's study provided valuable insights for both ES implementation and organisational practices, and Chan's findings can serve as a reference for other industries as they seek to identify obstacles to the adoption of ES initiatives.

In the sporting context, recent studies have explored different types of leadership. Smith et al.

(2017) undertook a qualitative analysis with nine professional cricket players to explore transformational leadership in an elite sport environment. Also, Jones et al. (2018) adopted a single qualitative case study to examine the environmental characteristics of shared leadership in a sport organisation. In the organisational context, transformational leadership can motivate organisational members to achieve organisational goals. These studies mainly focused on the individual as a leader and did not consider the influence of context on leadership. In addition to established leadership models, recent scholarship has called for a broader theoretical integration between disciplines, which has highlighted the limited integration between sustainable event management and sport ecology. These two areas, although conceptually related, have developed along separate paths. Trendafilova and Ziakas (2025) proposed a systems-based perspective that situates sport events within broader social and ecological structures, advocating for adaptive and relational approaches rather than linear or impact-based models, and calling for research that conceptualises sport events as complex adaptive systems co-evolving with their environments. However, the role of organisational leadership in developing and delivering ES policy and practice in the sport context has still to be explored.

The research underpinning this thesis adopts an organisational leadership perspective rather than the more typical individual styles of leadership (Jones et al., 2018) or leadership traits (Smith et al., 2017) perspectives. The lack of consideration of organisational-level factors has led to a lack of empirical research on organisational leadership. Organisational leadership can be differentiated from individual and team leadership by drawing on the work of Stephen J. Zaccaro and Richard J. Klimoski, who argued that organisational leadership extends beyond individual behaviours to encompass the systems and structures. Zaccaro and Klimoski (2002) identified four defining features of organisational leadership as follows:

- Developing and achieving organisational purpose involves processes and proximal outcomes (such as worker commitment).
- Organisational leadership is characterised by nonroutine influence on organisational life.
- The influence of leaders is based on cognitive, social, and political factors.
- Organisational leadership is contextually determined and caused by system characteristics and dynamics.

More work further develops these ideas by emphasising that organisational leadership unfolds across levels, over long time horizons, and within complex structural environments (Day, 2014; Klimoski & Amos, 2012). This broader conceptualisation highlights how leaders shape strategy, culture, and processes in ways that are deeply embedded in organisational systems. These features highlight that organisational leadership is embedded in broader systems and contexts, providing a foundation for analysing how sport organisations respond to sustainability challenges.

Section Three: Conceptualising Environmental Sustainability in Sport - Theoretical Foundations and Frameworks

Theoretical Foundations: Exploring Key Theories and Frameworks

In this section, a conceptual framework is developed to guide the investigation of organisational leadership for ES in Australian sport and, thereby, address the research aim underpinning this thesis. This section introduces key concepts, which were used to guide the collection and analysis of data. This conceptual framework integrates constructs from the responsible innovation framework, the dynamic capabilities framework, and ecological systems theory. Each component of the conceptual framework and its links is described below. A summary of the conceptual framework is illustrated in Figure 1.

Components of the Conceptual Framework: Constructing the Framework for Sport Sustainability

Responsible innovation framework

Responsible innovation has been defined as a normative concept that emphasises avoiding harm, doing good, and coordinating with others to protect people and the planet (Scherer & Voegtlin, 2020). It is recognised as a key contributor to addressing the grand challenges, including poverty, inequality, climate change, biodiversity loss, and pandemics, which pose significant threats to

sustainable development (Scherer & Voegtlin, 2020). Stilgoe et al. (2013) further proposed that responsible innovation requires governance that takes place across multiple levels, including the global, societal, and organisational (enterprise) levels. Responsible governance can foster an inclusive process when developing and managing innovation goals and social acceptability. In the context of the increasing emphasis being placed on sport's contribution to climate action, sport organisations need to carry out responsible and innovative practices in governance to meet environmental challenges. The research underpinning this thesis incorporates the fundamentals of responsible innovation into a conceptual framework that guides the investigation of organisational leadership factors that influence sport sustainability development and practices.

Dynamic capabilities framework

Harris et al. (2021) demonstrated that the dynamic capabilities framework can be applied to the study of sport organisations to better understanding the factors that drive sustained innovation and enhanced organisational performance. In their work, the core processes underpinning dynamic capabilities include organisational learning, market alignment, and resource acquisition and mobilisation, with innovative leadership added as a fourth element particularly relevant to the sport context. Building on this, the framework can be used to examine an organisation's capacity to continuously innovate and improve its performance.

In this thesis, dynamic capabilities are understood as the organisational processes that allow sport organisations to sense environmental opportunities and threats, seize them through strategic and operational decisions, and reconfigure resources and routines accordingly. This perspective is particularly relevant for ES because responding to ES challenges often requires organisations to develop new capabilities, such as monitoring environmental impacts, redesigning events and facilities, and integrating ES considerations into strategic planning.

Ecological systems theory

While the responsible innovation and dynamic capabilities frameworks guide data collection about

an organisation internally, other external factors can influence an organisation's leadership. In this regard, the conceptual framework will also be informed by ecological systems theory. Bronfenbrenner's ecological systems theory is a useful theoretical framework for studying individuals in ecological contexts. Ecological systems theory is relevant at the individual, organisational, societal, and socio-cultural levels. Initially developed in 1979, the theory posits that human development is a process involving a person's evolving conception of their ecological environment and their relation to it (Bronfenbrenner, 1994). The theory divides the human environment into five different systems: microsystems, mesosystems, exosystems, macrosystems, and temporal systems. Bronfenbrenner's multi-layered ecological model (1994) will be adopted in the conceptual framework for this research to gain richer insights into the individual and external influences especially at the micro, meso, and macro levels, that are most relevant for understanding ES policy in sport organisation's ES decisions and actions. In this study, these influences are considered the 'initiating conditions' for sport organisations to develop ES policy and practices, meaning the organisational and environmental factors that trigger or shape the adoption of ES initiatives. Specifically, and in the context of a sport organisation, the micro-level of ecological systems theory relates to the attitudes, beliefs, and values of the organisational leader and the key support people around them (i.e., employees, families). The meso-level reflects the influences of and interactions with organisational structure, such as the board of directors and other organisational stakeholders (i.e., coaches, athletes). Finally, the macro-level represents entities of influence outside the organisation's boundaries, such as investors, external partners, government, local and global sport communities, and national/international environmental agencies (Flagstad et al., 2021).

Underpinning ecological systems theory is the assumption that human development is a process involving a person's evolving conception of their ecological environment and their relation to it. Ecological systems theory scholarship has been characterised by debates about the extent to which the theory can account for agency, power and structural change, and about how best to operationalise and empirically test multi-level ecological influences. While ecological systems theory has generated important insights into how contexts shape behaviour, it has also been critiqued for offering limited tools for explaining organisational processes, strategic decision-

making and innovation. These limitations suggest that ecological systems theory alone may be insufficient for understanding how sport organisations develop and implement ecological systems theory practices.

Visual Representation: Illustrating the Conceptual Framework

Rather than applying ecological systems theory as the sole analytical lens, this study develops an initial conceptual framework in Figure 1 that integrates EST with concepts from responsible innovation and the dynamic capabilities framework. The rationale for this approach is that existing frameworks, taken in isolation, are inadequate for explaining the complex, multi-level leadership processes through which ES practices are, or might be, adopted in sport organisations. In particular, ecological systems theory has been critiqued for offering limited explanatory tools for understanding strategic decision-making, organisational processes, and innovation. As a result, it was necessary to construct a framework that allows for the integration of complementary perspectives.

Specifically, this integrated approach is grounded in established research literature and offers a more comprehensive basis for understanding the adoption of ES practices. There are important conceptual linkages that support this integration. The responsible innovation framework intersects with the dynamic capabilities framework through the shared element of organisations. Innovation is enacted within organisations, and dynamic capabilities refer to how organisations sense, seize, and reconfigure in response to change. The dynamic capabilities framework, in turn, intersects with EST through the shared emphasis on individuals. Individuals are central to both frameworks: they are agents of capability development within organisations and are also embedded actors within broader ecological systems.

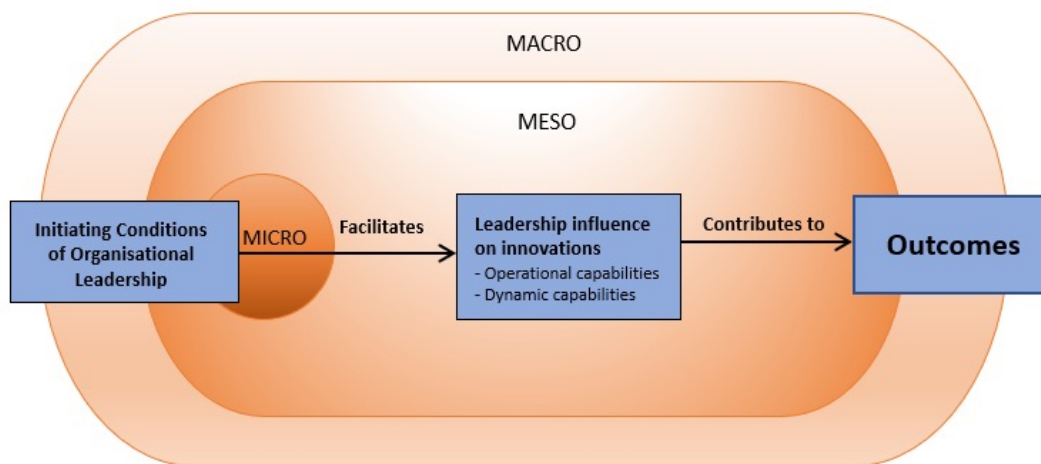
These linkages are important because they illustrate the value of integrating multiple theoretical perspectives to explain how ES practices are adopted and implemented in sport. They also point to the potential for advancing organisational leadership theory by clarifying how individuals, organisations, and systems interact in shaping sustainability-related change. As later chapters will

show, the limitations of this initial framework become apparent through the findings and motivate the development of the revised frameworks presented in Figures 2 and 3.

The conceptual framework integrates constructs from the responsible innovation framework, the dynamic capabilities frameworks, and the ecological systems theory, as shown in Figure 1. The framework guides data collection and analysis, and it is used to identify the key organisational leadership factors required for the development and delivery of ES practices within sport organisations.

Figure 1

The Conceptual Framework for This Research



Chapter Summation

Prior research into the ES practices of sport organisations contributed insights into key decision-making processes and organisational conditions that shaped sustainable sport development. Although leadership significantly affects many organisational activities, there is relatively little research on the influence of organisational leadership on ES and its application to sport. Despite the environmental initiatives and practices documented in Australia's sport organisation documents, little academic research is available on ES implementation in the Australian sports

industry. While empirical research has revealed practical implications for sport organisations addressing ES, there remains an imperative to explore organisational factors that underpin environmental leadership. Further research is warranted to better understand the key organisational factors of effective leadership for the development and delivery of ES practices in sport.

Chapter 3 - Methodology

This chapter describes the research design and methods employed to answer the research questions and meet the research aim. A constructivist-interpretivist research paradigm has been chosen that supports inquiry into individuals' experiences and views associated with the research topic. This research paradigm aligns with a qualitative research approach because it supports investigation of individuals' accounts and the meaning and interpretation of their experiences in the context of the research enquiry. A case study method underpins the research design and enables an integrated understanding and interpretation of data from multiple information sources. The research used a two-stage data collection method: first, analysing internal organisational documents on ES practices across select Australian sport organisations; and, second, conducting semi-structured interviews with Australian sport organisations managers who were responsible for ES policy and practice.

Research Paradigm

A research paradigm refers to the philosophical framework on which a research design is based (Creswell & Creswell, 2018). A paradigm reflects a set of beliefs and that inform the practice of research. Researchers use paradigms to indicate their philosophical worldview, and the assumptions that guide their research and help them make sense of the real world. The paradigm shapes the types of research questions posed, as well as the research design, methods, and approach to sample selection. Articulating the research paradigm facilitates the research and provides a

framework for understanding the different beliefs held by researchers (Kim et al., 2021). Paradigms comprise different theoretical and philosophical elements, including ontology, epistemology, and research methodology.

Ontology refers to how researchers perceive reality and their view of the world (Creswell & Creswell, 2018). Different ontologies have different assumptions regarding the nature of the phenomenon being investigated. Objectivism and constructivism are two different ontological assumptions. Objectivism is a philosophical approach that assumes the existence of social phenomena independent of human knowledge and interpretation. This approach commonly aligns with quantitative research, which emphasises collecting measurable data to uncover objective facts rather than subjective interpretations (Bahari, 2010). Conversely, constructivism, which tends to be associated with qualitative research, refers to knowledge and understanding of the world as something that is constructed based on people's beliefs, and their experiences and perceptions of reality (Saunders et al., 2019). The constructivist paradigm holds that reality is socially constructed and understood through the experiences and interactions of individuals. This perspective is particularly relevant for the research underpinning this thesis because it allows for an in-depth exploration of how different organisational leaders perceive and implement ES initiatives.

Epistemology is concerned with how knowledge of reality is understood and the methods by which such knowledge is acquired (Creswell & Creswell, 2018). The researcher's worldview subsequently informs how knowledge can be acquired and from what origins. Positivism is a scientific approach that involves the use of quantitative methods to examine human behaviour and the social world and often follows an objectivism-informed ontology (Golafshani, 2003). Alternatively, constructivist researchers focus primarily on how people describe and interpret their experiences of a phenomenon and subsequently compare, contrast, and align their views to create a collective understanding (Levers, 2013). This epistemological approach is known as interpretivism. An interpretive paradigm focuses on recognising and narrating the meaning of human experience and behaviour so that researchers can understand social phenomena through people's interpretations and explanations (Bahari, 2010). Interpretive research relies on a qualitative research approach to examine how individuals interpret and construct their realities

regarding specific social phenomena (Creswell & Creswell, 2018). The interpretive paradigm emphasises understanding the meanings and interpretations that individuals and groups assign to their experiences. By employing an interpretive paradigm, this research explores the underlying perceptions and experiences of mid-level leaders from sport organisations regarding ES. This approach facilitates deep insights into the contextual factors influencing the development and implementation of ES policy and practices in Australian sport.

Qualitative research design

Research design concerns what, and how, data are collected for a specific research purpose (Denzin & Lincoln, 2018). Qualitative research is commonly used to facilitate an understanding of social phenomena through the perceptions of actors/people. The purpose of qualitative research is to discover and understand the significance of individuals' or groups' perceptions of, or engagement with, social issues (Creswell & Poth, 2016). This approach involves collecting and analysing non-numerical data, such as narratives, descriptions, and observations, to gain insights into how people make sense of the world around them.

Qualitative research has limitations. Specifically, qualitative research can be prone to researcher bias due to the subjective nature of data collection and analysis (Azungah, 2018). To mitigate potential biases, Creswell and Poth (2016) outlined several strategies that researchers can adopt. For instance, researchers can seek participant feedback to ensure that the interpretations accurately reflect their experiences and perspectives. This step can help reduce researcher bias by allowing participants to challenge or clarify any misinterpretations. In addition, researchers can corroborate findings and reduce possible bias in any single data source by utilising multiple data sources, including conducting interviews, making observations, and analysing documents. By taking such steps, researchers can increase the replicability and integrity of qualitative research findings (Creswell & Creswell, 2018).

Qualitative research methods have been used in the field of organisational sport management and policy development research (Veal & Darcy, 2014). Qualitative methods enable sport researchers

to interpret, understand, and contextualise sport policy research with data collection through interviews, focus groups, and case studies. These methods are particularly suitable for exploring complex social phenomena, such as the attitudes, beliefs, and behaviours of sport organisations and their stakeholders. By using these methods, researchers have been able to gain diverse insights into the experiences and perspectives of those involved in sport organisations and examine a wide range of topics, including sport governance, athlete development, and the impact of sport events on local communities (Skinner et al., 2021).

Qualitative case study approach

There are five approaches to qualitative research design: ethnography, narrative, phenomenology, grounded theory, and case study (Creswell & Creswell, 2018). These five methods typically use similar data collection techniques, such as observations, interviews and document analysis. A case study consists of an in-depth, detailed analysis of an individual or group in its real-life setting (Yin, 2014).

The case study approach is a frequently used qualitative research method in sport management research (Skinner et al., 2021) to gain a rich understanding of sports phenomena, people, events, and organisations (Flyvbjerg, 2006). Morse and McEvoy (2014) stated that, when seeking a deeper understanding of research, it is important for the researcher to have a comprehensive description of the problem from multiple perspectives. A case study method is appropriate when the researcher has an identifiable bounded case and is trying to provide an understanding of the case or a comparison of several cases (Skinner et al., 2021). A case study researcher can focus on a specific area of interest, or phenomenon, by limiting their study to a small number of units, which allows for a more detailed and in-depth analysis.

Despite being criticised for limited generalisability due to small sample sizes, the case study method provides a valuable opportunity to gain an in-depth and comprehensive understanding of a specific phenomenon (Flyvbjerg, 2006). One of the primary strengths of the case study method is its ability to provide contextualised data, which is relevant to a particular industry or sector and

directly applicable to practice in that field (Baxter & Jack, 2008). Understanding is enhanced because case studies allow for researchers to collect detailed data on the context, history, and current situation of the case, and to explore the various factors that contribute to its success or failure (Merriam & Tisdell, 2016). Another strength of the case study method is its flexibility in terms of data collection tools, which can include interviews, observations, and documents (Yin, 2014).

While a qualitative case study design aligns well with the exploratory and contextual aims of this research, it is important to acknowledge several recognised limitations associated with case study methods. One common criticism is that case studies do not readily support statistical generalisation beyond the specific settings examined. Others argue that case-based research privileges detailed contextual knowledge at the expense of generating broadly applicable theoretical propositions, or that it risks a bias toward verification. Case studies are also sometimes viewed as less appropriate for addressing research questions focused on frequency or magnitude, such as “how much” or “how often,” which are typically addressed through quantitative approaches (Yin, 2009). Given that five of the six research questions in this study are framed as “what” questions, this concern may be considered particularly relevant.

However, scholars such as (Flyvbjerg, 2011) have challenged these critiques, characterising them as methodological myths. He argues that theoretical knowledge is not inherently superior to case knowledge, and that well-designed case studies can contribute meaningfully to theory development. Case studies, when conducted rigorously, are capable of producing analytically generalisable findings rather than purely statistical ones, and can provide valuable insights into complex, real-world organisational processes. In this study, the case design is used not to generalise to populations but to develop a deeper understanding of how organisational leadership influences the adoption of ES practices within a bounded set of Australian sport organisations. This focus on analytical rather than statistical generalisation is consistent with established methodological debates in the case study literature.

Research Design

Research on the role of organisational leadership in developing and implementing ES practices in sport has not received significant attention in the academic literature to date. To investigate the nature, characteristics, and circumstances, relating to the development and implementation of ES policy and practice, this research has adopted a qualitative, two-stage, case study methodology. This approach allowed for data to be collected and synthesised from multiple sources to generate a comprehensive understanding of the key organisational leadership factors influencing the development and implementation of ES practices in Australian sport organisations.

Research aim and research questions

To achieve the overarching aim of this research – to investigate how organisational leadership influences the development and implementation of ES practices in Australian sport organisations – the following research questions were posed:

1. What publicly available strategic plans and policies documents exist in Australian NSOs related to ES?
2. How do NSOs define ES in their strategic plans and policies?
3. What organisational leadership factors influence ES policy in sport?
4. What is the mechanism of influence of the major organisational leadership factors to shape ES policy?
5. What are the facilitators and barriers to developing and implementing ES policy in Australian sport?
6. What role does organisational leadership play in removing or creating barriers to the development and implementation of ES policy in sport organisations?

To answer the research questions and meet the research aim, a two-stage approach was adopted. Study One (document analysis) and Study Two (case study) were designed to be complementary, thereby ensuring that insights from multiple sources provided a comprehensive understanding of the research topic. This approach is well-suited for this research because as it aims to understand

the social behaviours and processes involved in ES policy development and implementation. The qualitative design used in this research included conducting semi-structured interviews with a purposive sample of sport organisations, analysing organisational documents, and incorporating field notes. The case study method allowed for a comprehensive exploration of each sport organisation's unique context and the specific leadership factors influencing their ES plans and initiatives. This methodology ensured that the research captured contextual insights necessary to understand the complex nature of ES policy development and implementation in Australian sport organisations.

Study One consisted of a preliminary document analysis of publicly available policies, strategies, and reports from Australian NSOs to understand the scope and extent of environmental policies and practices they have adopted. The purpose of Study One was to establish a foundation of understanding relating to the current state of ES practices and policies in Australian sport organisations.

Study Two further investigated and expanded the findings from Study One, using a qualitative case study approach, which integrated data insights from semi-structured interviews, additional document analysis, and field notes. Semi-structured interviews were conducted with senior managers across different Australian sport organisations responsible for ES policy and practices, in order to gain an understanding of the organisational context and views of individuals about the key characteristics, attributes, and processes and procedures associated with developing and implementing ES policies and practices in Australian sport organisations (Kvale & Brinkmann, 2009). Document analysis extended beyond the publicly available policies identified in Study One, to include internal organisational reports, ES action plans, and other related ES information that provided additional evidence of the organisational ES policy, plans and/or practices shared by interview participants (Bowen, 2009). In addition to interviews and document analysis, researcher field notes were used as a supplemental data source. These notes captured observations of participant behaviour, non-verbal cues, and organisational settings, as well as informal interactions that provided additional contextual understanding of the stakeholders responsible for developing and/or implementing ES practices. The field notes also contributed to the triangulation of data

sources, which helped to validate and enrich the themes identified during the interviews and document analysis (further discussed later in this chapter). For example, the field notes allowed the researcher to document informal observations or off-record discussions that complemented formal interview responses. Integrating field notes with other data sources ensured a comprehensive understanding of the research topic and strengthened the credibility of the findings (Patton, 2014).

Study One– Preliminary Document Analysis

The objective of Study One was to identify the current ES commitments and reported practices of Australian NSOs. Study One focused on analysing publicly available documents, such as strategic plans, sustainability reports, and policy statements, to assess how and to what extent Australian NSOs engage with the concept of ES from a strategic and organisational perspective.

Data collection

Data were collected on publicly available organisational documents of Australian NSOs (recognised and funded by the Australian Sports Commission (ASC)). Organisational documents included strategic plans, organisational policies, national guidelines, and annual reports.

The document search strategy was based on a specified website search. An organisation's website is one way to communicate an organisation's plans and practices to a target audience (Bekker & Finch, 2016). The official website of each Australian ASC-funded NSO was reviewed and analysed. Each NSO website was searched to identify organisational documents that provided an understanding of the nature and types of efforts made by NSOs in addressing ES. Public strategic plans and policies were included if they were relevant to ES. A screening inclusion criterion was employed to ensure that the search strategy would identify all relevant documents. The website of each NSO was assessed to determine the following:

1. Does the NSO have national strategic or policy plans publicly available?
2. If so, do those documents reference environmental sustainability?

3. If so, do those documents reference specific initiatives or efforts to address environmental sustainability?
4. Does the NSO reference any public policies to support its strategic plan related to environmental sustainability?

Data analysis

Following the data collection screening process, organisational documents from NSOs that referred to ES were identified and selected for analysis. Thematic analysis was adopted to analyse the collected documents and to identify the main environmental sustainability themes contained in the NSO organisational documents. Thematic analysis, as a fundamental method for qualitative data analysis, involves carefully examining data sets and identifying patterns in meaning across the data to derive themes (Kalogirou et al., 2021). This method of analysis enables researchers to organise, categorise, and generate, new insights and concepts from data in a detailed manner. The procedural guidelines for conducting thematic analysis include data familiarisation, generating information topic codes, organising codes, grouping codes into themes, defining the naming and definitions of themes, and writing a report on the findings (Braun & Clarke, 2006).

Inductive and deductive approaches were adopted to generate themes. Combining deductive and inductive analytical processes allowed for rigorous consideration of how the theoretical framework explains the findings, which, in turn, can support theoretical contributions. In qualitative analysis, deductive analysis refers to organising data according to pre-determined categories based on existing theory or knowledge (Hyde, 2000). Inductive analysis is a method that mainly uses a detailed reading of raw data to derive concepts and themes directly from the data (Azungah, 2018). Based on the nature of the research underpinning this thesis, a deductive approach was undertaken first to categorise data according to pre-determined codes derived from the conceptual framework developed in Chapter 2, which integrates ecological systems theory, responsible innovation and dynamic capabilities perspectives. Then an inductive reasoning approach was employed to capture new insights or themes that did not align with the pre-determined codes.

To assist the coding process, a qualitative coding manual can be used as a data curation tool to interpret relevant text fragments, and as a guide to commencing the subsequent analysis (Creswell & Poth, 2016). For Study One, the coding manual was developed a priori, based on the research questions and the theory being examined. Four predetermined deductive code categories were identified, derived from the integrated conceptual framework that combines the responsible innovation framework (Scherer & Voegtlin, 2020) and Bronfenbrenner’s ecological systems theory (Bronfenbrenner, 1994). This integration allowed the study to capture the reflexive and participative governance dimensions emphasised in the responsible innovation framework, while also incorporating the multi-level contextual influences highlighted in ecological systems theory. Table 1 describes the four codes (code title) and their alignment with the key theoretical framework.

Table 1
Pre-Determined Codes (Based on Deductive Reasoning)

Responsible innovation framework	Ecological systems theory	Code title
No equivalent	Micro-level	Individual action or advocacy for ES
(Facilitate) innovations that (1) avoid harm and (2) do good for people and the planet	Meso-level	Whole of sport actions and initiatives for ES
Reflexive and participative corporate governance	Exo-level	ES policy and strategy development
(Contribution) to grand societal challenges and sustainable development	Macro-level	Reference to societal, cultural views about ES

The text data were further examined and scrutinised using an inductive reasoning approach to generate and describe any additional codes, or specific sub-codes, within the four predetermined codes. The next stage of analysis involved clustering the sub-codes to create themes, which

represented the initial data analysis and codes (Fereday & Muir-Cochrane, 2006). Codes from previous stages were individually and collectively reviewed and cross-checked with the research supervisory team to ensure that the clustered themes accurately represented the initial data analysis. During the final stage, codes were combined to reveal an emerging comprehensive set of themes which represented the Study One findings.

Study Two – Case Study Methods

The findings from Study One established a foundation for Study Two by identifying the number and types of organisational documents available at that time from Australian NSOs, and the ES issues they addressed. The outcomes and insights gained from Study One informed the design and participant selection for Study Two. Study Two adopted a qualitative case study approach, which integrated semi-structured interviews, additional document analysis, and field notes as part of an expanded reflexive thematic analysis.

Case study sample:

Case selection is typically purposive when multiple cases are involved in the research (Veal & Darcy, 2014). For Study Two, the initial sample cases were selected based on their being a registered Australian NSOs with clear and identifiable ES policies and practices. Study One identified nine cases that had publicly available documents, such as policies and annual reports, that referred to ES. Due to recruitment challenges, the case selection criteria were expanded to include other eligible Australian sport organisations, such as state sport organisations (SSOs) and professional clubs with evidence of ES related practice, such as a publicly available ES policy and/or website content.

The following eligibility criteria were used to inform purposive case selection:

- NSOs, SSOs, or professional clubs with documented references to ES initiatives in media or public reports.
- Sport organisations which were actively implementing ES measures, actions, or programs.

The case study ‘units of analysis’ focused on the internal organisational leadership practices and processes identified across the selected cases (i.e., sport organisations) that specifically enabled or hampered the development or implementation of ES policy, strategy, and practices (Yin, 2009). Analysis of case study units was informed by the conceptual framework developed for this research (see Figure 1, Chapter 2), which was based on two frameworks and one theory, namely the responsible innovation framework (Scherer & Voegtlin, 2020), the dynamic capabilities framework (Harris et al., 2021), and ecological systems theory (Bronfenbrenner, 1994). The following sections describe the data collection and analysis methods for both stages of Study Two.

Data collection:

Semi-Structured interviews

A series of semi-structured interviews were undertaken concurrently to the document analysis as part of Study Two. Interviews are common in exploratory research. They are an appropriate means of collecting detailed, experiential data directly from participants, to gain insights into complex social issues that might not be apparent from other sources (Bryman, 2016; Creswell & Creswell, 2018). Interviews are a particularly useful data source for case studies because they allow the researcher to collect diverse information about the experiences, attitudes, and perspectives of the people involved in the case (Yin, 2014). By engaging with participants through semi-structured interviews, the researcher was able to balance consistency in guiding questions with the flexibility to explore for deeper insights. This approach allowed participants to elaborate on their experiences in their own terms, thereby enabling the researcher to explore unanticipated but relevant themes and gain an understanding of the wider social and organisational contexts that shape ES practices (Merriam & Tisdell, 2016).

Conducting interviews with relevant sports managers enabled the researcher to obtain a critical perspective on the influences of organisational leadership on ES. Although leadership is not always explicitly theorised as a distinct construct, it is implicitly present as a mechanism that shapes

strategic change, organisational adaptation, and multi-level system interactions (Plowman et al., 2007). To address this conceptual nuance, the interview protocol was carefully designed to capture participants' reflections on how leadership was expressed through both formal structures and informal practices, and how these shaped sustainability outcomes within their organisations.

Participant sample

The criteria for participant selection included individuals in key decision-making roles or those directly involved in ES initiatives, such as chief executive officer (CEO), ES managers (or equivalent), and board members across different cases. Each case included at least one key decision-maker responsible for developing or implementing ES policies. In some cases, two participants were interviewed to capture diverse perspectives and provide a broader understanding of the organisation's ES practices. This approach ensured the inclusion of participants with direct knowledge of, and influence on, the development and implementation of ES policies.

Qualitative research commonly employs sampling strategies, such as snowball, convenience, purposive, and maximum variation sampling (Palinkas et al., 2015). Among these strategies, purposive sampling is widely used in various fields, including healthcare, social sciences, and education (Guest et al., 2006). Purposive sampling is a non-probability technique, which enables the selection of those participants who are most likely to provide rich and meaningful data (Creswell & Poth, 2016). Furthermore, one of the key advantages of purposive sampling is that it facilitates the diversification of the sample by selecting participants from different backgrounds, experiences, or settings (Palinkas et al., 2015). Significantly, purposive sampling is the most appropriate sampling method for qualitative research that seeks to understand a particular phenomenon or experience from the perspective of those who have lived it (Creswell & Poth, 2016).

For Study Two, purposive sampling enabled the researcher to select participants with knowledge and expertise in ES practices and leadership within Australian sport organisations. The participants were selected based on their experience in ES practices, and their current organisational role and

involvement in developing and/or implementing ES strategies. This sampling strategy ensured that the selected participants possessed the necessary knowledge and experience to provide considered and relevant data that could assist in answering the research questions.

Participant recruitment

The CEOs of sport organisations that met the eligibility criteria of the study were contacted via email and asked to nominate relevant senior managers for a semi-structured interview. After receiving the CEO participant nominations and identifying other potential participants through purposive sampling, an invitation email was sent to the identified/nominated participants outlining the purpose of the study, the interview duration, the nature of the participants' involvement, the benefits, and the potential risks of participation in the study (Appendix A). CEOs from identified sport organisations were also encouraged to alert relevant senior managers in their organisation about the opportunity to participate in the research.

Once potential participants expressed their interest in being involved, the researcher contacted each person by email to arrange a convenient time (and location, if in-person was preferred) for the interview, and to provide them with the "Information to Participants Involved in Research" form (Appendix B) and the "Consent Form for Participants Involved in Research" (Appendix C). Study Two employed a data-driven approach to determine the sample size for the interviews. The saturation point was reached when no new themes emerged, and the existing themes were fully developed and deemed important (Guest et al., 2006). Interviews were conducted until it was determined that collecting additional data was unlikely to lead to new insights or information (Bryman, 2016).

Interview guides

The process of developing the interview guide (Appendix D) involved both inductive and deductive approaches, with some questions derived from the responsible innovation and dynamic capabilities frameworks, and ecological systems theory. In addition, the interview guide was

informed by the literature on ES in sport organisations and leadership in organisational change. Specifically, the guide addressed the role of organisational leadership in implementing ES practices in Australian sport organisations. The guide ensured participants were asked structured questions while allowing them to share their diverse experiences, perspectives, and attitudes towards ES and leadership.

Interview process

The “Consent Form for Participants Involved in Research” (Appendix C) was signed electronically prior to conducting the interview. Any concerns or questions relating to the interview process, confidentiality, and/or consent, were addressed prior to the interview. Participants were encouraged to choose a safe, comfortable, and quiet location for the interview. Before commencing the interview, which was conducted via telephone, online, or in-person, the researcher explained the study verbally to the participants and obtained their verbal consent to proceed with the interview and audio-record it.

Each interview lasted approximately one hour and was recorded digitally using Otter software. Following the interview, the audio recordings were transcribed into a Word document, and each transcription was cross-checked for accuracy against the interview audio by the supervisory team.

Document collection

Document analysis is a form of qualitative research that uses systematic procedures for thematically reviewing documents (Bowen, 2009). The choice of document analysis was justified on the basis that it is particularly applicable to qualitative case studies, such as events and organisational practices, and has been widely used to research sporting events and organisations (Skinner et al., 2021). For Study Two, the documentary evidence served to give context and complementary information on the processes, procedures, and leadership attributes identified in the case study organisation.

Study Two sought to identify and analyse available internal documents that underpin the ES practices described on the websites of the identified Australian sport organisations. The selection of appropriate documents for analysis was crucial to ensure the validity and reliability of the research findings. The process of requesting internal documents commenced with contacting the CEOs of the identified organisations via email. An introductory email was sent to the CEOs with information about the research purpose and a request for any relevant organisational documentation, such as policy documents, operational plans, reports, and any other relevant materials related to the organisation's strategies, practices, and processes. Also, during the semi-structured interviews, participants were asked to provide any relevant organisational documentation related to their ES practices. Only documents published after 2018 were requested. This timeframe was chosen because it aligns with the UN Sports for Climate Action Framework that was launched during the 24th conference of the Parties to the UNFCCC (in December 2018).

Documents that were not relevant to the research questions or did not meet the inclusion criteria were excluded. All documents collected were considered confidential, and participating organisations were advised that subsequent reporting of document analysis would not identify their organisation. After collecting all the documents, the researcher reviewed them to become familiar with the content and develop a clear understanding of the purpose, audience, and type, of each document before categorising and commencing thematic analysis.

Field notes

Field notes are a crucial element in qualitative research. They provide a structured record of the researcher's observations, thoughts, and reflections throughout the research process. Purposeful reflection within field notes enhances the richness and robustness of qualitative data, making them a vital source for understanding the nuances of participant interactions (Deggs & Hernandez, 2018). Field notes also include thoughts and reflections on the interview process itself, aligning with guidelines for systematically recording all accounts and observations (Mack, 2005). This method ensures that field notes document both factual elements of the research process and provide a reflective account for deeper analysis (Phillippi & Lauderdale, 2018).

Field notes were recorded during and immediately after each semi-structured interview to document key observational insights and support reflexive practice. These notes captured participants' levels of enthusiasm, degree of engagement, and openness when discussing ES practices. In addition, field notes also served as a tool for reflexive development, capturing the researcher's evolving insights during data collection. These field notes also included observations about the effectiveness of specific questions, the timing of prompts, and the overall learning from, and development of, the interview process. Finally, these field notes documented areas in which interview strategies could be adjusted to improve question clarity or engagement.

Data analysis

The interviews data were initially analysed using thematic analysis; a qualitative data analysis method that involves identifying, analysing, and reporting patterns within the data (Braun & Clarke, 2006). This foundational thematic analysis approach involved data familiarisation, coding data, organising codes, grouping codes into themes, naming the themes, and writing a report on the findings. Building on this foundation, the analysis was further refined through the principles of reflexive thematic analysis (RTA), as developed by Braun and Clarke (2019). RTA emphasises that the researcher actively constructs themes rather than identifying them passively. The approach emphasises the construction of themes as interpretive stories connecting patterns of meaning across the dataset and shaped by the researcher's perspectives and engagement with the data. Reflexivity is central to this process and it requires the researcher to consider how their background influences the analysis. In addition, document analysis requires deriving and synthesising contextual information about achievements or intentions from the collected documents. In qualitative research, RTA is recognised as an advanced approach to consolidating and interpreting qualitative data (Braun & Clarke, 2019). RTA goes beyond simply following a set of procedures and positions the researcher's active engagement and reflexivity as central to the analysis process.

The RTA process also supports theme development based on "topic summaries" and "meaning-united stories" (Braun and Clarke (2023). While topic summaries replicate data collection

questions or summarise responses, meaning-based themes synthesise diverse data points into cohesive narratives centred around a core idea. These distinctions guided the iterative process of coding, clustering, and refining, themes to capture the complexity of the data. Themes were underpinned by sub-themes for coherence, thereby ensuring clear, accurate and meaningful interpretation of the data.

The data analysis process began with the essential step of confirming the accuracy and completeness of interview transcripts, in order to ensure the quality of the qualitative research data (Broom et al., 2009). In Study Two, the researcher read the transcripts while listening to the audio recording of the interview to ensure the accuracy and completeness of interview transcripts. The transcript was assigned a unique pseudonym to de-identify participant data. This approach was important to protect the confidentiality and privacy of the participants and ensure that their personal information was not disclosed in the reporting of results. The interview transcript data, and additional supporting documents were analysed using NVivo 12 software, which facilitated the coding process for RTA.

The thematic analysis followed the framework proposed by Braun and Clarke (2019), which involves becoming familiar with the data, generating initial codes, searching for patterns, developing themes, and iteratively refining these themes. During the familiarisation phase, the interview transcripts and documents were thoroughly reviewed several times to identify both clear and underlying meanings. This reflexive approach enabled the researcher to engage and immerse themselves in the data and acknowledge how their perspectives may impact the thematic analysis. The next step in thematic analysis was coding the data. Coding refers to the process of labelling chunks of text with titles that summarise the main points and meaning (Saldaña, 2016). Study Two employed both deductive and inductive reasoning to the coding process; these being two different but complementary approaches to qualitative data analysis.

Reflexivity in the research process

Reflexivity is a core principle of RTA, underpinning both the analytic process and the interpretive

positioning of the researcher. It involves a continuous and critical reflection on the assumptions, values, and positionality that shape every stage of research. Reflexivity requires “turning of the researcher lens back onto oneself to recognize and take responsibility for one’s own situatedness within the research and the effect that it may have on the setting and people being studied, questions being asked, data being collected and its interpretation (Braun & Clarke, 2022). This orientation challenges positivist assumptions of neutrality and instead acknowledges the co-construction of meaning in qualitative research.

In this study, reflexivity was considered across three dimensions. From a personal reflexivity perspective, the research topic was shaped by underlying values related to environmental responsibility, social equity, and ethical organisational practice. These values influenced the selection of ES as a core focus and shaped interpretive engagement with participants' accounts. Prior academic training and professional experience in the sport and non-profit sectors also contributed to the perspectives brought into the research context, influencing both topic selection and thematic sensitivity.

From a functional reflexivity standpoint, the use of qualitative methods, including semi-structured interviews and document analysis, was consistent with an interpretivist epistemology and a constructivist ontology. These methodological choices framed the research as a meaning-making process rather than an attempt to uncover objective truths. The structure of the case study design, as well as the iterative nature of coding and theme development, guided what could be observed, prioritised, and interpreted. This also influenced how knowledge was produced and what insights were emphasised through the analytic process (Braun & Clarke, 2022).

Disciplinary reflexivity was reflected in the influence of sport management and organisational leadership literature on research design and interpretation. The selection of sport organisations as the unit of analysis, the focus on formal leadership structures, and the emphasis on organisational processes align with prevailing analytical conventions in the discipline. These disciplinary norms framed how leadership was conceptualised and what kinds of sustainability-related actions were seen as analytically significant.

These reflexive considerations were integrated into the research design and were not treated as peripheral or after-the-fact reflections. Instead, they shaped ongoing analytic decisions, informed the construction of themes, and contributed to a transparent and contextually grounded understanding of the findings.

Deductive coding framework

Deductive coding is an approach used to assign chunks of text with descriptive labels that are pre-determined from a theoretical framework and/or insights from existing literature. This approach is considered particularly useful during the early stages of theory-informed exploratory studies, wherein the goal is to identify patterns and themes in the data (Creswell & Poth, 2016). The deductive codes helped categorise specific events, behaviours, and organisational practices relevant to ES.

For both Study One and Two, the deductive coding framework developed was informed by the conceptual framework (refer to Figure 1, Chapter 2), which incorporated the responsible innovation framework (Scherer & Voegtlin, 2020), the dynamic capabilities framework (Harris et al., 2021), and ecological systems theory (Bronfenbrenner, 1994). The responsible innovation framework examines the role of governance in fostering innovation, while the dynamic capabilities framework focuses on the organisational capacity to drive continuous innovation and improve organisational performance. These frameworks were further complemented by ecological systems theory, which acknowledges the influences of different social environments on human behaviour and development.

Organisational leadership was added to the conceptual framework given the importance of leadership in creating change and adopting innovation (Jun & Lee, 2023; Wilson-Evered et al., 2001). Although the two theoretical frameworks and one theory adopted in studies One and Two do not define leadership as a separate analytical category, leadership was treated as a central

construct and was systematically integrated into the coding process. A series of codes were developed to reflect the role of leadership in strategic planning, resource allocation, collaboration across organisational departments, and influencing organisational climate. These leadership-related codes were associated with the conceptual components of responsible innovation, dynamic capabilities, and ecological systems theory.

The integrated conceptual framework allowed for the creation of pre-determined codes that captured key elements of responsible innovation, organisational performance, and individual behaviours. Each code was defined with a brief description to ensure clarity and accuracy in the coding process. A table outlining the pre-determined codes and their respective alignment to the theoretical components of the conceptual framework is provided below:

Table 2

The Pre-determined Codes and Their Framework/Theory

Code	Framework/Theory
Strategic planning for ES	Leadership / Dynamic capabilities framework
Resource allocation for ES implementation	Leadership / Dynamic capabilities framework
Collaboration across organisational departments	Leadership / Ecological systems theory
Influence on organisational climate	Leadership / Ecological systems theory
ES initiatives and innovations	Responsible innovation practices
ES values and organisational commitment	Responsible innovation practices
Stakeholder engagement and collaboration	Responsible innovation practices
ES risk assessment and reporting	Responsible innovation practices
Drivers of ES practices (systems-level)	Responsible innovation practices

Microsystem influence (individual level influences)	Ecological systems framework
Mesosystem influence (organisational relationships and interactions)	Ecological systems framework
Macrosystem influence (external influences and governance entities)	Ecological systems framework
Bidirectional impact of sport and environment	Ecological systems framework
Challenges in implementing ES practices (systems-level)	Dynamic capabilities theory
ES knowledge learning and training	Dynamic capabilities theory
Strategic policy planning	Dynamic capabilities theory

Coding approach and use of a codebook

Although this study adopted Braun and Clarke’s RTA, a codebook was pragmatically employed to support the organisation and transparency of coding across the two datasets. Codebooks are characteristic of coding reliability approaches to thematic analysis, such as template analysis or framework analysis, which are grounded in post-positivist assumptions and are considered incompatible with the interpretivist values that underpin RTA (Braun & Clarke, 2022). This highlights a methodological tension between the selected analytic approach and the use of a tool associated with a different qualitative tradition.

Despite this tension, the application of a codebook in this study can be justified as a flexible and practical tool that supported the coding process. The codebook was not treated as a fixed or prescriptive instrument. Instead, it functioned as a heuristic device to help document, refine, and organise codes and themes. Coding was conducted as an iterative and interpretive process, with codes being added, revised, or removed as analytical understanding deepened over time. This is consistent with the reflexive orientation of RTA. While Braun and Clarke caution against the use of codebooks within RTA, other methodological scholars have acknowledged that codebooks can

enhance transparency, consistency, and rigour in qualitative analysis when used appropriately (Creswell & Creswell, 2018).

In the context of this study, the codebook served to support analytic coherence across two distinct datasets without compromising the underlying interpretive and inductive principles of the chosen approach.

Inductive coding process

In addition to deductive coding, an inductive coding approach was employed to generate interpretive codes. Interpretive codes go beyond describing what exists in the data, to reflect the underlying meaning and interpretation of the data (Saldaña, 2016). The inductive coding approach allowed for the identification of emergent concepts and ideas that were not pre-determined by the conceptual framework. This approach facilitated a more nuanced understanding of the data and ensured that all data were thoroughly considered and interrogated. The NVivo 12 software program was used to manage the coding process and develop the qualitative coding framework (i.e., codebook), thereby ensuring the application of both deductive and inductive codes (Guest et al., 2012).

Following the coding of the data, codes were then clustered into themes and sub-themes. The process of creating themes involved reviewing the coded data to identify patterns and connections between codes. As part of a reflexive thematic analysis approach, the researcher's positionality was acknowledged during this process. The interpretation and organisation of themes were influenced by the researcher's theoretical perspective and engagement with the data, which shaped how meaning was constructed across the dataset. To identify themes in qualitative research, researchers review codes and look for similarities and patterns to develop a comprehensive understanding of the data (Braun & Clarke, 2006). The definition of a theme can vary depending on the researcher and the specific study. However, a theme generally refers to a pattern or idea that emerges from the data and is relevant to the research question (Creswell & Poth, 2016). For studies One and Two, codes were grouped into categories based on shared meaning and then developed

into overarching themes. In line with RTA, themes were conceptualised not as topic summaries but as meaning-united stories that captured deeper patterns across the data. This process was iterative, with codes and categories continually reviewed and refined to ensure that the resulting themes reflected the complexity and interpretive nature of the dataset.

Integration of Data Analyses

To integrate and compare the analyses from different data sources, the researcher adopted the systematic data integration method proposed by Strøm and Fagermoen (2012). This method involves combining field notes and interview texts to develop a comprehensive understanding of the research questions. The systematic data integration method used in this research ensured that the analysis was rigorous and reliable, and thereby consistent with previous scholars' recommendations for conducting case study research (Baxter & Jack, 2008; Flyvbjerg, 2006; Merriam & Tisdell, 2016). The insights gained from the researcher's field notes were incorporated into the major themes as supporting evidence and were not analysed separately. These insights provided additional context by capturing observations of participant interactions and informal discussions, which helped to clarify and strengthen the insights gained from interviews and documents.

Once the interview codebook was finalised, the same iterative approach was applied to the document analysis codebook. Initial codes from the document analysis were aligned with those from the interviews where appropriate. However, the document codes also captured unique and meaningful content that could only be derived from sport organisational documents. As new codes emerged during the document analysis, these were compared to existing codes from the interviews, and the codebook was updated accordingly to reflect new insights.

Researcher Rigour

An ethics application was submitted and reviewed by the Victoria University Human Research Ethics Committee (VUHREC). Approval for the conduct of semi-structured interviews was

obtained from the VUHREC on 20/03/2023 (Application ID: 0000027453). Throughout the research, the protocols and practices outlined in the ethics application were strictly adhered to, and the confidentiality and secure storage of data were maintained. These ethical considerations were of paramount importance to ensure the safety, privacy, and autonomy of research participants, as well as to maintain the credibility and validity of the research findings. In the context of research, respecting the autonomy of research participants means acknowledging their freedom to voluntarily participate or withdraw from the research, obtaining informed consent, and ensuring that participants' preferences and perspectives are considered throughout the research process (Creswell & Poth, 2016). By obtaining ethical approval and following the ethical guidelines, the research upheld the highest standards of academic integrity and ethical conduct in research.

The use of triangulation is a widely accepted technique for ensuring the validity and reliability of qualitative research findings. By using multiple sources of data, researchers can compare and corroborate their findings, thus reducing the risk of biases or errors resulting from using only one data source (Creswell & Creswell, 2018). In regard to the research underpinning this thesis, the use of both internal organisational documents and semi-structured interviews were sources of data that allowed for the cross-validation of findings, which increased the reliability of the research. The internal documents offered structured information about ES strategies, policies, and procedures, while the semi-structured interviews provided contextual insights into the decision-making processes and leadership dynamics that shaped ES practices (Patton, 2014). Interview transcripts were then checked for accuracy and completeness by the student researcher and supervisors. A triangulation approach was used to enhance the credibility of the findings by comparing and cross-verifying data from interviews and documents. This work allowed for a more comprehensive understanding of the organisational leadership factors that influence the development and implementation of ES practices.

The rigour of the qualitative approach was enabled through the use of member checking, to ensure accuracy and completeness (Creswell & Poth, 2016). Initially, the first few interviews were coded, and the NVivo file was shared with the second member of the supervisory team for review. Any disagreements in coding were discussed until a consensus was reached, thereby ensuring that the

codes clearly described the data. Additionally, the supervisory team conducted peer-debriefing sessions to further develop specific concepts and coding categories, and to challenge any assumptions or conceptualisations made by the student researcher. This process allowed for a critical evaluation of the research and ensured that the findings were well-supported by the research team and reliable.

In summary, adherence to ethical guidelines, the use of triangulation, and member checking ensured that the research findings were valid, reliable, and trustworthy. These practices upheld the highest standards of academic integrity and ethical conduct in research and ensured that the research outcomes contributed to the advancement of knowledge in the field of ES in sport organisations.

Chapter Summation

The research underpinning this thesis aimed to provide a comprehensive understanding of the organisational leadership factors that influence the implementation of ES policy in Australian sport organisations. To guide the investigation, a conceptual framework was developed based on two leading frameworks (responsible innovation, and dynamic capabilities), and ecological systems theory. A qualitative case study design was adopted, incorporating two stages of data collection: Study One (preliminary document analysis) examined publicly available documents from Australian NSOs policies and practices regarding ES; and Study Two (case study approach) used semi-structured interviews with managers of selected Australian sport organisations, additional document analysis, and field notes. RTA with a deductive-inductive approach was used to analyse the data from both studies and create themes that capture patterned meanings across the dataset. To integrate and compare the analyses from different data sources, the researcher employed a systematic data integration method. The chapter concluded with a summary of the systematic integration of data analyses and the rigour of the research design. The ethical considerations applied to this research were outlined in compliance with the requirements for the ethical conduct of human research approved by VUHREC.

Chapter 4 - Results

Chapter 3 described the methodology used to conduct this research, including the two-staged approach of the Study One findings informing the Study Two design. In Study One, document analysis examined how and to what extent Australian NSOs engage with the concept of ES from a strategic and organisational perspective. Study Two further progressed and expanded on the Study One findings by using a case study approach that analysed data from multiple sources, including semi-structured interviews with senior managers, additional document analysis, and field notes. This chapter presents the findings from these two studies.

Study One - Document Analysis

The purpose of Study One document analysis was to explore the concept of ES within Australian NSOs and identify what strategic plans and policies documents exist related to ES. Study One drew on a sample of publicly available organisational documents of Australian NSOs defined as being recognised and funded by the ASC. Publicly available organisational documents included strategic plans, organisational policies, national guidelines, and annual reports, all of which were sourced from the NSOs' websites. A preliminary review of the collected data identified three main findings (see Table 3 for the nine organisational documents stating ES):

- **Document Accessibility:** Of the 56 NSOs investigated, 30 published accessible documents on their official websites; with only nine having a relevant document that referenced ES (16%).
- **ES-Specific Initiatives:** Of the nine documents eligible for analysis, eight documents representing 8 NSOs (14%) described specific ES-related initiatives.
- **Policy Alignment:** Only five documents/NSOs (8%) referenced alignment with ES policies or guidelines.

Table 3*Nine Organisational Documents Referencing ES (data capture from 07/12/2021)*

Sport	Document names (Year)	Mention ES?	Specific ES initiatives?	Policy support for ES?
Bowls Australia	Strategic plan (2021)	Yes	Yes	No
Golf Australia	Annual report (2021)	Yes	Yes	No
Gymnastics Australia	Strategic plan (2021)	Yes	Yes	No
Motorcycling Australia	Organisational policy (2021)	Yes	Yes	Yes
Motorsport Australia	Organisational policy (2020)	Yes	Yes	Yes
Netball Australia	Annual report (2020)	Yes	Yes	Yes
Rowing Australia	Organisational policy (2009)	Yes	Yes	Yes
Sailing Australia	Annual report (2021)	Yes	No	No
Surf Life Saving Australia	Organisational policy (2005)	Yes	Yes	Yes

Thematic Analysis

A deductive approach was first applied to the coding process using a priori codes derived from the research questions and based on the theoretical foundations of the responsible innovation framework (Scherer & Voegtlin, 2020) and Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1994). A deductive coding manual was developed reflecting specific code categories that aligned with key concepts from this framework and theory. This initial coding phase allowed for targeted data analysis that was directly informed by the integrated conceptual framework developed combining both the responsible innovation framework and ecological systems theory.

Inductive coding then followed, which facilitated the identification of additional codes and/or sub-codes within the four pre-determined codes. This approach resulted in five major themes from the nine organisational documents (See Table 4 for themes, key characteristics of themes, and sub-themes).

Table 4

Thematic Analysis Summary

Major themes	Key characteristics	Sub-themes
Individual action or advocacy for ES	Athlete/individual advocacy for environmental issues and/or climate change	<ul style="list-style-type: none"> - Educating members - Ambassador program - Responsibilities of managers
Whole of sport actions and initiatives for ES	Sustainability features embedded in NSO management systems/ structures (i.e., novel programs, products, activities, initiatives or services)	<ul style="list-style-type: none"> - NSOs' ES initiatives/action - Management system capabilities - Avoid taking actions that are detrimental to ES - Promotion of ES awareness to community - Assessment of organisational impact on the environment
ES policy and strategy development	NSO policies and strategies Alignment with other national/ international policy on Sport for ES Consultation process (i.e., reflexive and participative with multi-stakeholders)	<ul style="list-style-type: none"> - ES guiding principles - ES purpose - Comply with ES regulations - Alignment with National/International ES policy - Commitment to ES for NSOs
Societal and cultural views on ES	Attitudes, ideologies of culture relating to sport's role in addressing ES (i.e., movements such as #NoPlanetNoPlay)	<ul style="list-style-type: none"> - Environmental vision - NSOs leadership role in addressing ES - Social and environmental benefits
ES infrastructure and facility operations	NSO's infrastructure, building and construction needs to consider ES	<ul style="list-style-type: none"> - Facility design guidance - Energy efficient technologies - Natural resources used

Table 5, below, summarises the frequency of each major theme and its sub-themes across the nine organisational documents. For example, the most frequent major theme was “Whole of sport

actions and initiatives for ES”. Most organisations (n=7) reported “Whole of sport actions and initiatives for ES” and “ES policy and strategy development”.

Table 5

The Frequency of Themes and Sub-themes

Theme name	How many organisations mentioned it (n)	How many times it was mentioned (across all documents)
Individual action or advocacy for ES	Total: 4	Total: 8
- Educating members	3	5
- Ambassador program	1	1
- Responsibilities of managers	2	2
Whole of sport actions and initiatives for ES	Total: 7	Total: 33
- NSOs ES initiatives/action	5	14
- Management system capabilities	3	3
- Avoid taking actions that are detrimental to ES	3	6
- Promotion of ES awareness to community	3	4
- Assessment of organisational impact on the environment	3	6
ES policy and strategy development	Total: 7	Total: 25
- ES guiding principles	4	6
- ES purpose	5	5
- Comply with ES regulations	4	7
- Commitment about ES for NSOs	3	7
Societal and cultural views about ES	Total: 4	Total: 8
- Environmental vision	3	3
- NSOs’ leadership role in addressing ES	1	3
- Social and environmental benefits	1	2
Environmentally sustainable infrastructure and facility operations	Total: 4	Total: 14
- Facility design guidance	2	3
- Energy efficient technologies	3	4
- Natural resources used	3	7

Individual Action or Advocacy for ES

This theme emphasised the role of individuals – athletes, staff, and managers – in promoting ES through personal advocacy. Documents from Bowls Australia, Rowing Australia, and Surf Life Saving Australia referenced efforts to educate members on ES practices. Four documents (n=4) reported on three key areas: educating members, ambassador program, and responsibilities of managers.

Bowls Australia highlighted its role in educating members, with managers being responsible for informing members about the organisation’s environmental plan: *“the organisation’s Managers will play a key role when educating and informing our members on the environmental sustainability plan”* (Bowls, 2021, p. 11). Similarly, Rowing Australia addressed the importance of educating members and the public, recognising that *“rowers are mindful of protecting the environment they must rely on to carry on their sport”* (Rowing, 2009, p. 1). Surf Life Saving Australia encouraged clubs to *“adopt environmentally friendly and ecologically sustainable practices in facility development and resource recovery”* (Surf Life Saving, 2005, p. 3).

Only Bowls Australia mentioned an ambassador program, proposing the use of Australian sports stars and club volunteers as ES ambassadors (Bowls, 2021, p. 12).

Two organisations assigned ES responsibilities to management. Rowing Australia stated that they *“place the responsibility for environmental sustainability with someone in a senior position within the management structure”* (Rowing, 2009, p. 3). Similarly, Motorsport Australia encouraged its staff and partners to *“understand their responsibilities to minimise potential risks to the environment”* (Motorsport, 2020, p. 1).

Whole of Sport Actions and Initiatives for ES

Most NSOs (n=7) reported on whole-of-sport actions and initiatives for ES, describing the sustainability features embedded in their management systems, including projects, products, activities, initiatives, and services.

The most prominent sub-theme was NSOs 'ES initiatives and actions' across five NSO documents, albeit each NSO adopted their own specific approaches. Bowls Australia focused on adopting digital technologies to reduce paper use, stating their plans to *"start transitioning everyday operations to a more paperless environment"* (Bowls, 2021, p. 11). Golf Australia implemented sustainability practices by enhancing the sustainability of clubs and facilities: *"the [Royal and Ancient Golf Club of St Andrews] sustainability initiative ... was a focus for much of the year"* (Golf, 2021, p. 14). Netball Australia highlighted the importance of being responsive to environmental changes within the Australian netball ecosystem (Netball, 2020, p. 8), while Rowing Australia referenced initiatives such as *"organising an environmental sustainability initiative that invites media coverage"* (Rowing, 2009, p. 3) and *"promoting the use of environmentally friendly accommodations"* (Rowing, 2009, p. 6). In contrast, Surf Life Saving Australia aimed to ensure the ecological sustainability of coastal resources through *"promoting environmentally sound practices and raising awareness of environmental issues"* (Surf Life Saving, 2005, p. 1).

Three NSOs (n=3) reported on 'management system capabilities', describing how they integrated an environmental sustainability management framework. For instance, Golf Australia's strategic priority was to *"improve the capability and sustainability of clubs and facilities"* (Golf, 2021, p. 3). Motorsport Australia incorporated ES into its operations through the Health Safety and Environment Management System framework (Motorsport, 2020, p. 1), whereas Rowing Australia developed an environmental management system that outlined *"the goals and objectives for environmental sustainability for the event"* (Rowing, 2009, p. 3).

The sub-theme 'avoiding actions detrimental to ES' was developed and identified six times across three NSOs (n=3), focusing on efforts to prevent significant negative impacts on biodiversity and the environment. Motorsport Australia aimed to *"avoid actions that risk significant adverse impacts on biodiversity, cultural, and heritage assets"* (Motorsport, 2020, p. 1). Rowing Australia highlighted actions such as *"providing smoke-free indoor and outdoor environments"* (Rowing, 2009, p. 4), *"preventing soil compaction and erosion"* (Rowing, 2009, p. 5), and *"ensuring that*

all refuelling activities are undertaken with the proper procedures to ensure that there is no pollution of the water body” (Rowing, 2009, p. 5). Surf Life Saving Australia focused on minimising environmental impacts through education and coast protection activities (Surf Life Saving, 2005, p. 2).

The ‘promotion of ES awareness to the community’ sub-theme was identified four times across three NSOs (n=3). These NSOs encouraged their members to raise public environmental awareness. For example, Bowls Australia aimed to “*engage in Environmental initiatives BA to encourage the Bowls community to create awareness and get involved with environmental initiatives throughout the year*” (Bowls, 2021, p. 11), while Rowing Australia emphasised community involvement in ES actions (Rowing, 2009, p. 6) and promoted environmental awareness within the international rowing community (Rowing, 2009, p. 2). Surf Life Saving Australia also sought to raise community awareness on coastal management issues (Surf Life Saving, 2005, p. 2).

The final sub-theme of this group was, ‘assessment of the organisational impact on the environment’ which was mentioned six times by three NSOs (n=3). This sub-theme involved evaluating the environmental impact of NSO activities. Bowls Australia established a “*conscious approach to environmental sustainability by assessing issues, risks, and opportunities*” (Bowls, 2021, p. 8). Motorsport Australia committed to “*reducing, preventing or eliminating environmental hazards and impacts*” and being “*open and transparent about its environmental performance*” (Motorsport, 2020, p. 1). Rowing Australia proposed several specific actions to assess environmental impact, including “*an assessment of all aspects related to the event*”, to “*post information on daily levels of air quality for the information of participants and medical staff*”, and to “*notify in a conspicuous place water quality condition for the information of participants, officials and medical staff*” (Rowing, 2009, pp. 3-5).

ES Policy and Strategy Development

Most NSOs (n=7) reported on ES policy and strategy development. This theme encompassed the

policies and strategies NSOs developed to align with national and international ES guidelines, engage with multiple stakeholders, and comply with relevant environmental regulations and laws.

The sub-theme ‘ES guiding principles’ referred to foundational principles guiding organisational planning and decision-making for environmental protection and was mentioned six times across four NSOs. Bowls Australia, a signatory to the UN Climate Action Campaign, adopted principles including *“reduce overall climate impact”* and *“promote sustainable and responsible consumption”* (Bowls, 2021, p. 4). Rowing Australia reported key ES issues and appropriate responses aligned with sustainable practices aimed at *“improved air quality”* (Rowing, 2009, p. 3). Gymnastics Australia emphasised the sustainability of facilities for future generations: *“be economically and environmentally sustainable to ensure today’s facilities are around to develop future generations of gymnasts”* (Gymnastics, 2021, p. 8). Surf Life Saving Australia noted that it was *“establishing guidelines to ensure environmental protection is a key objective in the effective management of surf lifesaving events and activities”* (Surf Life Saving, 2005, p. 2).

The theme ‘ES purpose’ reflected how organisations sought to incorporate ES values into their operations. Five NSOs (n=5) had developed an intention or purpose based on how their guiding principles would shape their activities. For example, Bowls Australia aimed at *“creating a strategy that will lead to ensuring we are creating a more sustainable environment for our community and sport as a whole”* (Bowls, 2021, p. 10). Motorsport Australia defined targets to influence behaviours and encourage better sustainability practices (Motorsport, 2020, p. 1). Netball Australia’s ES purpose aligned with the United Nations Sustainable Development Goals, and the organisation stated that its vision was to support the 2030 goals through community engagement at events like the World Cup (Netball, 2020, p. 7).

The sub-theme ‘comply with ES regulations’, which addressed the need for NSOs to adhere to environmental laws, regulations, and policies, appeared seven times across four NSOs. Motorcycling Australia outlined the importance of compliance to foster a culture of environmental stewardship, and required promoters to *“comply with relevant law, governmental regulation and policy”* (Motorcycling, 2021, p. 1). Motorsport Australia also emphasised adherence to local

environmental laws (Motorsport, 2020, p. 1), while Rowing Australia ensured its events met all federal, regional, and local environmental standards (Rowing, 2009, p. 3). Rowing Australia's ES strategy included a commitment to environmental responsibility, which also aligned with the International Olympic Committee's Olympic Charter and Agenda 21 (Rowing, 2009, p. 4).

The final sub-theme in this group was, 'commitment to ES for NSOs' which described the commitment of three organisations (n=3), mentioned seven times, to manage and address environmental sustainability. Motorsport Australia committed to "*continually monitor and strive to improve its environmental management performance*" (Motorsport, 2020, p. 1). Rowing Australia dedicated itself to "*promoting practices within the sport of rowing that are environmentally sustainable*" (Rowing, 2009, p. 1). Surf Life Saving Australia similarly committed to "*reducing and preventing pollution of coastal and marine systems*" by managing practices and educating members and the community (Surf Life Saving, 2005, p. 2).

Societal and Cultural Views about ES

The document analysis identified four NSOs (n=4) within the theme of 'societal and cultural views about ES', which reflected attitudes and cultural perspectives on sport's leadership role in promoting ES.

The first sub-theme, 'environmental vision', appeared three times across documents from three organisations (n=3). This sub-theme highlighted each organisation's commitment to a long-term vision for ES and sport's role in climate action. Motorsport Australia outlined its dedication to fostering sustainable motor sport within the country, describing its "*vision to foster sustainable motor sport within Australia*" (Motorsport, 2020, p. 1). Document analysis revealed that Rowing Australia's materials referenced the importance of assessing environmental and social impacts to meet its policy goals (Rowing, 2009, p. 2). In addition, Surf Life Saving Australia highlighted community involvement as a critical element in achieving its environmental vision, stating that "*Surf Life Saving Clubs and Services are active participants in the cooperative network of community organisations that promote environmental stewardship*" (Surf Life Saving, 2005, p. 1).

One NSO document (n=1) referenced ‘NSO leadership role in addressing ES’ three times, and discussed how the organisation demonstrated climate leadership. Bowls Australia emphasised its unique position to leverage its platform for sustainable outcomes, and its aim to “*deliver this strategy by utilising its position and platforms to deliver sustainable outcomes for Bowls for the betterment of the globe*” (Bowls, 2021, p. 2). The Bowls Australia document further discussed the benefits of climate leadership, noting that sport organisations can engage their personnel and enhance brand reputation by embracing climate-neutral practices (Bowls, 2021, p. 7). It also acknowledged the responsibility of sport organisations to lead on climate issues, and highlighted the need for sports to “*act as leaders in our communities to accelerate change in behaviours around environmental sustainability*” given the ongoing concerns about climate change (Bowls, 2021, p. 14).

The final sub-theme, ‘social and environmental benefits’, had two references in one document. Surf Life Saving Australia have considered the social and environmental advantages of implementing ES initiatives. The organisation noted benefits such as “*improved relationships with the community, business and government*” and “*reducing environmental impacts on ecosystems*” (Surf Life Saving, 2005, p. 1), indicating that ES efforts can contribute positively to both environmental outcomes and community relations. While the evidence base is limited, this theme was tentatively coded as an emergent area of interest. It may not yet warrant classification as a fully developed sub-theme, but it signals a direction for future research on the reputational dimensions of sustainability in sport.

Environmentally Sustainable Infrastructure and Facility Operations

Four NSOs (n=4) proposed strategies for managing and operating infrastructure and facilities with a focus on ES. This theme consisted of three sub-themes: facility design guidance, energy efficient technologies, and natural resources used.

Two NSOs (n=2) reported on the importance of integrating environmentally sustainable principles

into the design of sports facilities, along with compliance with environmental protection regulations. Gymnastics Australia specifically referenced the “*Environment Protection and Biodiversity Conservation Act (1999)*” as well as the responsibilities set by state and territory planning and environmental authorities. The organisation acknowledged that “*the construction and operation of gymnastics facilities can have a significant impact on the environment*” (Gymnastics, 2021, p. 31).

Three NSOs highlighted the adoption of ‘energy efficient technologies’ as a key strategy. Gymnastics Australia mentioned “*investing in energy-efficient technologies and optimising energy usage through initiatives such as passive solar design and natural ventilation systems*” (Gymnastics, 2021, p. 31). Rowing Australia focused on reducing energy consumption through “*using efficient equipment, (e.g. photocopiers with standby functions)*” (Rowing, 2009, p. 3). Motorsport Australia promoted the “*efficient use of resources, minimisation of waste, and prevention of pollution in all its operations*” (Motorsport, 2020, p. 1), highlighting a commitment to resource efficiency.

The sub-theme ‘natural resources used’ was identified most frequently during the document analysis, with related content found across three organisations and referenced seven times. This sub-theme detailed the use of natural and environmental resources, such as “green materials” and “natural light,” as reported by Gymnastics Australia (2021, p. 31). Surf Life Saving Australia encouraged environmentally friendly practices and suggested that NSOs should set an example through the use of “*environmentally friendly printed information as well as goods and services*” (Surf Life Saving, 2005, p. 3). Rowing Australia emphasised the selection of non-toxic materials to eliminate risks from emissions and recommended the use of “*non-toxic materials and processes in order to eliminate the risk of toxic emissions or off-gassing from items such as paints, carpets, and cleaning materials*” (Rowing, 2009, p. 4).

In conclusion, the Study One preliminary document analysis identified several emerging themes that reflect how Australian sport organisations are beginning to engage with ES. These included formal policy commitments, initial reporting systems, references to global frameworks, and

varying levels of reporting, accountability, and operational integration. While these findings demonstrated a growing awareness and commitment to ES among Australian sport organisations, the information presented was often high-level, with minimal detail on how ES strategies were developed, implemented, or evaluated. These preliminary findings also raised further questions about the drivers and challenges behind these ES commitments, the internal capacity of organisations to take action, and the role of organisational leadership in shaping ES goals.

Study Two – Case Study Research

Based on the Study One preliminary findings, Study Two results subsequently provided deeper insights into how sport organisations were interacting with and enacting ES approaches. In the case studies, data were integrated from three sources: interviews, documents, and field notes. Semi-structured interviews with key decision-makers captured lived experiences, challenges, and perspectives on ES policy leadership, development, and implementation. The document analysis provided information on, and insights into, formal policies, strategies, and organisational and leadership actions related to ES. Field notes, in the form of recorded observations and reflections of the researcher during the research process, added context that was not available in the documents or interviews. The combination of these sources ensured a balanced analysis through triangulation, which allowed for the exploration of both stated policies and practical actions. The results presented in this section have been de-identified to ensure the confidentiality of all data sources.

Semi-structured Interviews – Participant Characteristics

Semi-structured interviews were conducted with 16 senior managers from 14 Australian sport organisations. These interviews aimed to understand the key characteristics, attributes, processes, and procedures associated with developing and implementing ES policies and practices in Australian sport organisations. These organisations represented a range of types, including nine NSOs, three SSOs, one Sport Institute, and one Professional Sport Club. To ensure anonymity and confidentiality, each organisation has been assigned a unique code (as SO1-SO14), as illustrated

in Table 6, with participants within the same organisation distinguished by participant numbers (e.g., P1, P2).

Table 6

Represented Australian Sport Organisations Interviewed

Type	Sport/ participant code
NSO	SO1-P1
NSO	SO2-P1
	SO2-P2
NSO	SO3-P1
NSO	SO4-P1
NSO	SO5-P1
NSO	SO6-P1
NSO	SO7-P1
NSO	SO8-P1
NSO	SO9-P1
SSO	SO10-P1
	SO11-P1
SSO	SO11-P2
	SO12-P1
Professional Sport Club	SO13-P1
Sport Institute	SO14-P1

Thematic Analysis

This following section describes a thematic analysis of findings from the study, organised into six major themes that captured the breadth of ES actions, drivers, and challenges across the participating sport organisations. These themes collectively provided an overarching narrative of

how organisations perceived, implemented, and evaluated ES initiatives. The first theme, bidirectional impact of sport and the environment, explored both the effects of climate change on sport and the environmental footprint of sporting activities. The second theme, organisational action to advance ES, examined the integration of ES strategies into planning, operations, and infrastructure. The third theme, drivers and motivators for ES practices, outlined internal and external factors that encouraged organisations to embed sustainability into their practices. The fourth theme, stakeholder collaboration and engagement, considered the role of external partners and internal actors in shaping ES efforts. The fifth theme, challenges to implementing ES practices, addressed both systemic and external barriers that constrained the effective adoption of sustainability strategies. Finally, the sixth theme, risk assessment and reporting, analysed current and planned approaches to monitoring, evaluation, and accountability in relation to ES. Each theme was further supported by relevant sub-themes, providing detailed insights into the complexity of ES integration in sport.

Bidirectional Impact of Sport and the Environment

The bidirectional impact of sport and the environment describes the relationship between the effects of climate change on sport and the environmental footprint of sporting activities, with findings categorised into two sub-themes: climate change impact on sport; and sport impact on the environment. These sub-themes capture both the challenges faced by sport organisations due to environmental disruptions and their environmental footprint, and they comprise aspects such as the operational disruptions caused by climate change, strategic adaptations to address these disruptions, and the environmental impact of sports activities.

Climate Change Impact on Sport

Climate change impact on sport was reported in terms of disruption to sport organisations' operations, infrastructure, and practices. Across seven cases and 19 references, three key themes reflected shared patterns of meaning: strategic adaptation of sport practices to environmental

challenges; operational and infrastructure disruptions from climate change; and driving climate action through sport leadership and advocacy.

Strategic Adaptation of Sport Practices to Environmental Challenges

Strategic adaptation of sport practices to environmental challenges emerged as a critical response to the challenges posed by climate change. Some organisations (n=5) emphasised the need for proactive planning to address rising temperatures and extreme weather. One participant described the growing climate risk for summer sports as an “*existential threat*”: “*if it’s extremely hot and it continues to heat up, then that’s obviously problematic ... particularly for a summer sport, it’s an existential threat, and we need to start doing something about it*” (SO1-P1). Extreme weather events also affected event planning and operational strategies. One participant highlighted the unpredictability of water levels and availability explaining: “*in [state location], we had to cancel events due to flooding. Temperatures are just getting really, really hot. In some areas, they’re quite concerned that they won’t be able to run a February-March season in the future*” (SO5-P1).

At the organisational level, the sport organisations acknowledged the critical role that local clubs play in implementing adaptive practices. One participant noted that: “*these things are undertaken by clubs and individuals within clubs. Sporting clubs generally want to champion this, and that’s created a bit of a movement*” (SO9-P1). This response illustrates how the sport organisation recognises the importance of engaging clubs in environmental initiatives. However, the strategic approach lies in how the organisation supports, coordinates, or scales these grassroots efforts, by creating frameworks, sharing best practices, or aligning club-level actions with national sustainability goals, demonstrating a broader adaptive strategy that goes beyond internal operations to build capacity across the sport system. These ES initiatives also addressed specific challenges, including water quality, which one interviewee described as “*dirty water and wastewater running in from excessive rain*” (SO11-P1). In addition, three organisations emphasised the importance of integrating environmental awareness into organisational strategies to maintain their relevance and competitiveness. This theme was illustrated by one manager who noted, “*if we don’t be seen to be at least trying to communicate a message of positive change, then we will fall behind other sports*” (SO2-P1).

Operational and Infrastructure Disruptions from Climate Change

Operational and infrastructure disruptions from climate change were among the most frequently discussed themes in the interviews. Participants from five organisations (n=5) described the disruption caused by extreme weather events, including high temperatures, flooding, and water quality issues. One interviewee explained that *“synthetic athletics tracks are significantly warmer than the outdoor temperature. It could be nearly 70 degrees on the track with the radiating heat coming off the surface. That’s a health risk and impossible to operate in”* (SO1-P1). Similarly, organisations involved in water sports reported challenges in maintaining safe and sustainable competition environments. For example, one participant explained that *“Victoria has a low tolerance for blue-green algae, whereas in ACT they just roll in it and don’t care. They’ve cancelled regattas for the last 15 years because of algae”* (SO5-P1). In some areas, repeated flooding led to event cancellations. SO5-P1 explained: *“we had to cancel because of flooding. Temperatures are just getting really, really hot.”* Furthermore, participants discussed the broader implications of global warming, including its effect on sport competitions in certain regions. SO2-P2 explained that *“global warming and temperatures were made [sic] it unviable to play [sport] in some locations at certain times of the year.”*

Driving Climate Action through Sport leadership and Advocacy

Driving climate action through sport leadership and advocacy was evident as sport organisations (n=3) positioned themselves as leaders in promoting sustainability. One participant described how their organisation leveraged a national grant to conduct climate risk assessments across clubs:

We’re currently two years into this three-year grant, and we’ve done a desktop analysis of every single club around the country. We’re using existing datasets to look at different risk profiles. The grant was focusing on bushfire, cyclone, and flood. We added in coastal erosion and secondary hazards like heatwaves and coastal flooding. (SO8-P1)

Sport organisations can also shape and influence climate action through advocacy and leadership. In particular, international sport events, like the Paris Olympics, were frequently cited as examples of leadership in sustainability. As one participant explained, *“the Paris Olympics [are] the first to*

really make a stand ... trying to change the direction of hosting big international events” (SO14-P1). Similarly, planning for the Brisbane 2032 Olympics includes a commitment to sustainability, focusing on environmentally conscious building designs and broader community impacts. According to the interviewee, “there is a huge focus on sustainability, right from the building design to having our first ever First Nations museum”. (SO14-P1)

Sport Impact on the Environment

Sport impact on the environment refers to the environmental consequences and carbon footprint associated with sports activities. This theme was acknowledged by five organisations and six references in two ways: first, the environmental impacts of sport events; and, second, the need to protect natural places to play sport.

Environmental Impacts of Sport Events

Environmental impacts of sport events emerged as a recurring concern among some organisations (n=3), particularly in relation to carbon emissions and resource use. High-performance programs and large-scale competitions were identified as significant contributors to environmental footprints. As one participant explained:

Air travel is probably one of our biggest footprints as well. Our high-performance program, given the diversity of [sport] consumes a lot of travel... thousands of participants going to a national championship for eight or nine days, all staying in hotels as well. (SO1-P1)

International travel associated with Australian sports was also noted as a major contributor to emissions due to the country’s relative geographic isolation from the main competitions. One participant described the problem:

Emissions, that we would accumulate is with travel and the nature of sport, and certainly with the top end and international competition is and being in Australia, so far away from everywhere, the travel will be a really large part of it. (SO14-P1)

Protecting Natural Places to Play Sport

Two organisations (n=2) emphasised the connection between sport and natural environments, highlighting the need to protect these spaces for the ES of sports activities. For example, one participant described how coastal erosion posed a direct threat to their sport: “*if we don't have a beach, we can't patrol, and we can't provide services*” (SO8-P1). Similarly, another sport also demonstrated a strong link to natural landscapes, particularly through its off-road and rally events. SO6-P1 conveyed this issue: “*our turf, if you like, is actually the Australian landscape ... taking a lead in caring for that and being good stewards is important*”. In both organisations, participants highlighted how their sports' reliance on natural environments creates a sense of obligation to lead by example. Rather than viewing environmental protection as separate from sport, they framed it as a prerequisite for sport delivery. This finding suggests that protecting the natural environments where sport takes place is a key concern resulting in leadership action for some organisations.

Organisational Action to Advance ES

Organisational action to advance ES describes how sport organisations integrated ES into their operations through strategic planning and practical initiatives. Findings under this theme revealed that organisations advanced ES through: strategic planning for ES goals; policy and strategy development; education and behavioural change initiatives; perception of leadership support for ES; sustainable procurement and practices; waste reduction and recycling programs; resource management and operational efficiency; and infrastructure and landscaping. Across 14 cases, participants described the role of leadership commitment, policy development, and organisational behavioural change in integrating ES.

Strategic Planning for ES Goals

Strategic planning for ES goals explored how sport organisations integrated sustainability into both planned strategies and operational frameworks. Across 13 cases and 22 references, the theme revealed that organisations approached ES planning through early integration of ES in strategic planning; integration of ES initiatives into business operations; development and implementation of ES public strategies; and development and responsibility allocation of ES plans. Field notes

supported this finding by showing that organisations such as SO9 and SO6 had developed clear climate action strategies, while others like SO4 relied more on informal planning and individual advocacy.

Early Integration of ES in Strategic Planning

Several organisations (n=3) emphasised the importance of incorporating ES considerations from the early stages of strategic planning. The theme reflected the growing proactive mindset among sport organisations, and their aim to integrate ES within broader governance frameworks rather than address ES as an afterthought. One participant described how their organisation had already begun integrating ES into its overarching strategic plan at an early stage:

However, we are going through the process of updating our greater [sport organisation], overarching strategy for the sport. And part of its already started very early conversations, which already start about how we build in being sustainable and all of these social impact objectives into that strategy. (SO3-P1)

Similarly, another participant highlighted the importance of a “whole-of-sport” approach: “*but I think, you know, this was good. There were individual isolated efforts. I think the change for us now is about how do we do something for whole of sport. That umbrella approach*” (SO6-P1).

Integration of ES Initiatives into Business Operations

A few of organisations (n=2) described integrating ES within their core business operations rather than limiting it to strategic planning teams. Participants stated that this operational integration helped distribute accountability across departments and embed sustainability into daily decision-making. One participant explained how their ES initiatives were integrated within both strategic planning and business operations:

So I've sat primarily in strategy, and this, I guess this new aspect of our business is seen at this point to be sitting in strategy, but also importantly, sitting in business operations,

which means it will be embedded across the business, and it's actually ownership for everyone. (SO2-P1)

Similarly, another participant described efforts to incorporate ES within everyday operations: *“and here's what I mean about making it part of business as usual, I tell here's a list of all the things that the [sport] are doing and Barry is doing this, Chloe is doing that, etc” (SO7-P1).*

Development and Implementation of ES Public Strategies

Development and implementation of ES public strategies were evident in most of the organisations (n=10) that had policies or plans in place, although some required updates or further integration. This theme indicated that, while these organisations recognised the importance of ES commitments, implementation gaps remained. One participant noted that, despite their organisation having established sustainability policies, the impact of those policies was inconsistent: *“we develop policies around sustainability, depending on where we are and what the impact is going to be with it” (SO5-P1).* Another participant described how their sustainability strategy was embedded in a broader strategic plan, which provided top-down support and financial backing:

And I do think the benefit to this is that it was written in that 2023 whole-of-sport strategic plan, so that that's a real, you know, top-down, which I'm not sure if that's common, and I would say it probably isn't very common in sports. But to have it written in a whole-of-sport strategic plan from the start just really allows us to be able to turn around and point to that when there may be those hurdles that popped up. (SO2-P1)

Some organisations were still in the process of drafting their sustainability strategies, with one participant stating the following: *“so in the process, at the moment of drafting up a sustainability strategy, which have been kind of working on” (SO14-P1).*

Development and Responsibility Allocation of ES Plans

A couple of organisations (n=2) described how responsibilities for implementing ES strategies were being allocated within working groups or governance structures. This theme revealed that structured leadership and clear accountability mechanisms were essential for advancing ES objectives. One participant explained that developing a formal ES plan was the first step in driving engagement: “*yeah, the first one is actually developing the plan, so we can put that in front of people and start to have a conversation around that and raise awareness*” (SO1-P1). Another participant described how their organisation engaged external consultants to help structure and distribute ES responsibilities within a working group:

So the working group looks up, look at what the items and things that we felt that we needed to concentrate our time on. My understanding is the consultant was engaged and assisted with pulling that Green Action Plan together, and then from that action plan, then that was sort of divvied up into response, you know, responsibilities of individual people on that working group to fulfil some of those elements. (SO10-P1)

Policy and Strategy Development

This sub-theme is concerned with how sport organisations developed their ES policies. Findings showed that organisations worked to include sustainability in programs, create oversight groups, and use external frameworks and seek stakeholder engagement. Across nine cases and 22 references, participants described efforts to integrate ES into governance and operations. While some progress has been made, challenges remain with developing consistent and actionable strategies.

Embedding ES Principles in Organisational Programs

While some organisations (n=4) reported efforts to incorporate sustainability into existing programs, their progress was uneven. While some organisations had incorporated ES into their procurement policies and leadership structures, others acknowledged that there were gaps in programming that needed to be addressed to ensure sustainability was fully integrated rather than

treated as an isolated initiative. However, standardised strategies were still in development, and required clearer direction and leadership commitment. One participant emphasised the need for dedicated leadership to drive sustainability within operational structures: *“which I think at some point where we’re going to need to do, we’re going to need someone to kind of help drive some of this and embed that in the business”* (SO1-P1). Others identified the absence of an environmental focus in existing leadership programs, and recognised the need to integrate ES into professional development: *“at the moment, our leadership programs don’t really have an environmental lens. That’s probably something we’d like to really bring in in the future”* (SO11-P2). Some organisations incorporated ES priorities into procurement policies to guide decision-making. For example, SO14-P1 explained that, *“within that as well, what we’re working on, one of the major projects that I’m working on is our procurement policy.”*

Establishing ES Oversight Committees

Several organisations (n=7) had established advisory groups, working groups, and multi-sector committees to provide governance, support policy implementation, and facilitate collaboration. These committees varied in their functions, which ranged from advisory roles to direct implementation of ES policies. For example, some organisations created committees to support members in developing ES initiatives:

So recently, we’ve created the Environment Advisory Committee, which I’m a member of, which is run by a [sport organisation] Advisory Committee, with the purpose of trying to figure out how we can help clubs in that space. (SO11-P1)

Other organisations formed internal working groups of passionate individuals within their organisations to promote internal ES leadership: *“what we’ll need to do is probably stand up an internal agile working group with people who are passionate about it”* (SO9-P1). In addition, one participant emphasised cross-sector collaboration, which involved incorporating external sustainability experts and key industry figures into their committees:

So the third piece of that process was we set up an environment committee. And we have now met twice. And we have representatives from we have the Sustainability Manager, we

have the Sustainability Manager, we have a Sustainability Environment Consultant who's worked in and with us for many years. (SO6-P1)

Furthermore, these committees also functioned as accountability mechanisms, to ensure that ES strategies were actionable for many organisations: *“the way we're going about this is we've put the call out to a lot of our networks to form a working group, and that working group is made up of industry partners, but also leading experts in sustainability” (SO12-P1).*

Utilising External Frameworks and Stakeholder-Driven Insights

In addition to internal oversight structures, some organisations (n=3) explored external sustainability frameworks and stakeholder-driven insights to guide policy development. While global sustainability models provided them with some strategic direction, the organisations found it difficult to apply generic frameworks to the sports sector. To address this problem, the organisations worked on adapting these frameworks by incorporating stakeholder feedback and aligning ES initiatives with CSR strategies. One participant described the difficulties of adapting existing sustainability frameworks that lacked sport-specific considerations:

And a woman from the UK presented about what they're doing in the UK. And the example that she gave was the UN framework that sports can align to, and I went and looked it up, and I downloaded it, and it was so basic that like, it's not, you can't plug and play. It's kind of too simple, if that makes sense. But actually being able to take it and apply it to our organisation would be a lot of work. (SO4-P1)

To make such frameworks more relevant, some organisations developed ES strategies through stakeholder consultation, particularly using survey data to align ES efforts with member priorities. For example, SO12-P1 explained:

They're kind of driving the approach that we take and the activities we're stepping through before we establish our sustainability plan. And so there, at the moment, they are tasked with analysing some survey responses, which has gone far and wide, to, as I said, work out how we influence this area and what our members see as important to influence.

In order to ensure ES strategies aligned with existing organisational initiatives before promoting them further, other organisations took a phased approach:

We're developing a strategy at the moment in terms of exactly where it is that just because it is a new role, just in terms of exactly where we will, you know, be concentrating our energy and what we'll be doing. (SO10-P1)

Education and Behavioural Change Initiatives

Education and behavioural change initiatives played a central role in embedding ES within sport organisations. Across 13 cases and 42 references, participants described efforts to embedding ES awareness and advocacy in organisational culture; ES education for clubs, members, and athletes; incentivising sustainable behaviour; learning and adopting practices from other sports' ES experiences; and leveraging expertise and networks for ES investment and delivery.

Embedding ES Awareness and Advocacy in Organisational Culture

Several organisations ($n=7$) reported that educating staff, members, and clubs was essential to integrating ES into daily operations. This theme includes training programs, leadership development initiatives and cross-departmental collaborations as effective strategies for integrating ES with organisational priorities. One participant explained that providing clubs with practical guidance was more effective than simply promoting awareness:

Education is... going to be the key here as we start to educate our clubs, how they can play a different role. A piece around education because we figure if we, if we can create advocates, in our new sailors, then as they as they grow and influence their parents, at their clubs, and others that the clubs then they're going to that's going to be the key. So what we'll start to see is introducing some sustainability education around tankers. (SO9-P1).

Another participant stressed the need for consistent sustainability knowledge at leadership levels: *"I'm pushing hard for the GMs to do a climate literacy course so at least we're all speaking in the same way about sustainability. People throw around the term sustainability without fully*

understanding what it is” (SO4-P1). Some organisations integrated sustainability into leadership roles and performance expectations. For example, SO10-P1 explained that:

One of the things I’m doing in my role is looking at everyone’s role and where and how we could almost always add that kind of responsibility. KPI, however you want to put that into everyone’s into everyone’s role in the organisation.

Another participant said that they encouraged staff engagement through workplace events and internal initiatives:

so we hosted an earth day morning tea for the staff, just to basically introduce the group to the rest of the staff and the organisation and give them a little brief on what our sort of mission is. Over the next 12 months, what we’ve done is sort of identify some smaller initiatives. So, we’re going to put together a group for clean-up Australia Day. (SO14-P1)

ES Education for Clubs, Members, and Athletes

ES education for clubs, members, and athletes was identified as an emerging focus area aimed at building awareness and skills to support sustainability adoption (n=2). Participants described training programs, outreach activities, and tailored athlete education. One organisation embedded sustainability education into junior programs:

We’re trying to look for a whole sort of club focus, and just trying to include it in education, so that when this current generation of members moves on the next, the next generation of sort of pioneers in the environment space. (SO11-P1)

Another participant emphasised the need for accessible and flexible ES education for athletes:

What would be beneficial for sport is having more educational resources within Australia. Right now, I’m struggling to find how I can educate our athletes in a way that Athletes need to hear it not in a two-year course or anything like that a realistically a one year, a one-hour online tutorial so that I can upskill athletes on what it is that we’re doing in this type of space. (SO3-P1)

Incentivising Sustainable Behaviour

Incentivising sustainable behaviour involved creating rewards (including financial rewards) and recognition programs to encourage ES engagement at individual and club levels (n=3). One participant described how ES was built into award structures: “*we’ve embedded environmental lenses in some of our awards. With a bit of a carrot, clubs will see that as a priority*” (SO11-P1). Others explored financial incentives for sustainability compliance. For example, SO6-P1 explained that:

We need to at some point, and we don’t want to, you know, it’s always the ‘carrot or the stick’. But you know, do you charge someone more if they don’t do something? Or do you give them a discount if they do things? And so, there are also areas we want to sort of look at. So how do we incentivise having good, good practices.

Similarly, sustainability-linked discounts were considered in merchandise programs. SO10-P1 provided an example:

So for example, if I had something and I was like, I’m not going to wear this anymore because I bought new [team] gear, if I then give these back, then we might be able to look at giving them a voucher to then get a discount that comes off for their next merch.

Learning and Adopting Practices from Other Sports’ ES Experiences

Learning and adopting practices from other sports’ ES experiences emerged as an important strategy to accelerate progress and avoid duplicating efforts (n=6). Participants explained that cross-sport collaboration helped organisations avoid starting from scratch. One participant noted that sports regularly adapt ideas from each other:

We’re constantly watching what other sports are doing going, that’s a great idea. But we did, it was very good to be able to sit in the room with the person responsible in the other sports and bounce ideas, and what are you doing? What’s happened, what works, and I shared a lot of things about what completely failed with us. (SO3-P1)

Another participant emphasised the value of knowledge sharing between organisations: “*networking with other sports organisations has been really useful. We’ve had discussions with them, learning from each other on experiences*” (SO14-P1). Some organisations also drew inspiration from international sustainability models: “*but overseas are some really good examples of where they’ve run entire [sport] tournaments that are, that are no waste, or no single plastics*” (SO4-P1).

Leveraging Expertise and Networks for ES Investment and Delivery

Leveraging expertise and networks for ES investment and delivery helped organisations access knowledge, funding, and resources to support their sustainability goals (n=6). This theme suggested that expert partnerships and industry-wide collaboration played a crucial role in driving effective ES implementation. One participant described how external research projects supported ES planning: “*we have a consultant running the project, visiting clubs around the country, trying to assess how we can future proof [our sport] as a community service*” (SO8-P1). In addition, organisations also leveraged cross-sport collaboration to enhance ES education. SO2-P2 emphasised this opportunity:

I just think we would often miss an opportunity, particularly Melbourne, with so many sports here, to cross, collaborate and understand within our own sort of departments, like not just sustainability, with a lot of things, Obviously, but yeah, potentially educational opportunities for staff members that are in charge of sports, travel or events, or wherever those sort of really big factors are in terms of reducing emissions, getting the actual experts in their industry together, I think would be a good one.

Perception of Leadership Support for ES

Perception of leadership support for ES shaped how staff and stakeholders viewed the legitimacy and priority of ES efforts within their organisations. Across seven cases and 15 references, participants described leadership as both a driver and a barrier to ES initiatives. Two key areas emerged: first, driving behavioural and cultural change for ES; and second, leadership advocacy and accountability. Several organisations (n=3) stated that leadership commitment was critical in

embedding ES within organisational culture. While some leaders actively incorporated sustainability into operational decisions, logistical and post-pandemic challenges often limited implementation. One participant described how their personal interest in sustainability influenced event planning:

And so I've tried to bring that in terms of what we do in our events, because often it's difficult, and often after COVID, it became even more difficult for that kind of thing. But that's really come out of a personal kind of interest in sustainability. (SO5-P1)

In addition to individual leadership influence, the data indicated that formalised commitments were essential for ensuring ES efforts were taken seriously. Some organisations (n=4) recognised that sustainability leadership needed to extend beyond individual advocacy and be embedded into structured accountability frameworks. One participant explained that their sport's environmental footprint required a strong leadership stance on sustainability: *"and I think we are a national sporting organisation with around 350 clubs dotted around the nation around our coastline, principally, which means that I think we have the responsibility to take a leadership approach in, in this space"* (SO9-P1).

Sustainable Procurement and Practices

Sustainable procurement practices are concerned with how sport organisations integrated ES considerations into purchasing decisions, logistics, and material sourcing. Across eight cases and 11 references, participants described their efforts to adopt ethical sourcing, sustainable logistics, and waste reduction. Some organisations (n=4) focused on reducing environmental impact through ethical sourcing and sustainable materials. One participant explained how their organisation introduced sustainable uniform production and recycling initiatives to extend the lifecycle of sports apparel: *"so essentially, what recycled threads could do is take some of that uniform and recycle or repurpose it in some way"* (SO10-P1). Another organisation recognised the importance of ensuring that procurement decisions aligned with sustainability principles, even when working with large-scale suppliers:

So we'd have to start looking at procurement policy. So that takes that into it as well. Now, that will go from not just being apparel, but that could be we have certain equipment that we have for schools, for juniors in schools, for instance. Now we know right now, every time I open it up, I have a heart attack. It's full of individual plastic bags, and everything comes in. (SO7-P1)

In addition to ethical sourcing, the data indicated that organisations (n=5) adopted green procurement and logistics strategies to minimise waste and carbon emissions. These strategies included transport optimisation, energy-efficient equipment, and investments in sustainable infrastructure. One participant described how their organisation prioritised battery-powered and hybrid equipment to reduce reliance on fossil fuels:

So we've shifted into a more green energy procurement play around that aspect. We've even started to look at some of our procurement policies, around some of our vehicles on site, around using battery vehicles We have some battery-powered whipper snippers and blowers and chainsaws. (SO13-P1)

Another organisation highlighted the need to reduce transportation-related emissions, particularly in sports that require frequent international travel: “so what we've said is we'll get some fully white 40-foot Cy containers, and we'll agree, as a storage arrangement in Italy, to say, well, that's so we've got storage” (SO9-P1). This arrangement was intended to minimise repeated shipping of equipment across countries by establishing a centralised storage location, thereby reducing transportation-related emissions.

Waste Reduction and Recycling Programs

Across 11 cases and 33 references, waste reduction and recycling programs were widely adopted to minimise the environmental impact of events and everyday operations. Although several organisations (n=5) prioritised reducing waste at event venues to minimise their environmental footprint, they had to outsource waste management services to third parties due to the lack of adequate recycling facilities at their venues. SO5-P1 offered an example:

So it's I guess it's more about us sourcing our own things being more proactive in you know, not provided, you know, encouraging people to bring their own coffee cup and, and water bottle, We had to go on and sort it ourselves and not only did we have to pay for waste management, we also had to then get on top of that a separate company to do recycling, which wasn't perfect because it wasn't done by the same company.

A few organisations also implemented recycling initiatives to manage event-related waste effectively. In addition to waste reduction, others (n=3) implemented energy-efficient initiatives, such as solar panel installations and energy audits to reduce costs and improve ES. For example, SO9-P1 explained that *“reducing single-use plastics and microplastics in our waterways and oceans has been a focus of our work.”* A few organisations (n=3) also explored waste reduction through equipment and textile repurposing programs. One participant described the success of an equipment reuse initiative: *“we did a ball exchange program, and that was really successful. We're now exploring how to make it a year-round initiative”* (SO10-P1).

Resource Management and Operational Efficiency

Resource management and operational efficiency efforts aimed to reduce environmental impact through energy audits, solar initiatives, and digital tools. Across seven cases and nine references, participants reported efforts such as reducing environmental impact, adopting energy-efficient solutions, and incorporating digital tools into sustainability plans. Some organisations focused on solar energy and efficiency audits to reduce costs and emissions. A participant noted that solar panels were widely used by clubs: *“a lot of clubs now, particularly in Queensland, they all have solar panels on top. So they're trying to generate their own electricity”* (SO8-P1). Another method involved financial incentives to encourage ES initiatives, particularly through energy audits to identify efficiency improvements: *“we are undertaking some energy audits at clubs to try and see where they can save money”* (SO11-P1). Participants also discussed how digital tools and technology could improve ES tracking and operations. One organisation explored ways to use technology for environmental monitoring: *“we can use technology a lot more to help with our impact, which we're not currently doing, but we're definitely starting to look at”* (SO12-P1).

Infrastructure and Landscaping

Infrastructure and landscaping strategies involved sport organisations enhancing their sustainability through travel policies, public transport incentives, and eco-friendly infrastructure development. The data supporting this theme revealed that organisations sought to reduce travel-related emissions and incorporate sustainable landscaping into facility planning. Across three organisations, participants described efforts to integrate sustainability principles into travel logistics and venue design. A primary focus was on minimising the carbon footprint associated with team and event travel. One participant highlighted the importance of embedding sustainability considerations into travel decision-making:

For example, into sustainability, into our travel policy, so getting people to think about, do you need to go to that meeting? Can you do that online? Or if you need to travel, can you group multiple trips into one to reduce the footprint of that travel? (SO1-P1)

Another organisation prioritised group travel arrangements to limit vehicle use: “*we try and reduce the number of vehicles, we try and put people in minibuses, there are better options now available to put as many people in one vehicle as possible and reduce travel*” (SO5-P1). In addition to travel policies, some organisations are exploring new construction materials and retrofitting existing venues for improved sustainability. One participant reflected on how engineering advancements influenced stadium development:

Building stadiums out of what we perceived as an odd choice of material, such as wood, using some of our new engineering that we’re finding out and new ways of building things, or 3D printing, using that sort of technology and putting it into new stadia builds. (SO13-P1)

Drivers for ES Practices

Drivers for ES practices explores the key factors that motivate and enable organisations to adopt and implement ES into their operations and long-term strategies. Across 13 cases, participants

highlighted the importance of financial incentives, leadership commitment, regulatory compliance and societal expectations in influencing ES efforts. Two sub-themes emerged: first, systemic drivers of ES adoption, including internal structural factors facilitating ES; and second, external drivers of ES practices, including broader environmental, social, and governance influences driving ES commitments.

Drivers of ES practices (systems-level)

Drivers of ES practices at the systems level refers to the systemic factors that facilitated the adoption of ES initiatives across sport organisations. Across 14 cases and 49 references, the data indicated that five primary drivers influenced ES adoption: financial sustainability as a driver; leadership support from the board and CEO regarding ES; sport's leadership role in social impact; staff passion and motivation for ES; and supportive and diverse ES working groups.

Financial Sustainability as a Driver

Participants across several organisations (n=5) highlighted financial sustainability as a critical driver of ES initiatives. This sub-theme revealed that many organisations framed sustainability as a cost-saving measure, particularly in travel policies, waste reduction, and operational efficiencies. By integrating ES considerations into budget planning, organisations strengthened the alignment between sustainability and long-term financial health. One participant explained how cost-cutting measures aligned with sustainability objectives:

There's obviously some financial drivers as well. Because if we can demonstrate that, for example, reducing, you know, policies that reduce travel, that focus on carbon reduction, but reduce travel, also reduce spend and cost. And so, you know, financial sustainability is a big, big challenge. (SO1-P1)

Other participants described how organisations allocated funds for ES efforts through strategic financial planning. For example, SO12-P1 explained that:

We have, like, a sustainability fund, sorry, a Strategic Fund, yeah. And we can apply for money for certain areas and projects, given that this is a strategic goal, yep, so it will be up to the board's discretion if they were to release those funds.

Leadership Support from the Board and CEO Regarding ES

Many of the participating organisations (n=10) discussed board and executive-level support in ES efforts. This sub-theme demonstrates that top-down leadership influenced strategic planning, policy development and resource allocation, albeit its impact varied across organisations. One participant stressed the importance of board-level commitment in setting the sustainability agenda:

The big thing, I think, for us is that we have a very committed Chair of the Board and a committed Board to environment. And I think that is key in terms of having it being led from the top. Because at the end of the day, the Board are the ones ... they sign off the strategic plan. (SO6-P1)

In contrast, other organisation participants noted a lack of top-down commitment. For example, SO5-P1 said:

I don't feel like it does come from the top at all. I listen to a lot of the webinars through the Institute of Company Directors, and every time there's a sustainability thing, and that's obviously aimed at board members and board directors and things like that.

Observational data also illustrated that leadership engagement varied significantly across cases, with some executives (e.g., SO9-P1, SO2-P1) demonstrating strong commitment and expressing uncertainty about priorities and resources.

Sport's Leadership Role in Social Impact

Several organisations (n=6) identified sport as a vehicle for social change, with the ability to leverage its platform to promote environmental awareness and advocacy. Sport organisations recognised their potential to influence societal attitudes toward sustainability and positioned ES as

a core component of their broader social responsibility efforts. One participant described sport's ability to engage the public:

But we certainly have a role and sport, I guess, like it or not, depending on people's view, sport often connects with a lot of people. But it has an opportunity to be part of the conversation and influence a lot of people in the space and bring them along in a whole range of social issues and challenges. (SO1-P1)

Another participant highlighted sport's cultural influence: *"Sport is a great vehicle for change, and if you can get the leadership at clubs to buy into environment, it can really have a huge impact"* (SO11-P1).

Staff Passion and Motivation for ES

Staff passion and commitment to environmental issues was also identified as a significant factor in the implementation ES initiatives, with six organisations reporting that ES efforts were often staff driven. Analysis of participant responses indicated that personal values and workplace culture significantly influenced ES adoption. One participant explained how their personal values influenced their sustainability work:

So from a personal level, I am a big nature nerd, and I have, from a personal perspective, a lot of engagement with environment, and just have a personal interest in sustainability. And through that, I think the just where I have general conversations with colleagues around sustainability and we, over time, worked out that there's actually quite a few of us who have quite a passion for the area. (SO14-P1)

A participant from another sport organisation described grassroots staff driven ES efforts: *"our key drivers are our people just pushing, saying that we want to do stuff. A lot of our staff ... they compost, they recycle. It's really people driven for us"* (SO5-P1).

Supportive and Diverse ES Working Groups

Several organisations (n=5) identified internal working groups as key enablers of sustainability efforts. These groups provided expertise, facilitated cross-organisational collaboration, and helped the organisation embed ES into its operations. One participant described how their organisation relied on volunteer expertise to advance ES initiatives:

One thing I would add is that we can have a very supportive working group that enabled us to do it. So like I said, my resourcing, my capability, my knowledge was very low. In this space, we had a volunteer working group that were phenomenal. (SO3-P1)

Another participant highlighted how working groups expanded ES engagement across the organisation:

Effectively, what I did was put out an EOI to our staff to say who's interested in being a part of this action group, and we had 18 staff come back and say they wanted to be involved. And on top of that, we also had five athletes who are really strong ambassadors in this space. (SO14-P1)

External Drivers

Based on data from 10 cases and 26 references, external drivers incorporate five external factors that influenced the adoption of ES practices in sport organisations: alignment with global sustainability standards; influence of the younger generation's awareness and approach to ES; international sports governing bodies driving compliance; legislation and community expectations for ES; and using athlete voices to advocate for ES in sport. Participants described how these external factors shaped organisational priorities, dictated compliance requirements, and influenced strategic direction for ES initiatives within sport organisations.

Alignment with Global Sustainability Standards

Participants from several organisations (n=5) described how their sustainability strategies were guided by international frameworks, including the United Nations (UN) principles and ESG

(Environmental, Social, and Governance) standards. The data supporting this theme demonstrates that these frameworks provided guidelines for ES implementation and enhanced transparency and accountability. To align their ES efforts with global frameworks, one organisation described its plan to integrate sustainability reporting within the UN Sports for Climate Action Framework, ensuring long-term accountability: “we have intention of signing up with the UN sports for climate framework. So that would help, I guess, make us accountable to reductions over the next, you know, until 2050 I think it is 2040” (SO14-P1). Another participant described the importance of internal alignment before influencing external stakeholders, and explained how ESG principles structured their ES commitments:

So it's almost like looking at where's our sphere of control, and making sure that everything that [organisation] does is aligned to the ESG. And then our sphere of influence is the clubs. So if we can actually influence the clubs to behave in the same way that we are, then we'll be able to change behaviour a lot more. But we have to start with our own sphere of control. (SO4-P1)

Another participant described their organisation taking a leadership role in sport and climate action, and becoming the first Australian sport to join the UN initiative:

[Name], who was the CEO of [national sport organisation] is now the CEO of [international sport organisation], had been working. He is the Director of [sport organisation], he sits on that board. [Name] took the, I think, courageous step at the time of being the first Australian sport to sign up for Sport for Climate Action with the UN. (SO7-P1)

Influence of the Younger Generation's Awareness and Approach to ES

Younger generations (n=7) emerged as a key driver for environmental sustainability adoption, with their increasing interest influencing organisational priorities and shaping sustainability initiatives. This data supporting theme revealed that younger athletes, employees, and members increasingly expected sport organisations to align with environmental values, which influenced sustainability policies at both grassroots and organisational levels. One participant felt that youth engagement shaped recruitment and retention in sport: “the thing that will attract new entrants into a sport,

particularly in that age group, is looking at the sport and saying, 'Well, what are the values of the organisation? And do they align with mine?'" (SO9-P1). Another participant described how younger members initiated local environmental actions, which influenced broader organisational priorities: "we've had some young members of clubs that, you know, have come up with uniform recycling systems and collecting rubbish off the beach" (SO11-P1).

International Sports Governing Bodies Driving Compliance

Participants from a couple of the organisations (n=2) reported that international sports federations influenced ES adoption by embedding sustainability requirements into governance structures. These global bodies mandated compliance measures and provided knowledge sharing platforms for their member organisations. One participant described how their global governing body had begun integrating sustainability requirements into event compliance structures:

[International sport organisation] is really a global leader for sports federations in this space. And, you know, they have a dedicated or a couple of people, I think, within [International sport organisation] that are responsible for working through this area. And some of those obligations are flowing down to the global network of events as well. So at some point, we're going to have to comply with those. (SO1-P1)

Another participant noted that governing bodies influenced sustainability via top-down compliance measures and grassroots initiatives: *"This strategy is as much top-down from [International sport organisation] as it will be bottom-up from some of these case studies that we've already seen over the last few years. Even clubs are doing this really well" (SO9-P1).*

Legislation and Community Expectations for ES

Participants from a couple of the organisations (n=2) described how legal regulations and community expectations influenced ES commitments. Participants explained that, while legislative changes required organisations to proactively integrate sustainability reporting, public expectations also exerted pressure for greater environmental responsibility. One participant described new reporting laws driving organisations to proactively take sustainability action:

“there’s some legislation in the mix at the moment that will require organisations to report on sustainability going forward as well, so I’m trying to get ahead of the curve” (SO1-P1). Community expectations were also identified as a significant external influence. One participant explained that the public increasingly demanded environmental accountability from sport organisations: *“I think socially, our community expects that we need to be aware and do more in this space. So there’s that wholeness, that societal and moral piece as well” (SO6-P1).*

Using Athlete Voices to Advocate for ES in Sport

A few organisations (n=3) identified athletes as key advocates for sustainability, both through their activism and their formal representation in governance structures. The data supporting this theme demonstrated that athlete advocacy influenced sustainability discourse at organisational, national, and grassroots levels. One participant noted that athletes played a growing role in pressuring organisations to take action:

Athletes are a driver in terms of actually doing some work in this space. And I think we’re going to see more and more of that around a little bit of athlete activism, or using the athlete committees across various sports to actually drive organisations to do something in this space, or do more than they’re doing. (SO1-P1)

Similarly, athlete involvement was closely linked to climate-related concerns, particularly for those competing internationally:

There are a number of other athletes within the [sport organisation], in particular, that are passionate advocates around sustainability and looking at climate in particular. Particularly given, you know, when they’re competing at an international level, they’re the ones that are facing those extreme heat challenges. (SO1-P1)

In some cases, athletes were directly engaged in grassroots environmental activism. For example, SO9-P1 conveyed their experience with a colleague:

You're going for a swim? No, I've actually—she then said she's adopted a beach because she went for a walk on the beach, saw that there was a lot of rubbish on the beach. So she said, So I've adopted the beach. I went to the local supermarket and bought garbage bags and rubber gloves. And each day I've been going to the beach and picking up the rubbish.

Stakeholder Collaboration and Engagement

The theme of stakeholder collaboration and engagement is concerned with how both external and internal stakeholders influenced the development and implementation of ES strategies. Across 13 cases, participants stressed the importance of working with governing bodies, industry partners, community organisations, and internal leadership structures to integrate ES within sport operations. Two sub-themes emerged: first, external stakeholders, focusing on partnerships with national and international organisations, suppliers, and community groups; and second, internal stakeholders, highlighting the roles of volunteers, leadership, club members and interdepartmental collaboration in ES efforts.

External Stakeholders

External stakeholder collaboration played an important role in sport organisations implementing ES initiatives. Across 12 cases and 35 references, the data supporting this sub-theme revealed the importance of engaging with national and international governing bodies, community partners, industry collaborators, and suppliers. These partnerships provided access to resources, strategic frameworks, and operational support, thereby enabling organisations to integrate ES into their operations. Field notes also highlighted examples of organisations, including SO10 and SO11, partnering with external experts and industry groups to access resources and strengthen their sustainability efforts.

Adoption of, and Advocacy for, National and International Governing Bodies' ES Guidelines

Participants from several organisations (n=8) described their engagement with national and international governing bodies as an essential driver for advancing ES policies. The data

supporting this theme indicated that partnerships with organisations, like the Australian Olympic Committee (AOC), the Fédération Internationale de l'Automobile (FIA), and international sustainability accreditation bodies, provided strategic guidance and structured frameworks for sustainability implementation. One participant described how the AOC's sustainability pilot project had to be adjusted based on their sport organisation's resource limitations:

We were involved in a pilot project with the Australian Olympic Committee, backing their sustainability plan. They had to change their approach because sports just didn't have the capacity to do the work originally set up. To their credit, they adapted it so we could achieve practical outcomes. This process helped unearth people across departments who had an interest in sustainability and could help drive conversations internally. (SO1-P1)

In another case, alignment with the FIA's environmental accreditation process allowed national organisations to integrate internationally recognised sustainability standard. SO6-P1 explained that *"the FIA has an accreditation process that all national sporting organisations and affiliated clubs can go through to achieve certification. It aligns with environmental ISO standards and provides self-assessment tools and certification pathways tailored for motorsport."*

Similarly, some sports relied on international industry expertise to guide their ES practices. For example, SO4-P1 explained how their organisation was *"working with the Green Division of the USGA to determine what metrics are easiest to capture and resonate the most with maintenance teams. Since the US is ahead of us in this area, we're learning from their experience and adapting what has worked for them."*

Community Engagement in ES Initiatives

Participants from several organisations (n=4) emphasised the importance of engaging local communities to complement top-down policy initiatives. Community-driven ES efforts included waste management partnerships, volunteer initiatives, and adaptive sports programs. For example, one participant described how the [sport organisation] integrated sustainability into its volunteer movement:

It's a really massive volunteer movement. There are nearly 200,000 members, about 45,000 patrol each year on the beach, but other members contribute in different ways, such as operating radios. It's a community organisation that is built for the community. (SO8-P1)

In another example, a participant highlighted local partnerships for waste reduction: “*we're talking to the local council about if they can pick up our green bins and take all of our food scraps*” (SO11-P1).

ES Industry Collaboration and Engagement for ES Practices

Participants noted that several organisations (n=8) also formed industry partnerships to strengthen their sustainability strategies. Collaborating with environmental agencies, research institutions, and other sport organisations, allowed them to adopt best practices and develop new ES initiatives. One participant explained how their organisation partnered in other organisations' ES initiatives to enhance its sustainability framework: “*we've partnered with Clean Up Australia because we recognise the role our waterways play in sustainability. In addition, the [sport organisation]'s Sustainability Agenda 2030 serves as a guiding framework for our sustainability efforts*” (SO9-P1). Similarly, the [sport organisation] engaged an environmental consultancy to support clubs in implementing ES initiatives:

We've partnered with a commercial energy consultancy [organisation], who find grants and funding to help clubs install solar panels and do a whole heap of things on how they can save energy and electricity. We also work with a state-level environmental initiative [organisation], which has provided advisory support to our environment committee. (SO11-P1)

Participants also described collaborations with sports manufacturers and corporate stakeholders to improve sustainability in sports apparel and equipment. For example, SO14-P1 responded that their organisation was:

Working on a big collaboration with a couple of universities and a few external organisations on looking at tightening up our procurement policy for apparel, but then

also that flowing over to procurement for like catering, our cleaning business and the products that they use.

The Role of Partnerships in ES Implementation

Participants from a few organisations (n=3) emphasised that successful sustainability implementation required active engagement with partners to provide financial and logistical support. One participant stated how financial constraints made partnerships essential for ES program execution: *“unless we can convince a commercial partner to come on board with our sustainability strategy, or secure government grants at national, state, and regional levels, it will be difficult to accelerate implementation”* (SO9-P1). Another participant described the role of strategic communication and transparency in stakeholder partnerships:

We will eventually sit down and have a full suite of comms planned out around this about what we’ve done, what we plan to do, and what this means for the sport. And we’re hoping that by being completely transparent with the transition or the change management that we look to implement, we come up against less barriers. (SO12-P1)

Working with Suppliers and Partners to Drive ES Practices

Participants from a few organisations (n=3) discussed their efforts to work with suppliers and corporate partners to integrate ES into supply chains, sponsorship agreements, and offsetting programs. The data indicated that supply chain engagement was a growing priority, with organisations seeking more sustainable procurement practices. One participant described their engagement with businesses that support carbon offsetting initiatives:

I spoke to a company that’s doing some good things in the space and using Blockchain to help sort of generate kind of consumer rewards, but also drive revenue, new revenue into the business, by partnering with organisations that want to invest and support in the area, or directly, you know, passing on the cost around offsetting emissions, for example, to the end user. (SO1-P1)

Another participant noted the importance of collaborating with major suppliers: *“I think influencing at different levels is something we can also look at, you know, big suppliers, our partners, is another aspect we look at influencing and how we work with them”* (SO2-P1). Similarly, another participant examined how sustainability principles could be embedded into their merchandise supply chain:

How can we look at what we're doing in terms of our merch, what we're who we're engaging with the organisations we're engaging with, are they, you know, are they ethical? where do things end up, like, when our uniform gets used, and where does it, you know, where does it end up? (SO10-P1)

Internal Stakeholders

The theme of Internal stakeholders is concerned with the roles and contributions of internal stakeholders in implementing ES initiatives. Across 10 cases and 17 references, participants described five types of stakeholder-driven efforts: volunteer-driven environmental initiatives; leadership influence and collaboration in federated sport structures; members' and clubs' engagement in ES practices; cross-departmental collaboration for ES strategy implementation; and athletes engagement in ES practices.

Volunteer-driven Environmental Initiatives

Participants from a few of the organisations (n=3) reported volunteer-led environmental efforts as an important driver of ES initiatives. These participants explained how volunteers shaped organisational priorities and played a role in sustainability-related decisions. One interviewee emphasised the bottom-up influence of volunteers in integrating sustainability efforts: *“so we kind of need to be led by the members. So if there's an appetite for including environment in a camp, we'll certainly do it”* (SO11-P1). Another participant noted that the volunteer structure of sports boards brought diverse perspectives to ES decisions: *“our board is largely volunteers and independent members, so we also get quite a broad cross-section as well”* (SO8-P1). Field notes also confirmed that in several organisations, including SO3-P1 and SO14-P1, volunteer working groups played a central role in driving sustainability initiatives in the absence of formal structures.

Leadership Influence and Collaboration in Federated Sport Structures

In federated sport models (n=2), participants cited leadership influence as both a facilitator of, and a challenge for, ES strategies. Analysis of participant responses indicated that leadership in federated sport structures played a dual role, while national governing bodies aimed to guide ES strategies. One interviewee reported the challenge of guiding state and territory organisations, and explained that national bodies often had to lead by example rather than impose directives:

That's a key challenge across all aspects of business in the federated sport structures is, do you go hold a sport and try and do everything, and try and drive that influence through the states and territories when they're their own separate entities and separate businesses, and you can't really tell them what to do, or do we just focus inwards initially, get some proof points, show some leadership, and then just encourage and try and bring those organisations along with us? (SO1-P1)

Another participant described how their organisation leveraged state councils to facilitate knowledge-sharing between club and national leadership:

We do have a body which we call or a group which we call our state council, and that is all of the club presidents, so they all meet once a quarter to four times a year, and they have almost a recommendation relationship with our board as well. (SO11-P2)

Members' and Clubs' Engagement in ES Practices

Participants from a couple of organisations (n=2) indicated that clubs and members played a crucial role in driving ES initiatives. These participants described their organisation's efforts to raise awareness and engage local clubs in environmental actions. One participant explained their approach to embedding ES into club activities:

We've got 350 clubs, many of which are in or around, you know, either directly on the harbour. So it was really very much, well, how can we help with that, but also highlight

through our network of clubs, the importance of keeping our beaches, waterways, and oceans clean? (SO9-P1)

Similarly, another sport organisation focused on supporting smaller community clubs by providing resources to help reduce their environmental impact:

We focus predominantly on the community clubs, working through issues around grass greens that's water conservation and reuse, and what we can do in that space. We work with them on converting appliances from gas to electricity, getting solar, and batteries. (SO7-P1)

Cross-Departmental Collaboration for ES Strategy Implementation

Participants from several organisations (n=4) described the importance of internal collaboration between departments to successfully implement ES strategies. The study data suggested that sustainability efforts often required cross-functional coordination. One participant highlighted the importance of integrating sustainability considerations into various operational areas: “so basically, we deal with most things that aren't necessarily an operational focus, where they sit across all operational areas. So environmental policy and sustainability sits across all of our operational areas, and sort of all of our entities” (SO11-P2). Another participant emphasised that having representation from all departments in strategy implementation helped ensure that ES priorities were aligned with broader organisational objectives:

We have individual staff members from most departments, we have all departments knowledgeable about the strategy, because we involve them when we're writing the priorities to ensure they were achievable. But we also request at least one staff member from each department involved in the implementation group, purely because it is a whole of organisation commitment. (SO2-P1)

Filed note data also indicated that federated structures and decentralised governance complicated consistent implementation, specifically for organisations SO8 and SO5.

Athletes Engagement in ES Practices

Participants identified athletes as important advocates for ES efforts in some organisations (n=3). The data indicated that athletes could serve as sustainability ambassadors and use their public platforms to promote environmental initiatives. One participant highlighted the role of athletes as sustainability champions, and explained that the athletes' public platform allowed them to advocate for environmental issues: *“and there's an interesting interplay between those two, because I think athletes can be the best champions for environmental change. And we've seen that in the past”* (SO9-P1). Another participant noted that athlete engagement in sustainability was increasing, with more athletes voicing concerns about environmental impact: *“I think we're going to see more athletes having a voice on these types of issues”* (SO3-P1).

Challenges to Implementing ES Practices

Despite increasing awareness of, and commitment to, ES among sport organisations, the integration of ES initiatives into their sports operations remains challenging. This major theme concerns the internal and external barriers that hinder the effective implementation of ES strategies. Participants across 14 cases identified systemic constraints that impacted long-term planning, resource allocation, and regulatory compliance. Two sub-themes emerged: first, challenges to implementing ES practices at the systems level, including governance, policy, and operational barriers; and second, external challenges to implementing ES practices, which highlights the role of stakeholder pressures, financial dependencies, and regional policy inconsistencies.

Challenges to Implementing ES Practices (Systems Level)

Across 14 cases and 72 references, this sub-theme identified key structural and operational challenges such as compliance readiness, cultural resistance, governance instability, infrastructure limitations and resource constraints. While sustainability awareness has increased, analysis of participant responses revealed that organisations continue to face difficulties in embedding ES initiatives within their existing frameworks due to regulatory uncertainties, leadership transitions, and limited capacity to support organisational sustainability strategies.

Compliance Readiness and Reporting Challenges

Participants from a few organisations (n=3) expressed concerns about their organisation's readiness to comply with new regulations and reporting requirements associated with ES initiatives. While the importance of improved reporting mechanisms was widely acknowledged, participants indicated that their organisations struggled with the anticipated financial and administrative burden. One participant expressed the uncertainty surrounding new legislative requirements:

The legislation that is going to come in will require organisations of a certain size to report on sustainability initiatives. I don't think there's good awareness around that at all levels of sport at the moment. The challenge is being ready when it's mandated and having the mechanisms to do it without significantly increasing costs. (SO1-P1)

Another participant also described difficulties in measuring and communicating the impact of their organisation's sustainability efforts beyond quantitative metrics:

I can easily report on the demographics of people involved in our initiatives, but actually articulating the impact – how does it change behaviour, how does it influence decision-making – has been difficult. Without that data, it's hard to justify budgets or advocate for resources. (SO3-P1)

SO7-P1 identified the absence of structured governance mechanisms as another challenge: “sustainability governance is critical – whether it's fiscal or operational, if there's no accountability, it will fail.”

Cultural, Behavioural, and Priority Barriers to ES Adoption

Many participants identified cultural resistance and competing organisational priorities as key barriers for their organisations (n=10). The data indicated that, although awareness of environmental issues had improved, balancing ES initiatives with financial sustainability and competitive success remained challenging. One participant explained:

Recruitment and retention of members, then probably followed pretty quickly by making money or having money in the bank to support their members. And then, sort of the third priority for some clubs is sport success and winning medals. So to try and come in with a focus on how important environment it is just isn't necessarily goal number one for all of our clubs and members, we've still got some cohorts that don't believe in climate change. (SO11-P1)

In addition, long-standing attitudes within the sports community also contributed to resistance. Participants observed that some stakeholders remained sceptical about climate change or saw sustainability as unrelated to sport. One participant reported that “*we have a number of people who don't believe climate change is an issue or that [sport] have no role to play in it. They see it as an unnecessary distraction*” (SO3-P1). Even in organisations committed to sustainability, internal communication challenges persisted. One participant observed that:

Most of the people I'm dealing with those are aged 75 to 85, still running the club. So they're in transition as well. You know, they don't never generally don't see this as an issue. So how do we get that onto their agenda? And how can I show them that there are wins here? So that's a that's a that's a real, real challenge externally” (SO7-P1).

Notes from field observations highlighted that cultural resistance and traditional norms were recurring challenges, particularly for organisations SO4 and SO8.

Governance and Leadership Continuity Challenges

Leadership turnover and governance structures lacking long-term sustainability planning were cited as challenges by participants from a few organisations ($n=3$). Frequent leadership changes led to ES initiatives being given less importance. One respondent described this issue: “*we had a plan in place, but after a change of CEO, it got put on the shelf*” (SO12-P1). Volunteer-led governance structures created additional instability in sustainability commitments. SO11-P1 explained:

But to have those conversations with clubs that turn over board members sort of every two to three years, they probably don't want to be the president that spends, you know, \$200,000 in the hope that in 20 years' time they've got more money in the bank.

For organisations operating under federated governance models, national bodies developed sustainability frameworks, while state-level bodies were responsible for implementation. One respondent felt that this structure could lead to inconsistencies:

It's a federated model, national body job is really sort of to develop the frameworks and the guidelines to support the states who are the ones actually delivering the services. That's briefly how it is, but it doesn't necessarily work like that, and each state is their own entity, and each club is their own entity within that state. So it's kind of like my boss always describes it as like an epileptic octopus, where every single arm is going in its own direction and doing it. (SO8-P1).

Lack of Infrastructure and Alignment with Government Support

A few participants identified infrastructure limitations and inconsistent government support as key barriers faced by organisations (n=3). Participant responses indicated that their organisations relied on external infrastructure to support sustainability initiatives, which was not always available. One participant noted that *“a big hurdle is government alignment. We can't be expected to fund everything ourselves. We have the intention, but if the facilities aren't available – like electric vehicle chargers in our precinct – it's hard to roll out some initiatives”* (SO14-P1). Participants noted that logistical challenges further complicated the implementation of sustainability practices at venues. One participant explained that *“many of the locations we use for events don't have recycling facilities, so we have to find workarounds”* (SO5-P1). Participants also felt that funding constraints added another layer of complexity, especially when government priorities shifted. SO8-P1 remarked that *“the recommendations we received were great, but they required more money than we had. Then, we had a shift in government, and funding priorities changed.”*

Resource and Capacity Limitations for ES Initiatives

Many participants reported that a lack of financial, staff, and operational capacity was a consistent challenge for their organisations ($n=13$). The data supporting this theme demonstrated that limited funding, staff shortages, and competing priorities restricted organisations' abilities to implement ES initiatives effectively. One participant explained: *"there's a desire and need to do things, but the challenge is capacity. If we allocate resources to sustainability, it's taking away from something else because we don't have the available funds to create a dedicated role"* (SO1-P1). Participants suggested that smaller organisations faced additional difficulties due to their reliance on volunteers. SO11-P2 commented on this challenge:

And it's hard with clubs, because they're all volunteers and gathering data from them, we rely on them to give us their data. We don't have access to their [sic] we did try and get all of their electricity bills, and they were pretty good with that, but they also don't have any obligations to share that with us, because they are their own entity.

Participants noted that staff workloads also presented obstacles. For example, one participant (SO2-P1) explained that their role had been expanded to include sustainability responsibilities equivalent to those of an additional full-time staff member, illustrating the strain on existing personnel. Participants also reported that financial constraints remained a persistent issue. One participant explained: *"NSOs always feel like they have too much to do. The challenge is getting sustainability to the top of the priority list when it will likely cost money initially"* (SO4-P1). Notes from field observations further confirmed that limited funding, staffing, and expertise were among the most frequently cited constraints, especially by participants from SO12 and SO5.

External Challenges to Implementing ES Practices

ES practices in sport organisations are not only shaped by internal management and operational decisions; they are also shaped by external constraints that influence an organisation's ability to implement and sustain initiatives. Across nine cases and 17 references, this sub-theme is concerned with five external challenges: challenges in external market and stakeholder pressure; challenges in inclusive engagement in ES initiatives; regional differences – different state and venue policies;

reliance on government funding and external support; and resource management and communication challenges. These external factors often created additional complexity for organisations trying to translate policy into practice, which affected the pace and feasibility of their sustainability adoption.

Challenges in External Market and Stakeholder Pressure

Participants from a couple of sport organisations ($n=2$) reported that external pressures from stakeholders and corporate partners made it harder to advance ES initiatives. Analysis of participant responses indicated that sponsorship deals, commercial limitations, and venue management policies often restricted how much influence organisations had over sustainability efforts. One participant explained the challenge of sponsorship in Australian sport, noting that limited corporate funding made it difficult to reject partnerships based on sustainability concerns:

For sport, there's going to be more pressure to do more. We've seen conversations around greenwashing and pressure on organisations to drop partners in the fossil fuel or resources sector. But Australia is a small market, and corporate dollars are extremely difficult to come by. If you've got a multi-million-dollar partner willing to invest, it's a real challenge to say no if there's no alternative. (SO1-P1)

Participants noted that some organisations also had little control over sustainability policies at the venues they used. SO12-P1 pointed out that:

It's also a challenging area for us, because whilst we are the state organisation for the sport, we don't control the water space. There are management companies and councils that do. So there's not direct influence for us in manipulating this area.

Challenges in Inclusive Engagement in ES Initiatives

Participants from a few organisations ($n=3$) found it difficult to foster inclusive engagement in sustainability efforts across different stakeholders, including athletes, members, and local clubs. While stakeholder involvement was important for ES initiatives to succeed, participants reported

that organisations struggled to mobilise their members and bring different interests together. One participant recognised the value of collective action but noted the difficulty of engaging large member groups:

You do feel part of a community when we're talking about it, but also, when we can harness the collective movement around this – whether through our athletes or our 130,000 club members who regularly [sport] – we can do a lot of good” (SO9-P1).

Another participant pointed out that sustainability messaging needed to be clearer. They drew a comparison with gender equity policies, where early miscommunication led to misunderstandings:

With gender equality policies, people initially thought it was only about women, which impacted uptake. We don't want to face the same issue with sustainability, where people assume it's just about recycling or something narrow, when in reality, it's much broader. (SO14-P1)

Participants noted that a further challenge was community resistance to change. One respondent explained: “Some will 100% be with us, and others won't” (SO10-P1).

Regional Differences – Different State and Venue Policies

Participants reported that there were differences between state-level environmental policies and venue regulations that created inconsistencies in sustainability implementation across a couple of the sport organisations (n=2). The data supporting this theme indicated that venue-specific restrictions sometimes conflicted with broader sustainability goals, thereby making compliance and engagement difficult. One participant described inconsistencies in single-use plastic policies across states:

It does vary from state to state in terms of plastic straws and those kinds of things. In Penrith, for example, they tell us we're not allowed to take reusable coffee cups, which is untrue because local cafes allow them. But venue managers say it's a safety issue—which I can understand, but it's super frustrating. (SO5-P1)

Another participant noted regional differences in attitudes toward environmental challenges, particularly in response to extreme weather conditions: *“they do things a bit differently down there, which is great, but they’re often a bit more progressive in some ways. WA is a bit less progressive in other ways”* (SO8-P1).

Reliance on Government Funding and External Support

Participants reported that several organisations ($n=4$) depended on government funding and external partners to support their sustainability initiatives. The data indicated that funding was often uncertain, making it difficult to secure dedicated financial support. One participant emphasised that government grants were one of the few reliable sources of funding:

It really is going to be sort of by education unless we can, again, come and convince our commercial partner to come on board around our sustainability strategy, and how that might be developed and then implemented locally. Or seek government grants, which again, could be a combination of national, state, and regional grants. (SO9-P1)

Participants reported that sustainability was not yet a priority in government funding for some organisations. For example, SO2-P1 explained:

With our assistance as a primarily government-funded sport, we rely on the Australian Sports Commission for a lot of our funding. But sustainability is not currently a reporting function we need to provide to them. That’s the single biggest lever that hasn’t been pulled yet.

Another participant described their organisation’s funding structure and its reliance on multiple revenue sources: *“we are quite reliant on government funding because we’re a charity. A lot of people don’t realise that. Our revenue streams are broadly one-third partnerships and sponsorship, one-third government funding, and one-third philanthropy”* (SO8-P1).

Resource Management and Communication Challenges

Participants from a few organisations (n=3) reported that resource constraints and communication challenges were barriers to sustainability adoption. Analysis of participant responses demonstrated that limited financial and logistical support made it difficult to implement ES initiatives at scale. One participant noted that event logistics and materials management remained a challenge: “we do a lot of volunteer uniforms and things like that, but there’s packaging and other materials that come along with it” (SO5-P1). Another participant identified gaps in communication and awareness: “yeah, we’re clear as to whether that was a lack of, you know, connection to the program, or whether it was a communication and an awareness issue” (SO3-P1). Apparel and uniform sustainability was also raised as a sector-wide issue. SO14-P1 explained:

That is spanning across the main focus at the moment – on our apparel and our uniform and trying to improve the sustainability element within that. It’s a big gap in sport at the moment, obviously. I mean, it’s a big gap for fashion in general, but sports apparel in particular, with the performance aspect, it’s quite hard to find sustainable materials.
(SO14-P1)

Risk Assessment and Reporting

Participants identified risk assessment and reporting as key aspects of sport organisations’ ES efforts. Field notes also showed that, while some organisations (e.g., SO14, SO13) had begun tracking sustainability metrics, most were still in the early stages of developing consistent monitoring systems. This major theme encompassed both existing initiatives and planned actions related to risk assessment and reporting, all aimed at strengthening accountability mechanisms and aligning organisational practices with ES goals. Across 12 cases, participants described their existing reporting structures and shared how they planned to improve ES assessments. Two sub-themes emerged: first, current risk assessment and reporting practices; and second, planned developments in ES metrics and standards.

Current Risk Assessment and Reporting Practices

Across 10 cases and supported by 17 references, participants identified three primary areas of focus for sport organisations when assessing environmental risks and undertaking reporting: internal reporting and accountability; waste management tracking; and travel policies related to carbon management.

Internal Reporting and Accountability for ES Progress

Participants from a couple of organisations (n=2) described how they track ES progress through internal reporting structures. The data supporting this sub-theme indicated that some organisations followed a fixed schedule for board updates, while others reported flexibly as needed. For example, one participant noted the frequency of their reporting structure: *“so we report to our board on a monthly basis. It does depend, though, where we’re at with our working group, where they’ve met you, they’ve got a survey open if the results have come back”* (SO12-P1). This participant also explained that their organisation was moving toward a more structured system:

We’ve progressed things to a point now where I think we’re kind of at the point where we’ll look to have six-weekly meetings and put a little bit more structure around it, like we’ve got, sort of through the exploratory phase. (SO12-P1)

Similarly, another participant reported that their sport organisation followed a structured reporting cycle. This participant explained:

At the moment, we’re doing once. So basically, we do once every six weeks. And then what we do is, if there’s a reason for us to catch up more than that, we then would go at the three-week meeting mark. (SO10-P1)

The data supporting this theme revealed that, while regular updates improved visibility and accountability, the lack of a standard reporting framework made consistency challenging.

Tracking Waste Management and Audit Reports

Participants identified waste tracking and auditing as key tools for monitoring ES performance. Participants from two organisations (n=2) described their data-driven systems to track waste levels and contamination. For example, a real-time dashboard powered by Power Business Intelligence (BI) helped one organisation track multiple indicators, including working hours, incidents, audits and waste. One participant explained that *“they use Power BI, like we do, they’ll provide us with a dashboard where we’ll track everything, sort of hours, incidents, audits, and waste. We can assess performance at a glance”* (SO13-P1). In addition, the same participant also reported that their waste reports included total tonnage, category breakdowns, and contamination percentages, which helped the organisation measure sustainability efforts more effectively. Another participant described how they sought external support to improve their tracking systems:

We have a tracking document that I mentioned this. We had external expertise and external expertise in strategy writing and the climate space help us write our strategy, and they’re also helping us develop processes to track and report on our priorities that are listed in the strategy. (SO2-P1)

However, more generally, the data supporting this theme indicated that the integration of these tracking tools with organisational planning and reporting systems varied considerably, making cross-organisation comparisons difficult.

Travel Policies and Carbon Management

While managing travel-related carbon emissions was a focus for many organisations (n=7), their tracking and reporting methods were different. For instance, some organisations conducted formal carbon footprint assessments, while others included emissions reporting within broader sustainability commitments. One participant linked their sport directly to environmental responsibility, explaining that working on waterways made sustainability a priority: *“sustainability is central to our work – we operate on waterways, and staying mindful of our environmental impact is essential”* (SO5-P1). Participants indicated that other organisations used carbon tracking to raise awareness internally. For example, SO9-P1 explained that *“examining our*

carbon footprint has increased mindfulness about sustainability within the organisation.” Those organisations that had signed international sustainability agreements faced additional reporting requirements. For instance, one organisation had to submit annual reports under the UN Sports for Climate Action initiative, with non-compliance risking removal from the programme. However, comparing carbon emissions across different sports remained a challenge. One participant pointed out that *“reporting metrics for one sport may not align with another, making cross-industry standardisation difficult”* (SO4-P1).

Planned Developments in ES Metrics and Standards

Participants from several organisations (n=6) mentioned planned improvements to ES risk assessment and reporting. The data supporting this sub-theme indicated that a number of organisations were in the process of establishing standardised metrics and aligning their reporting with global sustainability frameworks.

Developing Metrics and Baselines for ES Practices

A few organisations (n=3) recognised the need to develop baseline measurements to track sustainability more effectively. One participant emphasised the importance of consistency in waste management explaining:

From a waste management perspective, it would be great to have that at our events, but also even just our facilities – like, you know, we’ve got an office at each of the states around Australia. So having a gold standard about how we actually manage waste, all of that kind of stuff probably needs to be aligned to something. (SO4-P1)

Another participant described their organisation’s priority as establishing a carbon baseline: *“our first priority at the moment is to get our carbon baseline measurement in order. We have a fair idea, we think, of where our emissions are coming from, but it’s good to have actual evidence of that”* (SO14-P1).

Tracking and Aligning with Global Sustainability Standards

Participants from a few organisations (n=3) described their plans to integrate global sustainability standards into their reporting frameworks. One participant discussed their organisation's efforts to align with international sustainability commitments: *“within that plan, there are a number of things around tracking carbon emissions and carbon reduction over a period of time, looking at the sustainable development goals and the UNESCO framework”* (SO1-P1). Participants also noted that some organisations explored the expansion of emissions tracking beyond their direct operations to include the environmental impact of athlete and spectator travel. For example, one participant explained that *“stage three is pretty far down the track where you're tracking how many emissions people were putting into the planet, just turning up to sport and driving there”* (SO11-P1). Another participant reflected on the requirements associated with global sustainability initiatives, stating that:

If you signed up before the first of January 2023, you have to be reporting right now The UN Sports for Climate Action actually have the ability to remove people if they're not on board and committing and reporting. (SO2-P1)

Document Analysis

Study Two incorporated document analysis as a complementary method to triangulate with, and enhance the credibility and depth of, the semi-structured interview findings. The documentary evidence served to give context and complementary information on the processes, procedures and leadership attributes identified in the case study organisations. It also facilitated the identification of patterns and strategic directions, while offering additional insights into the ES implementations within Australian sport organisations. In particular, document analysis supported the cross-validation of themes derived from the interview data, and the confirmation of consistencies and the highlighting of discrepancies between how ES is conceptualised and operationalised across organisations. Furthermore, the document analysis provided access to organisational-level

perspectives that were not always accessible through interviews especially in areas relating to public commitments, official policies, and the structured implementation of ES initiatives.

Overview of Document Characteristics

The dataset comprised a total of 39 documents from 14 sport organisations. These documents were gathered from both publicly accessible sources and confidential internal records provided by Study Two participants. Among the 39 documents, 23 documents (59%) were publicly available, while the remaining 16 documents (41%) were internal documents shared during the interview. All documents are identified using anonymised IDs (e.g., D1, D2) and detailed in Appendix E.

The documents varied considerably in their form, purpose, and level of detail. Around two-thirds of the documents were designed for external audiences, and they focused on the communication of long-term vision and public impact. Other documents were internal in nature, and they focused on the operational aspects of policy implementation and procedural coordination. Internal working documents, such as implementation plans, meeting minutes, and executive briefings, revealed the ES practical activities and decisions that accompany the development of formal strategies. This variety of sources enabled the assessment of both the strategic positioning reflected in public-facing statements and the operational pathways through which organisations attempt to realise their ES goals. The full dataset was categorised into six document types: strategic documents; organisational action and implementation plans; regulatory and policy frameworks; internal reports and decision records; research, data collection and stakeholder engagement; and public communication and impact reporting.

Overview of Document Category

Strategic Documents

This category included 13 strategic planning documents, representing the largest portion of the dataset. These documents were primarily developed at the national or state level and were mostly publicly available through organisations' official websites. Most of these documents were

designed for external stakeholders, indicating a performative function, while a few of these documents, such as D9 and D37, included internal operational metrics, indicating that these documents served both external communication and internal accountability purposes.

Across this category, these documents addressed a broad range of sub-themes identified in the interview data, including “strategic planning for ES goals (planned)”, “policy and strategy development”, and “resource management and operational efficiency”. However, there was a notable difference in depth and specificity. While some plans focused on general aspirations, such as D2’s recognition of the climate’s growing impact on sport participation and operations, only a small number of cases translated those concerns into tangible commitments. For example, D1 outlined a plan to monitor the organisation’s carbon footprint from travel and set reduction targets, alongside transitioning to digital systems to reduce paper waste.

Despite being primarily forward-looking and principle-driven, several strategic documents also referenced concrete organisational actions and stakeholder engagement strategies. Initiatives ranged from carbon footprint calculations and travel emission reductions (D1, p. 4), to internal staff education programs and junior-level community engagement (D21, p. 1; D37, p. 17). Furthermore, some documents highlighted challenges in implementing ES goals, such as water scarcity or capacity issues (D3, p. 7; D19, p. 2), which offered some insights into the practical constraints faced by sport organisations. The inclusion of such operational and contextual considerations demonstrates that strategic documents, while often framed in abstract terms, occasionally functioned as hybrid instruments, combining vision-setting with foundational steps toward execution. However, this level of specificity was not consistent across the sample, which underscored the broader tension between symbolic commitment and measurable planning.

Compared with the interview findings, these strategic documents tended to present a more aspirational and future-oriented narrative, whereas participant interviews more often emphasised practical constraints, such as resource limitations, implementation lags, or staff capacity issues. This contrast suggests that, while they might reinforce the existence of ES commitments at the organisational level, strategic documents sometimes understate the complexity of delivery.

Nevertheless, the documents helped to validate interview themes and they added clarity to how ES values are formalised and communicated at an organisational level.

Organisational Action and Implementation Plans

This category included seven documents focusing on translating ES strategies into concrete actions, metrics, and internal frameworks. These documents included environmental management plans, green action plans, work plans, and sustainability planners. These documents generally articulated concrete steps, timelines, and measurable indicators, and they addressed implementation strategies in greater depth than strategic documents. For instance, D10 outlined a structured plan focused on four key areas, including internal sustainability audits and external collaboration. These documents not only presented sustainability as a priority but also revealed how organisations intended to achieve progress, marking a shift from vision to action.

These documents addressed several sub-themes arising from the interview data with clarity and specificity. Topics such as strategic planning, education, stakeholder engagement, infrastructure, waste management, and emissions tracking were frequently addressed with practical examples. For instance, D14 specified a 2% annual reduction in electricity and landfill waste per capita (p. 8), while D35 set out a carbon footprint measurement strategy using the 2023–24 financial year as baseline (p. 3). Furthermore, D34 included internal staff engagement initiatives, highlighting staff-led sustainability squads, which suggested an effort to embed behavioural change at the grassroots level. These examples echoed interview findings relating to staffing, leadership, and evaluation challenges, and they demonstrated how some organisations are actively working to address those areas.

Importantly, these implementation-focused documents not only confirmed many of the issues raised during interviews but also offered additional detail on internal structures and staff involvement. In several interviews, participants emphasised the importance of practical enablers, such as working groups, cross-departmental coordination, and pilot initiatives. Documents like D16 and D34 illustrated these elements clearly, referencing internal toolkits and sustainability

champions. At the same time, gaps remained in areas such as performance tracking and accountability. Only a few documents, like D14 and D35, included robust evaluation frameworks. Others described goals without specifying how progress would be measured or who would be responsible. This observation suggests that, while many organisations have moved toward action, the long-term success of these plans depends on sustained leadership, resource investment, and integration across departments.

Regulatory and Policy Frameworks

This category included six documents that defined ES expectations, operating principles, and formal commitments across the organisations. These documents included policy statements, position statements, committee terms of reference, and national-level guidelines. Compared to strategic and implementation documents, these texts were more focused on standard-setting and accountability rather than goal setting or program design. Most provided high-level direction on how sustainability principles should be embedded across organisational operations. For instance, D11 outlined a broad commitment to “reducing, preventing or eliminating the environmental hazards and impacts of its people, activities, operations, and products” (p. 1), suggesting a broad-based policy intent to institutionalise environmental responsibility at a structural level.

The level of detail and enforcement capacity varied across documents. Some documents, such as D8, provided relatively clear governance mechanisms, including oversight responsibilities and the embedding of policy monitoring into committee structures. D16 added further specificity by outlining expectations for executive-level reporting and regular policy reviews. These features suggest that policy documents were not simply symbolic; they also carried the potential to support structural accountability. In contrast, other documents, like D24 and D38, offered more general principles without specifying indicators or enforcement mechanisms. This lack of clarity reduced their operational value and risked limiting the extent to which they could drive or monitor change, especially in the absence of alignment with action plans or evaluation systems.

In relation to the interview findings, these documents reflected key governance-related themes, particularly those focused on formalising ES strategies and setting organisational responsibilities. Sub-themes such as “policy and strategy development” and “risk assessment and reporting” were well represented, providing documentary support for the formal processes described by senior leaders who participated in interviews. However, there were notable omissions. Themes like “resource and capacity limitations” and “internal resistance”, which appeared frequently in interviews, were rarely addressed in policy texts. D38 was one of the few that explicitly acknowledged operational challenges such as schedule disruptions due to extreme weather (p. 3), reflecting real concerns raised by study participants. This finding suggests that, while they may offer foundational guidance and legitimacy, regulatory frameworks often present a simplified version of the challenges organisations face, which highlights the importance of connecting policy structures more closely with implementation realities.

Internal Reports and Decision Records

This category comprised seven documents, including internal meeting minutes, panel summaries, executive updates, award submissions, and internal progress reports. These documents offered valuable insight into the operational and reflective dimensions of ES practice, and they revealed how ideas were translated into decisions, monitored over time, and shared among internal stakeholders. Unlike strategic plans or policy frameworks, internal records were more candid and process-oriented, and they often captured emerging tensions, achievements or gaps. For example, D15 described how [the sport organisation] positioned itself as a leader by aligning with the UN’s Sports for Climate Action Program, while also noting ongoing efforts to engage staff through induction programs and awareness initiatives such as Earth Hour (p. 1). These narratives revealed the everyday governance practices that accompanied high-level ES commitments.

The thematic range in this category was broad but grounded in implementation realities, including behavioural change, leadership engagement, resource management, and procurement. Several documents documented implementation experiences, such as the challenges of introducing recycling at international events where participants were unfamiliar with local systems (D22, p.

1), and the incremental adjustments made to electricity consumption targets, and travel emissions reporting (D14, pp. 10–11). Internal decision records also included staff-led initiatives and evaluation reports, which demonstrated a commitment to continuous improvement. However, while they often confirmed the direction of strategic plans, these materials also exposed implementation inconsistencies, such as unclear accountability, uneven stakeholder involvement, and a reliance on voluntary engagement without formal enforcement mechanisms.

In relation to interview findings, these documents provided strong support for sub-themes such as “education and behavioural change initiatives”, “resource and capacity limitations”, and “driving climate action through leadership”. For instance, D15 explicitly stated that [the sport organisation] is “continually monitoring the options for the introduction of new categories as technology evolves” (p. 2), a statement that reflects concerns participants raised in interviews regarding the pace of technological and cultural change. Moreover, internal records often extended or enriched interview findings by providing additional contextual details, such as the influence of international frameworks or the motivations behind specific actions. In this sense, internal documentation functioned as a bridge between formal commitments and lived organisational realities, revealing not only what organisations aimed to do but how they learned and adapted along the way.

Research, Data Collection, and Stakeholder Engagement

This category comprised three documents that represented early-stage or grassroots engagement with ES through consultation, idea generation, and staff or member participation. Rather than setting policy or outlining strategy, these materials aimed to generate input, surface new ideas, and involve internal and external stakeholders in shaping future directions. The documents included a member survey, an expression of interest (EOI) for joining a sustainability working group, and brainstorming notes capturing a broad set of proposed initiatives. For example, D25 presented a member-facing survey that aimed to gather opinions on the environmental impacts of sport participation, and the document stated that “[the organisation] is conscious of the environmental impacts of our sport and [is] interested in our members’ thoughts on the way in which we work and participate in regard to sustainability” (p. 1). This approach demonstrated an openness to

community perspectives and signalled the organisation's intent to align future actions with stakeholder values.

These documents also offered insights into the early-stage formation of sustainability initiatives. D27 invited expressions of interest from coaches, club personnel, and others who were passionate about sustainability to join a working group, which demonstrated an open, participatory model of internal engagement. D33 comprised brainstormed principles and project ideas, which highlighted wide-ranging priorities, such as reducing travel impact, building strategic partnerships, and improving the circularity of sports apparel and equipment (p. 7). Although these ideas were not accompanied by implementation plans or formal commitments, they reflected an organisational culture that was beginning to explore sustainability across different operational dimensions. The emphasis on cross-cutting sustainability dimensions, such as sourcing, energy use, waste reduction, and climate education, suggested a broadening awareness of sustainability's relevance beyond compliance.

These documents provided a useful complement to interview findings by highlighting early efforts that were often less visible in leadership narratives. While interviews with senior managers often focused on strategy or governance, these documents illustrated parallel efforts at the operational and community engagement level. More particularly, the documents strengthened our understanding of sub-themes, such as "internal stakeholder engagement" and "education for behavioural change", which participants mentioned but did not always elaborate on in interviews. However, the absence of implementation timelines or accountability structures in these documents underscored their informal and preliminary nature. Consequently, these materials represent a transitional stage in the ES policy cycle, and they form a bridge between awareness and intention and future programmatic development.

Public Communication and Impact Reporting

This category included three publicly accessible documents intended to communicate ES actions, impacts, and commitments to external audiences. These documents included presentations,

sustainability reports, and public strategy handouts, all aimed at promoting transparency, demonstrating progress, and engaging broader audiences. Unlike internal records or policy frameworks, these documents highlighted achievements, values, and commitments in a summarised and accessible form. For instance, D29 reported measurable impacts of climate change on sport events, such as “low-snow winters causing ski events to get cancelled” and “events being rescheduled due to extreme heat and bushfire smoke” (p. 6), thereby framing the organisation as both responsive and adaptive in the face of environmental challenges.

Content in these documents tended to focus on highlighting outcomes and ongoing activities, with less emphasis on internal processes or planning logic. Sustainability reports, such as D28, often showcased practical adjustments, like a switch to reusable containers in food supply chains, to demonstrate concrete environmental gains: “save tonnes of waste being produced every year” (p. 3). Similarly, D21 described environmental education initiatives for junior participants and outlined compliance with environmental building codes (p. 1), presenting these as organisational milestones. However, the messaging in these documents was selective and success-oriented, with minimal discussion of implementation challenges, setbacks, or trade-offs. As a result, while the documents conveyed momentum, they often lacked the evaluative depth found in internal reports or action plans.

The themes featured in these documents closely aligned with those topics expressed in participant interviews, particularly around environmental leadership, external stakeholder engagement, and raising awareness. However, compared to the more reflexive tone of interviews and internal documentation, these documents appeared curated for reputational purposes. For instance, D29 referenced a carbon management plan (p. 9) but offered no accompanying data or evidence of implementation progress. These findings suggest that public communication documents serve both informational and reputational purposes, and they function as curated narratives rather than full representations of organisational effort. Nonetheless, these documents played a complementary role in triangulating interview findings by illustrating how ES commitments are translated into external messaging, and how sport organisations seek to engage with broader audiences through environmental storytelling.

Summary of Document Categories

The analysis of 39 documents revealed considerable diversity in format, purpose, and audience. These documents ranged from publicly accessible strategic plans and sustainability reports to internal action plans, meeting minutes, and brainstorming notes. Strategic documents were typically high-level in tone, they outlined long-term visions and organisational priorities, and were often aimed at external stakeholders. In contrast, action plans, internal reports, and committee documents provided more detail about implementation processes, performance indicators, and operational challenges. Policy and regulatory documents served to formalise commitments and set expectations, while education-focused and engagement-oriented materials aimed to influence behaviours and build awareness across staff, clubs, and community stakeholders.

Most documents aligned with the key themes identified through the analysis of interview data, particularly those themes related to “organisational action to advance ES”, “stakeholder collaboration”, and “risk assessment and reporting”. However, there were clear differences in depth and specificity across document types. While some action and operational plans included measurable targets, such as annual reductions in emissions or waste, many strategic and policy documents remained general in nature and offered only broad statements of intent without detailed implementation steps. Documents focused on education or stakeholder consultation were rich in engagement value but tended to lack formal planning structures, accountability mechanisms, or timelines for action. This variability suggests that, while organisations broadly acknowledged sustainability as a strategic concern, their levels of planning maturity varied.

When cross-referenced with the interview data, the documents helped to validate core themes and provided additional detail on how ES is framed within organisational narratives. They also revealed notable gaps. For example, participants often discussed practical barriers in interviews that were rarely addressed in formal documents, such as resource constraints, limited staff capacity, or internal resistance to change. Similarly, while interview data highlighted the importance of cross-departmental collaboration and adaptive leadership, these matters were seldom reflected in

policy or reporting documents. In this sense, the documents reinforced the strategic intentions of sport organisations but did not always reflect the lived realities of implementation. Nonetheless, the documents played a vital role in triangulating qualitative findings via different sources, offering complementary context, and surfacing additional insights, particularly in areas such as climate impact framing, procurement strategies, and member education initiatives.

Chapter Summation - Key Findings

This chapter presented the findings from two interconnected studies. Study One used document analysis to examine how Australian NSOs describe ES commitments in formal policies and strategic documents. The analysis revealed that while some organisations have developed high-level plans referencing ES, detailed operational frameworks and accountability mechanisms are rare. Study Two built on these insights through a case study approach that integrated semi-structured interviews, additional document analysis, and field notes. This study identified several recurring themes, including the bidirectional impact of sport and the environment, organisational actions to advance ES through strategic planning and operational practices, the role of leadership and stakeholder engagement, and the systemic and external barriers to implementation. Together, these findings demonstrate both the progress and the constraints that influence how sport organisations in Australia engage with ES. These findings provide the empirical foundation for the subsequent discussion of theoretical implications and practical recommendations.

Chapter 5 - Discussion and Conclusion

This chapter presents a critical interpretation of the research findings in relation to both the existing literature and the theoretical frameworks that have guided this research. The primary aim of this chapter is to interpret and explain the research findings in relation to the study's research questions and the existing literature reviewed in Chapter 2. Through this analysis, this chapter demonstrates a deep understanding of the empirical results and their broader implications for theory, policy, and practice. While acknowledging the limitations of this research, this chapter also outlines avenues for future research and reflects on the significance of the findings within the context of the environmental sustainability agenda in sport.

To achieve these aims, this chapter provides an integrated discussion organised around the following six research questions:

1. What publicly available strategic plans and policies documents exist in Australian NSOs related to ES?
2. How do NSOs define ES in their strategic plans and policies?
3. What organisational leadership factors influence ES policy in sport?
4. What is the mechanism of influence of the major organisational leadership factors to shape ES policy?
5. What are the facilitators and barriers to developing and implementing ES policy in Australian sport?
6. What role does organisational leadership play in removing or creating barriers to the development and implementation of ES policy in sport organisations?

Section one of this chapter synthesises the findings from studies One and Two, and examines how ES is currently represented in the strategic planning, definitional framing, and governance models of sport organisations, thereby addressing research questions one to three. Section two of this chapter focuses on the mechanisms through which organisational leadership influences the development and implementation of ES policy, thereby addressing research question four. Section

three of this chapter discusses the structural and cultural barriers to implementing ES, as well as the leadership factors that enable or inhibit progress, thereby addressing research questions five and six. Section four of this chapter considers the implications of the findings for the conceptual framework developed for this research. Section five of this chapter provides practical recommendations for sport organisations seeking to strengthen their ES practices. Section six outlines the key limitations of the research and identifies directions for future investigation. Through this structure, the chapter presents a coherent interpretation of how ES is understood, developed, and implemented across the sample of Australian sport organisations studied.

Section One: Strategic Plans and Policies on Environmental Sustainability

The findings confirm that ES is gaining strategic relevance among Australian NSOs. However, gaps remain in terms of policy integration and operational implementation. The findings show that of the 56 NSOs examined initially in 2021, only nine (16%) had publicly available organisational documents referencing ES. While ES was mentioned in these documents, it was typically framed in vague terms, such as “responsible operations” or “community engagement” and lacked clear operational guidance. There were few references to specific organisational ES initiatives, targets, or accountability frameworks. Of the nine NSOs, only five NSOs embedded ES policies or guidelines to support their strategic plans, such as linking ES objectives to their organisational visions or broader CSR commitments. Moreover, where ES commitments existed, they generally responded to external drivers, such as government funding requirements or international discourses, rather than reflecting a clear organisational imperative to prioritise ES. Among organisations with stated ES policies, many of those statements lacked a clear description of implementation pathways, key performance indicators (KPIs), and resourcing strategies. The findings suggest that ES was an emerging area of focus and planning for a greater number of Australian NSOs.

Drawing on the responsible innovation (Scherer & Voegtlin, 2020) perspective, the findings show

that most NSOs demonstrated little evidence of anticipatory planning or reflexive governance. The data indicate that most responded to sustainability challenges in a reactive way and primarily focusing on short-term compliance with environmental regulations or event-specific requirements. In contrast, only a few organisations articulated long-term strategic goals, such as aligning ES strategies with national policy objectives or with the wider global ES agenda, including international climate action frameworks. This observation suggests that NSOs gave limited critical attention to the broader social and environmental effects of their actions, which is a key element of responsible innovation.

These findings both confirm and advance academic knowledge. In line with Trendafilova and McCullough (2018), who identified a growing academic and practitioner interest in ES within sport, this research found that ES appeared in the strategic documents of several NSOs, but often without clear implementation strategies or measurable objectives. While earlier studies, such as those by Babiak and Trendafilova (2011) and Trendafilova et al. (2013), recognised the influence of external pressures, such as stakeholder expectations and CSR trends, as underlying motivations for ES considerations, the research underpinning this thesis extends these insights by empirically demonstrating that such external pressures have yet to consistently lead to substantive, systematised policy action across the national sport landscape.

How NSOs Define ES in Their Strategic Plans and Policies

The Australian NSOs investigated in this research appeared to be inconsistent in their definition of ES in their strategic plans and policies. According to the organisational documents collected and analysed across Study One (total 56 NSOs), eight organisations described specific initiatives or demonstrated alignment with recognised sustainability principles, such as reducing ecological impact, responsible resource use, or low-carbon infrastructure design. In most cases, ES was described in vague or general terms. It was often included under broad categories, such as social responsibility, wellbeing, or community development, without a clearly aligned environmental or climate focus. As a result, it was difficult to determine the NSO's actual ES intentions. Even when definitions were present, they rarely referenced a specific ES objective or plan, and lacked

measurable targets, timelines, or formal accountability structures. This absence of specificity illustrates an underdeveloped approach to planning and implementing ES initiatives across the sector. The findings suggest that, while ES may have been referenced in principle, such references to ES typically lacked the strategic clarity necessary to demonstrate a substantive organisational commitment.

The inconsistency in defining ES across the NSO research cohort can be understood using responsible innovation and ecological systems theory. Responsible innovation holds that organisations should plan and reflect on the wider impact of their decisions (Scherer & Voegtlin, 2020). However, most NSOs did not show strong evidence of forward planning or critical reflection. Sustainability appeared as a general value or a way to respond to public expectations, rather than as a long-term strategic priority for the organisations. Ecological systems theory (Bronfenbrenner, 1994) helps explain this trend further. The findings suggest that in the absence of national guidance or coordinated incentives, NSOs developed sustainability practices based on their internal capacity, leadership priorities, and localised needs. The resulting diversity of approaches reflected the contextual realities that shaped how each sport was governed and managed. Rather than viewing it as a limitation, this inconsistency or ‘variability’ highlighted the need for flexible frameworks that can accommodate sport-specific circumstances while promoting shared ES principles.

Consistent with Babiak and Trendafilova (2011), this research confirms that ES remained conceptually ambiguous within Australian NSO documents, and was often subsumed under broader CSR agendas rather than treated as a distinct strategic or operational priority. Similarly, Escher (2020) observed that, although references to sustainability and sport have increased significantly in the academic literature, the field remains fragmented, with diverse terms used inconsistently and without clear definition or nomenclature. In addition, McCullough and Cunningham (2010) noted that many sport organisations prioritised alternative objectives, such as managing stakeholder expectations, producing winning athletic squads, and generating a return on investment, with environmental goals frequently viewed as lower order or secondary concerns. These conditions contributed to a context in which environmentally sustainable practices remained

the exception rather than the norm. This broader pattern of organisational caution aligns with the definitional vagueness identified in this research and further suggests that unclear or absent definitions of ES are symptomatic of a limited investment to embed sustainability as a strategic priority.

Organisational Leadership Factors Influencing ES Policy in Sports

This section discusses the leadership factors identified that influenced the development and implementation of ES policies. Strategic ES commitments were more likely to be embedded into policy when supported by factors such as demonstrated and sustained leadership engagement. When senior leaders demonstrated clear support for ES, organisations were more likely to integrate specific ES initiatives into strategic plans, establish dedicated working groups, and allocate resources to facilitate implementation. In some cases, dedicated sustainability roles were created, demonstrating an organisational resource commitment to implement policy. In contrast, when leadership support was less evident, sustainability efforts were more variable, informal, and often driven by a few interested staff members. This observation was especially evident in federated model organisations, where leadership was needed to align ES implementation efforts across national and state levels. Other leadership factors that were identified as having an adverse effect on ES planning and execution included leaders prioritising other strategies due to limited resources, and a lack of knowledge and/or understanding about environmental issues relevant to the sport they govern.

Organisational leadership not only had a bearing on formal policy development, but also how ES commitments were translated into operational practices. Translating an ES commitment into practice was also evident when leadership had a dedicated focus to building internal capacity for sustainable change (Harris et al., 2021). The research underpinning this thesis found that ES was more likely to be integrated into daily operations in organisations whose leaders supported staff in identifying environmental risks, exploring external opportunities, and adjusting internal processes. Examples included the creation of working groups, the appointment of internal sustainability advocates, and the alignment of ES goals with existing planning or operational systems.

Leadership support of capacity-building extended across multiple levels of the sport ecosystem (Bronfenbrenner, 1994). At the macro level, board directors and national executives shaped policy narratives and allocated resources. Second, at the meso level, sport management leaders translated these broader goals into practice through collaboration with staff, volunteers, and external partners. It has been previously reported that sport managers often lack ES knowledge, which can limit their capacity to advocate for or lead ES efforts (Casper et al., 2012; McCullough et al., 2016). This finding was also reflected in the research underpinning this thesis, with environmental issues were only being discussed at the strategic level when prompted by individuals with prior knowledge or strong personal values related to ES. This leadership-related knowledge gap was a contributing factor for an organisation having unaligned or fragmented ES efforts (Frawley et al., 2018).

The role of senior leadership was highlighted as essential for clarifying ES goals and ensuring resources were available for implementation. In several cases, the inclusion of environmental principles in a whole-of-sport strategic plan gave staff a formal reference to determine clear sustainability practices. Several Study Two participants linked their organisation's progress in this area to the personal commitment of board members, and they explained that overt support from the board helped secure funding allocation and motivate staff to deliver plans. These findings show that leadership acted not only as a strategic driver, but also as a signal of organisational cultural priority, shaping how environmental responsibility was understood and enacted across the organisation. In addition, leadership support created conditions that enabled staff to trial new approaches, such as ES working groups, cross-department collaboration, and partnerships with external organisations. This willingness to innovate and adapt was often dependent on leaders demonstrating organisational vision and commitment to sustainability as an organisational priority. These results highlight that leadership is both a relational and structural part of ES governance. It requires long-term vision, the ability to influence others, and commitment across different parts of the organisation.

While previous research acknowledged leadership as an important factor in the implementation of ES policies in sport, it often focused on leadership as an individual attribute or personal

commitment (Babiak & Trendafilova, 2011; Trendafilova et al., 2013). However, this finding challenges the assumption that individual traits alone are the dominant drivers of ES action in sport organisations. This research offers a more detailed examination of the factors under which leadership becomes effective when it is embedded in organisational structures, specifically through clear strategic planning, defined responsibilities, and internal coordination and collective advocacy, such as establishing working groups. This finding expands existing knowledge by shifting the focus away from individual leadership traits and towards leadership as a distributed organisational function embedded within structures and processes.

Section Two: Mechanisms of Influence for Leading ES Policy and Practice

This section examines the main ways in which leadership influenced the development and implementation of ES policy and practice in Australian sport organisations. The findings identified five key mechanisms: integrating ES into strategic planning and integration; creating structural and role-based mechanisms; shaping culture and shared values; supporting staff-led ES initiatives; and building connections across departments and stakeholders. Each mechanism is discussed in detail below, with examples and references to relevant literature.

Leadership influenced ES policy primarily through early integration of ES into strategic planning and integration of ES initiatives into organisational operations. Senior managers introduced ES during planning activities, initiated new operating frameworks, and encouraged collaboration through working groups. This influence was generally not direct or authoritative. Instead, leadership guided ES by creating enabling conditions, initiating internal conversations, supporting pilot projects, and including ES in official planning documents. In some cases, organisations relied on external consultants or internal advocates to prepare ES strategies, while executives delegated responsibilities but retained overall accountability. These behaviours suggest that leadership operated through strategic coordination rather than a top-down directive. This approach was often informal and iterative, which points to a flexible rather than rigid model of influence. Furthermore,

this approach aligns with previous literature, which suggested that effective leadership in sport organisations is developed through managing complexity via an adaptive environment and experience-based learning process, rather than simply expressing organisational vision (Frawley et al., 2018). Collectively, these findings highlight the importance of shared responsibility for integrating ES within sport organisations.

Beyond setting strategy, leadership influenced policy development and implementation through organisational structures and role definition. In several cases, sustainability working groups or advisory committees were created following leadership endorsement. These groups supported cross-department learning and clarified responsibility for environmental initiatives. Leaders also encouraged staff autonomy by supporting new ideas, even when resources or performance indicators were limited. For example, some organisations formed small working groups led by motivated staff. These efforts were later recognised by senior leaders through public acknowledgment or inclusion in strategic documents. This form of influence allowed staff to experiment at a local level while feeling supported by the broader organisation. However, the impact of this leadership influence was varied. Some organisations received clear and consistent support from their board and CEO, while others faced unclear direction or changing priorities due to the board or senior level leadership turnover.

This thesis offers new empirical insights into how leadership shapes ES policy in sport organisations, with both similarities to, and differences from, existing research in other organisational sectors. Previous studies often described leading ES as a relatively linear process, in which senior leaders set sustainability goals and align them with the organisation's vision (Casper et al., 2012). For example, in the construction sector, Opoku et al. (2015) found that leaders influenced sustainability by both establishing policies and procedures and by coordinating cross-departmental efforts and promoting staff engagement. These research findings suggests that leadership approaches may combine top-down policy formulation with more distributed, collaborative practices. Collectively, the evidence indicates that leadership for ES should be understood not as a fixed role or a hierarchical process, but as a dynamic capability that enables organisations to respond to evolving sustainability challenges through both strategic direction and

shared responsibility.

This study addresses a key knowledge gap in the sports and ES literature by identifying the mechanisms through which leadership influences policy and practice. These mechanisms include signalling organisational priorities through strategic planning, allocating resources to enable implementation, embedding sustainability in formal policies, and building cross-sector collaborations to reinforce commitment. While Morrison and Misener (2021) described the complexity of planning in community sport, they did not explain how senior leaders influenced action across different organisational levels to support sustainability goals. Similarly, although Mallen et al. (2010) and Kellison and Hong (2015) acknowledged the role of sustainability teams, they did not discuss how leadership maintained these efforts over time. The research underpinning this thesis shows that leaders act not only as decision-makers but also as connectors who support local community initiatives, build relationships between departments, and align different stakeholder interests. These insights offer a more detailed view of how leadership operates as a distributed and supportive force in sport and ES governance.

The research underpinning this thesis also recognised the important mechanism by which leadership influences organisational culture in regard to ES. This mechanism is under-reported in the sport management literature on ES. In several cases, leaders framed sustainability not merely as a compliance obligation, but as an expression of the organisation's values. This cultural positioning served to normalise sustainability conversations and reduce resistance at the operational level. Leadership fostered an enabling environment through informal discussions and by incorporating ES into recognition and awards. These actions align with evidence in organisational studies, which suggested that leadership is not only structural but also symbolic (Zaccaro & Klimoski, 2002) and shapes what is seen as legitimate or worthwhile. By creating a shared meaning around ES, leaders can influence priorities without always resorting to formal control mechanisms.

Section Three: Factors Influencing Implementation of ES Policy in Australian Sports

This section examines the main factors that facilitated the implementation of ES policies in Australian sport organisations. The findings identified two types of facilitators: first, system-level drivers within organisations; and second, external drivers from the broader environment.

System-level leadership and governance support were key internal factors enabling the implementation of ES policies in Australian sport organisations. Senior leaders, especially board members and CEOs, played a central role in making ES a visible organisational priority. Their involvement included both symbolic actions, such as developing sustainability strategy in public documents, and practical steps, such as establishing an ES working group and allocating resources. When ES objectives were included in strategic plans or formal performance frameworks, they were more likely to be embedded across the organisation. The inclusion of ES objectives in these frameworks often led to clearer reporting processes, stronger internal monitoring, and staff responsibilities aligned with ES goals. In contrast, when leadership showed minimal interest around ES at the executive level, staff with strong personal commitment to ES often encountered structural barriers that impeded meaningful progress. These findings suggest that leadership commitment at the highest organisational levels is not only influential but often essential for turning ES planning into structured organisational action.

External drivers played a significant role in supporting the integration of ES within sport organisations. These drivers included alignment with international frameworks, increased environmental awareness among younger generations, and advocacy led by athletes. Global goals and standards such as the United Nations Sustainable Development Goals (SDGs) and Environmental, Social and Governance (ESG) principles, exerted an influence on organisational sustainability efforts. These goals and standards offered strategic guidance and enhanced the legitimacy of sustainability efforts. Organisations that referenced these international goals and standards were often better able to communicate their own environmental goals to stakeholders, sponsors, and government partners. At the same time, shifts in public expectations regarding ES

created additional momentum, with younger participants and emerging elite athletes a key demographic that expressed strong views about the importance of environmental responsibility. Such expectations from athletes and younger stakeholders placed internal pressure on organisations to respond through policy development and communication strategies. These expectations influenced staff attitudes and shaped how organisations engaged with the public. In some cases, sport organisations supported the ‘athlete voice’ to promote ES values and present environmental action as part of a broader social impact agenda. As a result, external influences contributed to both cultural change and policy development within sport organisations.

System-level leadership and staff mobilisation were important facilitators for ES and can be explained through the combined lenses of dynamic capabilities and responsible innovation. The findings from this research illustrated how strategic commitments were turned into action within sport organisations. According to dynamic capabilities theory, organisational innovation and improvement depend on internal learning, responsiveness to environmental pressures, and the ability to acquire and redirect resources. In the organisations participating in this research, the presence of ES working groups and formal leadership support helped the organisation maintain learning processes, respond to members’ and sponsors’ expectations, and direct financial and staff resources towards ES initiatives. This pattern is consistent with how dynamic capabilities have been described in the sport management literature, especially insofar as they provide a basis for continuous adaptation and strategic change (Harris et al., 2021). From the perspective of responsible innovation (Scherer & Voegtlin, 2020), these leadership practices also exhibit the qualities of anticipatory thinking and reflexivity. When senior leaders included long-term environmental risks and stakeholder values in strategic planning, ES became more embedded in the organisation. In contrast, when these values were not considered, ES was more likely to remain a low-priority or optional activity.

In addition, external drivers such as ESG frameworks, changing environmental values among younger generations, and athlete-led advocacy can be interpreted through ecological systems theory and the principles of responsible innovation. Ecological systems theory (Bronfenbrenner, 1994) suggests that organisations are situated within broader social environments, where shifts at

the macro level influence behaviours and practices at the meso and micro levels. The requirements of international sustainability frameworks and the expectations of younger stakeholders were described as influences encouraging changes in strategy and daily operations. These external factors not only created normative pressure but also offered practical direction. As a result, some organisations began to adjust their internal priorities and adopted more inclusive ways of communicating about ES. Athlete advocacy also served as a link between external expectations and internal responses. By drawing attention to environmental issues, athletes increased public awareness. When organisations viewed these external forces as opportunities to support socially responsible goals, and not as compliance requirements, they demonstrated the principles of responsible innovation. These principles included openness to stakeholder input, alignment with public values, and the use of forward-looking ethical thinking.

Prior research has emphasised that successful integration often depends on cross-functional teams and coordinated efforts that involve multiple stakeholders (Pfahl et al., 2015; Pfahl, 2010; Trendafilova et al., 2014). This collaborative structure is viewed as essential for embedding sustainability into organisational systems and daily operations. Growing global attention to environmental issues has also encouraged sport organisations to adopt related policies and initiatives in response to external expectations and internal values (Mallen et al., 2010; McCullough, 2023; McCullough & Trail, 2023; Pfahl et al., 2015). In several cases, organisations that maintained shared strategies across different levels were better able to assign ES responsibilities and maintain consistent implementation. The effectiveness of such shared, multi-level strategies adds a new dimension to the literature on strategic coordination, showing that leadership support must be both distributed and aligned to be effective. Furthermore, the research underpinning this thesis shows that performance accountability tools, such as ES-related KPIs or budget alignment, help turn general commitments into action. This area has received limited attention in previous studies.

The findings of this research are also consistent with previous research that highlights the role of external standards and societal pressure in facilitating environmental initiatives in sport organisations. For example, Trendafilova and McCullough (2018) discussed how global efforts,

including the UNFCCC, have encouraged the sport sector to embrace environmental responsibility. These findings are reflected in the research underpinning this thesis, with standards such as the United Nations SDGs and ESG principles constituting important reference points. Organisations that linked their sustainability work to these standards were more likely to gain stakeholder support and communicate their strategic goals clearly. These findings support the view of Babiak and Trendafilova (2011), who argued that aligning with external sustainability norms strengthens an organisation's legitimacy.

This research provides new insights by explaining how both internal leadership and external social influences support the development of ES in sport organisations. While earlier research often focused on the influence of sponsors, fans, and governing bodies (Casper et al., 2020; Mallen et al., 2010; Pfahl et al., 2015), the findings in this thesis show that younger members and emerging athletes often raise environmental concerns that influence leadership decisions. While their influence is usually informal, and expressed through expectations and everyday feedback, it has led to real changes in internal discussions and program development. This finding highlights a type of grassroots pressure that works in combination with top-down forces to implement ES action. A key contribution of this research is the identification of generational influence, especially through the values and actions of younger generations and athletes, which demonstrates how internal culture is changing in response to broader social values. In contrast to studies that describe leadership as a linear process, or focus primarily on external regulation and reputation management, the research underpinning this thesis shows that effective sustainability work depends on coordination across strategic, operational, and cultural levels. The research findings also show that both formal structures, such as strategic plans, and informal influences, such as stakeholders' moral expectations, play a role in supporting ES. Overall, these factors help to expand how ES is understood and studied, especially in sports systems that are decentralised and made up of many different organisations.

Challenges for Implementing ES Policy in Australian Sports

This section examines a range of organisational barriers that challenged the implementation of ES

practices in Australian sport organisations. System-level challenges related to governance challenges, competing priorities, limited internal expertise, and poorly defined roles and accountabilities. Beyond systemic challenges, there were also external influences (cultural, financial, and informational) that challenged the implementation of ES in this research cohort of sport organisations.

Many of the research cohort organisations were challenged in maintaining policy consistency across national and state levels, and these challenges led to a lack of clarity about who was responsible for executing ES plans and initiatives. As a result, implementation efforts were often fragmented. For example, some national bodies developed broad ES guidelines, while state-level organisations created their own local plans without coordination. This lack of coordination led to duplicated projects or inconsistent timelines, which caused inefficiencies and gaps in delivery. Accountability was often unclear, and there was a tendency to react to immediate issues rather than follow a structured, long-term strategy. The lack of dedicated ES roles or working groups meant that sustainability work relied on individual staff interest and initiative. In these cases, ES was perceived by some staff as an optional activity rather than a core responsibility. In other organisations, ES was regularly overshadowed by other concerns, such as elite performance goals, funding pressures, and recovery from the COVID-19 pandemic. Even when ES was included in strategy documents, a gap was identified between intent and action due to the absence of clear operational mechanisms for implementing ES initiatives. Infrastructure was also identified as a key constraint. For example, many organisations did not have access to energy-efficient venues or reliable recycling systems. In addition, limitations in sustainable procurement practices created further challenges for embedding ES across organisational operations. These issues were especially common in cases where organisations shared facilities or used council-owned venues. Under such conditions, even motivated staff faced practical barriers that made long-term ES implementation difficult.

In addition to internal governance and infrastructure-related barriers, the research underpinning this thesis revealed several externally driven challenges that shaped the implementation of ES policies. A common issue raised was the variation in stakeholder expectations and levels of

engagement. While some groups, particularly younger participants, and parts of the community, supported environmental initiatives, others showed little interest or were resistant. This resistance was often stronger when sustainability goals appeared to challenge long-standing traditions or conflicted with what stakeholders viewed as core organisational priorities. Many organisations also experienced tension between long-term environmental goals and the need to meet short-term funding requirements. In particular, heavy reliance on government grants or sponsorship limited the ability of organisations to pursue sustainability initiatives when funders did not include environmental outcomes as part of their priorities. Regional differences added further complexity. Organisations that operated across multiple jurisdictions described inconsistencies in policy requirements, the availability of infrastructure, and access to environmental support programs. These differences made it difficult to apply consistent strategies or expand successful local practices to a broader national level.

Communication challenges were also frequently identified. Staff and volunteers lacked the necessary language, tools, or knowledge to explain the purpose and value of ES. These limitations made it harder for them to build internal understanding and to engage external partners. Without an accessible educational resource, it was challenging to build consensus or momentum across stakeholder groups. Resistance was not always explicit but was often embedded in organisational norms and cultural inertia. In several cases, environmental initiatives were perceived as peripheral to “core business,” especially in high-performance sports where success metrics remained tightly focused on medals, rankings, and competitive outcomes. Other research participants described how long-standing traditions, such as event travel protocols or equipment sponsorships, made sustainability reforms feel disruptive rather than progressive. This form of cultural resistance, while subtle, posed significant challenges because it reinforced status quo practices and diminished the perceived urgency of change. Overall, these financial, cultural, and informational challenges combined to limit progress, reinforce internal uncertainty, and prevent sustainability from becoming a core organisational priority.

The challenges outlined in this thesis reveal a fundamental weakness in the development of dynamic capabilities within many Australian sport organisations. Harris et al. (2021) described

organisational learning, market alignment, and resource mobilisation as the key processes through which dynamic capabilities enable sustained innovation. However, the findings in this thesis indicate gaps across all three areas. First, many organisations did not have internal systems to support learning related to ES. Without mechanisms for reflection or evaluation, it was difficult for them to build on past experiences or recognise emerging good practices. Second, market alignment appeared limited. Although public concern about climate change has increased, few organisations had formal processes for collecting feedback from members or sponsors, and sustainability was rarely positioned as a core value or point of difference in their market identity. Third, resource mobilisation remained inconsistent. Even when there was a stated intention to act on sustainability, organisations often struggled to access the necessary funding, staff expertise, or infrastructure. These challenges were further compounded by regional differences, as state-level policies and venue management practices varied across Australia. Misaligned priorities, and imbalances in decision-making authority between national and state sport bodies, made it difficult to coordinate long-term capability building. Collectively, these findings suggest that while many organisations acknowledged the importance of ES, they lacked the internal systems and strategic coherence needed to turn recognition into sustained action.

Sport organisations continue to face barriers in implementing ES, and these difficulties show that their current practices do not fully align with the principles of responsible innovation. The responsible innovation framework highlights the value of inclusive and future-focused governance that recognises environmental and social risks while incorporating a wide range of stakeholder perspectives (Scherer & Voegtlin, 2020; Stilgoe et al., 2013). However, the findings in this thesis indicate that many sport organisations did not have the necessary structures to support this kind of governance. In most cases, formal channels for stakeholder input were limited or missing, especially for underrepresented groups such as community clubs and junior athletes. More importantly, anticipatory tools, like risk modelling or scenario planning, were rarely found in strategic documents. ES actions often occurred as short-term reactions to funding opportunities or media attention, rather than as part of a long-term strategy.

Ecological systems theory helps explain the systemic misalignment observed in this thesis,

particularly the failure to translate ES commitments into coordinated organisational practice. In Bronfenbrenner's model, effective change depends on the alignment between micro, meso, and macro systems. The research underpinning this thesis indicates that national policies and international standards or frameworks were not effectively translated into meso-level organisational routines, and individuals at the micro level, such as staff or athletes, lacked the influence or support to push for bottom-up change. The environment was not one of mutual reinforcement but one of fragmentation and poor communication. This disconnect goes beyond a lack of resources. It shows why ambitious environmental goals often do not translate into consistent organisational practice. Without systems that support ecological alignment and reflective leadership, sport organisations remained limited in their ability to address long-term sustainability challenges they claimed to prioritise. One illustrative example comes from organisations operating across both national and local jurisdictions. While national strategies referenced the UN SDGs and endorsed long-term sustainability goals, state-level affiliates often lacked the infrastructure or mandates to translate these ambitions into operational plans. For instance, some community clubs continued to rely on council-owned venues with limited recycling facilities or outdated procurement policies, despite national offices promoting sustainability as a strategic value. These persistent disconnects between macro-level vision and micro-level capacity underscore the system misalignment Bronfenbrenner's model warns against, whereby the absence of cross-level reinforcement leads to implementation failure.

The barriers identified in this thesis reflect several themes that are well documented in the previous literature. Resource-related limitations, including a lack of funding, human resources, and a lack of ES knowledge, have been widely recognised as major challenges to implementing ES initiatives (Casper et al., 2012; Kellison & Hong, 2015; McCullough et al., 2016; Trendafilova et al., 2013). These issues were found in a number of the participating Australian sport organisations, especially those without full-time staff or control over their facilities. Consistent with the findings of Trendafilova et al. (2013), many of the research participants expressed concern about taking on additional tasks without proper training or internal support. They also showed hesitation when it came to setting long-term goals. This caution mirrored earlier studies, in which organisations feared making public commitments they could not deliver. Several research participants explained

that it was difficult to make confident plans without strong infrastructure or secure funding. These findings highlighted a common tension between high-level sustainability goals and the practical limits of implementation (Casper & Pfahl, 2015).

This thesis also supports earlier research on organisational fragmentation and inconsistent strategic planning in sport. Previous studies have shown that environmental policies are often not fully integrated into core operational systems, which limits their effectiveness (Mallen et al., 2010; McCullough & Cunningham, 2010). This research has described similar issues, including a lack of coordination between state and national policies and unclear responsibility for sustainability tasks within organisations. These problems reflect broader concerns about siloed communication and weak governance in federated sport systems, as discussed by Casper et al. (2012). The research findings underpinning this thesis also confirm the critique by McCullough et al. (2020) regarding narrow environmental indicators and weak evaluation tools. The absence of reliable reporting systems made it difficult for participating organisations to assess or improve sustainability outcomes. In conclusion, these results support the view that environmental strategies in sport often remain at the level of intention rather than action in the absence of integrated structures, clear responsibilities, and regular monitoring.

While this thesis identifies many of the barriers already identified in previous research, it also reveals context-specific challenges that have received less attention. One such finding is the influence of cultural resistance. In several organisations, traditional sporting values and performance-focused norms made it difficult to prioritise sustainability. Although earlier studies have noted a preference for commercial or performance goals over environmental ones, the research underpinning this thesis showed how these preferences were embedded in daily decision-making processes (McCullough & Cunningham, 2010). This observation is consistent with findings from other sectors, such as tourism, where cultural norms, ingrained practices, and inertia to change have been shown to constrain the adoption of environmental initiatives (Budeanu et al., 2016). In regard to the organisations participating in this research, environmental efforts often came second to elite performance targets or were delayed due to post-pandemic recovery needs. Some participants also described deeper cultural tensions, including scepticism toward

environmental issues and reluctance among senior stakeholders to change familiar routines. These examples suggest that the tensions between established organisational cultures and ES goals are not unique to the sports sector but are also prevalent in other industries, where change challenges familiar identities and routines.

This thesis also expands on existing work by highlighting regional variation and the effect of inconsistent policies. While structural barriers have been reported previously (Mallen et al., 2010; Trendafilova et al., 2013), this thesis shows how differences across Australian states and territories create challenges for organisations working in multiple locations. Respondents described unequitable access to infrastructure, limited policy incentives, and varying levels of council support. These disparities made it difficult for them to develop or apply consistent sustainability strategies. Another important contribution of this research is the identification of communication barriers. Although previous studies have stressed the need for strong internal communication, this research shows how a lack of shared language around sustainability can block progress (Casper et al., 2012). Staff and volunteers often did not feel confident talking about environmental issues, which limited their ability to advocate for change or explain actions to others. In this way, this thesis identifies information literacy as a key organisational constraint and a potential enabler of more effective ES engagement.

While earlier studies have explored challenges, such as fan behaviour, limited knowledge of ES, financial pressure, and restricted access to ES expertise, this thesis contends that these issues are closely shaped by internal structures and communication processes. Rather than existing in isolation, problems related to knowledge, leadership, and resource use were part of everyday organisational practice. In many cases, sustainability efforts depended on individual interest rather than formal responsibilities. The research findings indicated that it becomes harder to build consistent ES action when internal structures, staff roles, and messages about sustainability are unclear. The findings suggested that progress depends not only on what resources are available, but also on how effectively sustainability is integrated into organisational learning and governance routines.

This thesis also contributes to the field by identifying internal communication and knowledge sharing as key enablers of ES. Although awareness is increasing, staff and volunteers often lack the tools and language needed to discuss or prioritise sustainability in a strategic way. As a result, some initiatives do not develop beyond the planning stage. By treating communication and information use as essential parts of implementation, rather than as separate support tasks, this thesis adds a new dimension to existing discussions. This thesis contends that internal literacy and confidence in ES discourse are essential for translating values into action, and that communication gaps deserve the same attention as structural or financial barriers.

Role of Leadership in Enabling and Inhibiting ES Implementation

The research underpinning this thesis found that organisational leadership played a central but inconsistent role in shaping the implementation of ES policies in Australian sport organisations. When senior leaders, such as board members or CEOs, expressed clear support for ES, organisations were more likely to include ES in their strategic plans, internal policies, and resource allocation processes. In these cases, leadership helped establish oversight mechanisms, like working groups or advisory committees. These mechanisms improved coordination across departments and supported accountability. Leadership influence in these organisations was both symbolic and operational. It signalled a shared commitment to sustainability and helped turn goals into practical actions. In contrast, when leadership did not prioritise ES, implementation was often scattered or limited. Some organisations treated sustainability as a low priority, depending on personal interest or temporary funding. Others lacked defined roles, reporting processes, or systems to turn strategies into daily practice. Even staff who supported sustainability faced structural limits that made it difficult to develop consistent or long-term plans.

These findings are consistent with the dynamic capability's framework, which highlights an organisation's ability to sense, seize, and transform in response to changing demands (Harris et al., 2021). The research underpinning this thesis found that leaders who integrated ES into strategic plans and daily operations showed strong sensing and seizing capabilities. They recognised rising stakeholder expectations, such as increased public attention to climate issues, and redirected staff,

funding, and processes to support sustainability goals. Actions, such as forming working groups, assigning ES responsibilities within staff roles, and linking ES to performance targets, showed how organisations could adapt their routines to support long-term change. In contrast, organisations without strong leadership in this area often remained in the sensing stage. They acknowledged ES as an issue but lacked the systems or commitment to act. As a result, ES goals remained abstract and were often pushed aside by other priorities. These differences suggest that leadership is critical in developing the internal capacity needed to embed ES within the structure and culture of sport governance.

Further interpretation using responsible innovation (Scherer & Voegtlin, 2020) and ecological systems theory (Bronfenbrenner, 1994) shows how leadership can either support or disrupt alignment between organisational values, structures, and stakeholder engagement. Responsible innovation stresses anticipatory governance, reflexivity, and the inclusion of diverse stakeholders as core features of ethical organisational practice. Leaders who responded to the concerns of groups such as athletes, member clubs, or sustainability experts showed an ability to make inclusive decisions and plan for the long term. These leaders viewed sustainability not only as a technical matter but also as a shared responsibility, which helped build trust and support cultural change. Ecological systems theory adds to this understanding by showing how leadership influences connections across different levels, such as staff and volunteers at the micro level, departments at the meso level, and policy frameworks or public discourse at the macro level. In organisations where leaders translated external expectations into daily routines, ES efforts were better coordinated. In contrast, where leaders ignored pressures from outside the organisation, coordination and alignment were weak, which in turn created gaps between national goals, internal systems, and individual behaviour. These theoretical lenses explain why leadership is not only an internal driver but also a conduit for systemic coherence in sustainability governance.

The findings in this thesis both support and contrast with existing research on the role of organisational leadership in shaping ES practices in sport. Previous studies have highlighted the critical role of senior management in embedding sustainability through strategic initiatives and symbolic appointments, such as sustainability officers (Babiak & Trendafilova, 2011; McCullough

& Cunningham, 2010; Pfahl et al., 2015). These scholars argued that sport organisations can drive sector-wide environmental change through visible leadership commitment and dedicated governance structures. However, the research underpinning this thesis revealed that leadership influence is not solely determined by formal titles or symbolic presence. Instead, it is often contingent upon whether ES is integrated into routine strategic priorities, decision-making processes, and cross-departmental collaboration, rather than relegated to being the responsibility of isolated champions. While earlier literature focused on top-down initiatives and visible commitment, this thesis shows that genuine change depends on distributed leadership practices and internal system alignment.

The thesis also expands on the literature that suggests sustainability leadership must be both proactive and embedded within strategic planning (Casper et al., 2012; Frawley et al., 2018; Opoku et al., 2015). For example, while Dangelico and Pujari (2010) and Morrison and Misener (2021) frame sustainability as a competitive advantage in strategic management, this thesis emphasises the importance of “business-as-usual” integration over symbolic or reactive efforts. Unlike studies that focus on individual leadership traits or styles, such as transformational or shared leadership, this thesis aligns more with organisational leadership literature that examines systemic conditions (Zaccaro & Klimoski, 2002). This thesis highlights that the absence of sustained, system-level leadership limits the translation of strategic plans into tangible outcomes. Furthermore, the limited communication channels and unclear allocation of sustainability responsibilities observed in the research underpinning this thesis contrast with the idealised governance models found in earlier work. This finding highlights an empirical gap between leadership theory and practical implementation across Australian sport organisations.

This thesis advances existing research by showing that leadership can act as both an enabler and a barrier to ES, depending not only on formal authority but also on organisational systems and relationships. While earlier studies have focused on individual behaviours, attitudes, or knowledge gaps, such as limited expertise or weak commitment, there has been less attention paid to how competing priorities reduce the impact of leadership. This research addresses that gap by showing that leadership influence depends on whether sustainability is integrated into core operations and

governance processes. By examining how leadership connects with resource limits, policy inconsistency, and internal separation of functions, this thesis presents a more detailed view of leadership as shaped by organisational processes.

Section Four: Implications for the Conceptual Framework of ES in Sport

The themes identified in this thesis are interrelated rather than discrete. System-level drivers, organisational leadership configurations and individual engagement emerge as mutually shaping elements of a broader ES implementation system. For example, themes relating to external policy and funding expectations intersect with themes about how boards and executives prioritise ES within strategic planning, which in turn influence themes concerning staff motivation, communication and perceived support for ES initiatives.

These interrelationships are reflected in the conceptual frameworks presented in Figures 2 and 3. In the high-functioning system, strong drivers, coherent organisational leadership and active individual engagement reinforce each other, whereas in the disconnected system, misalignment across these themes leads to stalled or symbolic ES efforts. Recognising these connections is important because it suggests that interventions focused on only one level or theme are unlikely to be sufficient; instead, coordinated leadership is needed across the system.

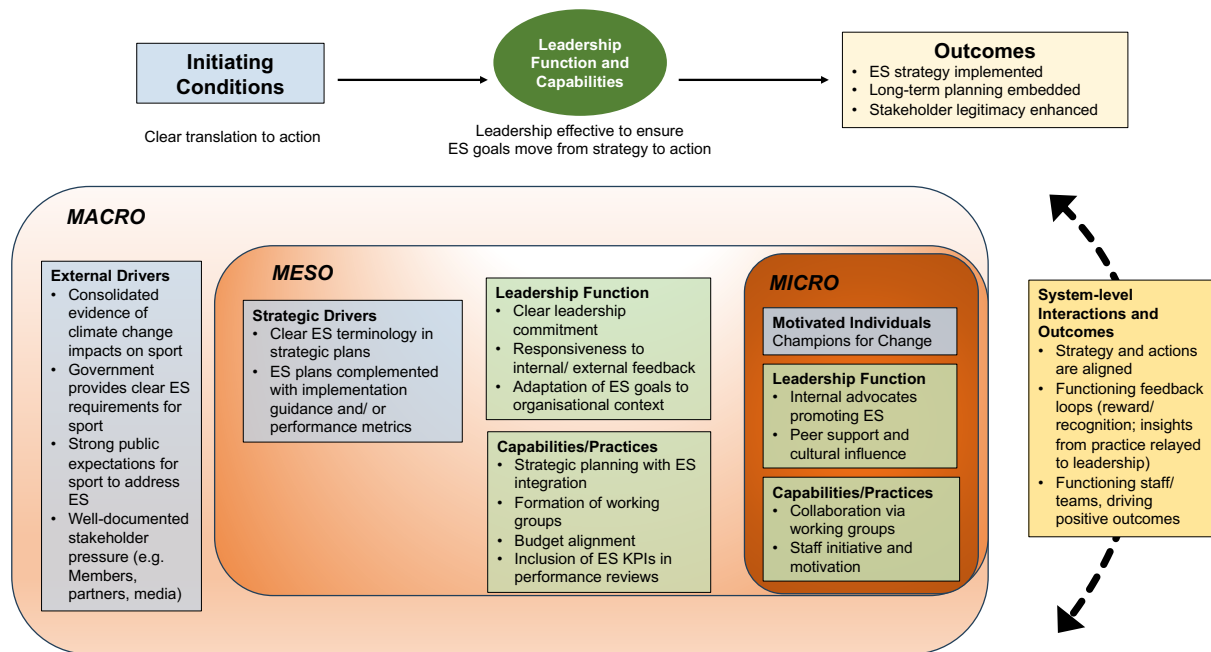
This section reflects on how the research findings inform and extend the integrated conceptual framework for understanding ES in sport organisations. The analysis connects empirical themes and sub-themes to the framework's core components, including initiating conditions, leadership function and capabilities, organisational practices, and system-level interactions and outcomes. By mapping the findings across these components, this section distinguishes between a high-functioning system pathway and a disconnected system pathway for ES implementation, as illustrated in Figures 2 and 3.

The features of Figure 2 represent a high-functioning system for ES implementation in sport organisations. At the macro (societal) level, it depicts the presence of strong external drivers, including policy expectations, funding incentives and broader societal concern about sustainability. At the meso (organisational) level, these drivers are translated through governing boards and executive teams into clear ES strategies and resource commitments, supported by formal structures such as dedicated roles, cross-departmental working groups and monitoring mechanisms. At the micro (individual) level, staff and volunteers are engaged, informed and empowered to integrate ES considerations into their day-to-day decision-making.

The framework emphasises that these elements are mutually reinforcing: macro-level drivers signal the importance of ES; organisational leadership interprets and operationalises these signals; and individual actors enact ES through their practices. When these levels are aligned, ES initiatives are more likely to be embedded in organisational routines, sustained over time and resilient to leadership changes. The high-functioning system thus integrates and refines insights from Ecological Systems Theory, responsible innovation and dynamic capabilities in a way that is grounded in the empirical material from this study.

Figure 2

High-functioning System for ES Implementation in Sport Organisations

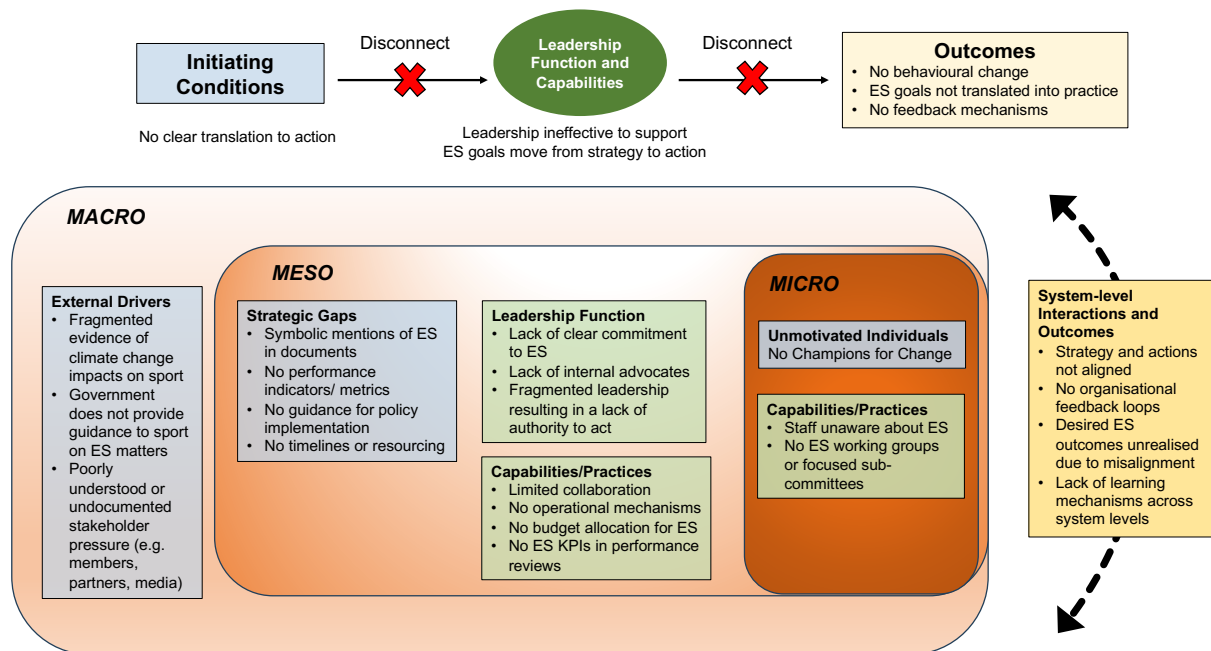


In contrast, Figure 3 reflects a disconnected system for ES implementation. Here, macro-level drivers may be weak, inconsistent or poorly communicated to sport organisations. At the meso level, leadership attention to ES is fragmented or episodic, with limited strategic prioritisation, unclear responsibilities and few resources allocated to implementation. At the micro level, staff may be confused about ES expectations, lack guidance on how to act, or perceive ES initiatives as peripheral to core business.

This framework helps to explain why ES policies and statements sometimes fail to translate into meaningful organisational change. It shows that, in the absence of coherent leadership across levels, ES efforts can remain symbolic or short-lived. By comparing Figures 2 and 3, the thesis argues that the configuration and alignment of leadership processes across macro, meso and micro levels is a critical factor in determining whether ES practices are taken up in substantive, sustained ways with in sport organisations.

Figure 3

Disconnected System for ES Implementation in Sport Organisations



The research findings show that initiating conditions are influenced by both external drivers and internal organisational readiness. External drivers, such as consolidated or fragmented evidence of climate change impacts, government guidance on ES matters, and documented stakeholder pressure, influence whether ES agendas are clearly translated into action. In the high-functioning pathway, initiating conditions are supported by clear ES terminology in strategic plans, and complemented by implementation guidance and performance metrics. In contrast, in the disconnected pathway, initiating conditions are weakened by symbolic mentions of ES in documents without measurable indicators, timelines, or resourcing, resulting in strategic gaps.

Leadership functions and capabilities emerge as central to determining whether ES goals progress from strategy to action. In the high-functioning pathway, leadership demonstrates clear commitment, responsiveness to internal and external feedback, and adaptation of ES goals to the organisational context. These qualities are supported by capabilities such as strategic planning, formation of working groups, budget alignment, and inclusion of ES KPIs in performance reviews.

Conversely, in the disconnected pathway, leadership lacks clear commitment, suffers from fragmentation, and is unsupported by internal advocates, with limited collaboration, no operational mechanisms, no budget allocation for ES, and no integration of ES KPIs in performance reviews.

The role of individuals further differentiates the two pathways. In the high-functioning pathway, motivated individuals act as champions for change, and they promote ES through peer support, cultural influence, and collaborative practices. In the disconnected pathway, the absence of champions results in staff being unaware of ES priorities, with no working groups or sub-committees to drive ES initiatives.

At the system level, the high-functioning pathway features alignment between strategy and actions, functioning feedback loops that connect practice to leadership, and staff or teams actively driving positive outcomes. In contrast, the disconnected pathway shows misalignment, absent feedback loops, unrealised ES outcomes, and a lack of learning mechanisms across system levels.

These findings highlight the pivotal role of leadership in shaping ES implementation pathways and they emphasise the need for integrated strategic drivers, operational capabilities, and engaged individuals to achieve sustained outcomes. The dual-pathway representation in Figures 2 and 3 illustrates the enabling and constraining factors at each system level, thereby providing a practical framework for diagnosing organisational readiness and guiding interventions for effective ES action.

It is important to emphasise that the frameworks developed in this thesis are intended to serve as flexible guides rather than universal templates. Sport organisations differ significantly in terms of size, governance structures, resource availability, and existing ES capacities. Accordingly, leadership strategies and policy designs for ES must be adapted to each organisation's specific context and constraints. The contribution of the high-functioning and disconnected systems frameworks lies not in prescribing a single "best practice" model, but in identifying key elements and relationships. These include the alignment between organisational drivers, leadership, and individual engagement, which organisations can interpret and configure in ways that are

appropriate to their specific circumstances.

Section Five: Practical Recommendations for Sport organisations

The findings in this thesis inform a range of recommendations for practical strategies to advance ES in sport. These recommendations are grounded in the empirical themes and reflect systemic insights across micro, meso, and macro levels of governance. Rather than relying on symbolic commitments or individual leadership, the suggestions below emphasise the structures, processes, and leadership development necessary for ES implementation.

Sport organisations could consider adopting a national *ES in sport framework* that provides agreed-upon definitions, benchmarks, and alignment with international standards such as the UNFCCC. A shared understanding of ES terminology and expectations would support clearer policy translation, reduce inconsistency, and enable comparison across organisations. National sport governing bodies could play a leading role in developing minimum expectations and providing advocacy for ES integration in sport planning and delivery. To strengthen leadership commitment, organisations could invest in targeted executive development programs that include environmental governance, strategic framing, and anticipatory planning. Leadership performance indicators may be revised to include ES responsibilities, and national bodies could support the development of sector-wide benchmarks to guide consistent leadership behaviour across federated systems. Integrating sustainability into executive agendas would help embed environmental goals beyond short-term leadership changes or reactive responses to external pressures such as media attention, sponsor demands, or policy shifts.

Sector-wide collaboration can play a critical role in improving information flow and reducing communication gaps between organisations. National governing bodies, policy-makers, and peak organisations can facilitate this by developing shared ES guidelines, offering capacity-building programs, and recognising exemplary practices through awards or accreditation schemes. Embedding ES within organisational strategy and performance evaluation frameworks can further reinforce its importance, ensuring that sustainability is not treated as a peripheral concern but as

an integrated aspect of core operations. Over time, these collective efforts can contribute to the normalisation of ES practices across the sector, fostering a culture where sustainability is viewed as both a strategic priority and a shared responsibility.

Practical progress on ES requires formal structures within sport organisations. Sport organisations could consider appointing ES leads, forming cross-departmental taskforces, and assigning environmental responsibilities in planning templates. These steps would help shift ES from isolated initiatives to shared organisational routines. Recognising and resourcing internal advocates across departments would also strengthen bottom-up engagement and support cultural change. ES goals could be more effectively embedded into strategic and operational systems through measurable targets, KPIs, and performance reviews. Organisations may integrate ES into their annual reviews, risk registers, and funding models. This integration would help institutionalise accountability and create visible feedback between ES planning, delivery, and learning.

In addition to technical tools, organisations should build the confidence and skills of staff and volunteers to engage with ES in their daily roles. This capability development could include adding ES modules to leadership and volunteer training, offering peer-led workshops, and using shared communication templates. Consistent messaging, visible success stories, and open learning platforms could create a more connected and confident sustainability culture across the sector. In addition, sport organisations could further embed ES by supporting the role of athletes, youth, and community groups as change agents. Recognising athlete-led sustainability initiatives, involving stakeholders in program design, and creating participatory platforms could help shift perceptions of ES from it being a compliance requirement to it being a shared organisational value. To enhance sport organisations' motivation and commitment to ES, governments and industry stakeholders could implement formal recognition programs, targeted funding, and rewards that celebrate environmental leadership. These mechanisms would serve to align ES goals with institutional priorities and promote strategic investment in long-term capacity building.

Section Six: Limitations and Directions for Future Research

This thesis offers important insights into the strategic positioning, leadership dynamics, and implementation mechanisms of ES in Australian sport organisations. However, several limitations should be acknowledged. First, the research sampling focused mainly on NSOs in Australia. As a result, the research findings may not fully reflect the ES practices of state-level organisations, local clubs, or professional leagues that follow different governance structures. While the federated model of Australian sport helped to explore systemic fragmentation, it may also have limited the relevance of these findings to countries with more centralised sport systems.

Second, the research underpinning this thesis was geographically limited. Although Australia is a useful case, due to its climate risks and active sustainability discussions, the national focus reduced opportunities for international comparison. Further studies across different countries, such as the UK or China, would help test whether similar patterns in ES engagement and leadership variation exist under other policy and governance systems. These comparisons could improve global understanding of how national policy environments influence the ways in which ES is adopted in sport.

Third, the timing of this research also introduced constraints. ES is still an emerging area in sport, and many sports are in the early stages of policy development. Some organisations may have introduced new ES strategies after the data collection was completed. Therefore, this thesis offers a snapshot rather than a long-term view of how organisations change over time. Future research should follow the same organisations across planning cycles to examine how ES strategies evolve and whether implementation becomes more effective.

A further limitation of this study is its focus on organisational leadership as the primary lens for understanding the development and implementation of ES practices. While this focus has yielded important insights into how leadership configurations enable or constrain ES, it does not capture the full range of factors that shape ES adoption in sport organisations. The findings themselves point to additional influences, including resource constraints, limited operational experience with

ES practices, competing organisational priorities and the attitudes of external stakeholders. Leadership is therefore only one part of a broader, complex picture. Recognising this limitation underscores the value of future research that examines how leadership interacts with these other factors in different sport contexts.

Finally, the use of reflexive thematic analysis introduced subjectivity into the coding and interpretation of the collected research data. Although triangulation with interviews, documents, and field notes was applied to enhance rigour, the data analysis was shaped by the researcher's theoretical lens and position. This acknowledgement of the researcher's influence on the production of knowledge aligns with the interpretive-constructivist approach, which assumes that research findings are co-constructed through the interaction between researcher and data rather than discovered as objective facts. Future studies may consider using mixed methods to involve practitioners, athletes, and community members in reflecting on findings and co-producing knowledge about ES in sport.

Based on these limitations, several directions for future research are recommended. First, longitudinal studies could explore how organisations move from symbolic commitment to fully embedded ES. These studies could also evaluate the durability of ES policies and assess whether implementation tools remain effective over time. Second, comparative research between countries with different political and climate contexts could improve theoretical development and policy relevance. Third, future research should include athlete and community perspectives. These voices are often missing in policy studies but are essential for understanding how ES initiatives are interpreted and experienced beyond the organisational level.

Conclusion

This thesis contributes to the growing literature on ES in sport by exploring how organisational leadership shapes the development and implementation of ES policies within Australian sport organisations. Constructed from two qualitative studies and an integrated conceptual framework, the research underpinning this thesis examined how organisational leadership influenced the

development and implementation of ES practices in Australian sport organisations. The two studies demonstrated that ES implementation is influenced by a combination of contextual conditions, including: cultural values that prioritise elite performance and provide limited opportunities to attend to environmental responsibility; federated governance arrangements that diffuse authority and inhibit coordination; and a reliance on individual champions rather than formalised leadership mechanisms. The research addressed two significant gaps in the literature: first, the lack of empirical evidence on how ES policies are enacted in sport settings; and second, the need for a theoretically grounded understanding of how leadership operates within complex organisational and systemic environments.

While many of the sport organisations studied articulated support for ES in strategic documents, the research found that implementation remained fragmented and inconsistent. Organisational actors often struggled to convert symbolic commitments into operational practice, particularly when leadership support was absent or uneven. The research findings suggested that leadership did not operate through hierarchical command alone, but rather through the complex interplay of different mechanisms, including: the allocation of resources; the coordination of activity across organisational boundaries; and the framing of ES within the broader meaning systems of elite sport. These mechanisms influenced how sustainability goals were interpreted, prioritised, and enacted within day-to-day operations. In addition, sport organisations faced significant resource and organisational capacity limitations, such as time constraints and limited funding, which hindered their ability to embed ES within routine practice. The research findings also included the identification of the challenge of balancing competing priorities, particularly between high-performance objectives and environmental initiatives, which shaped the extent to which ES actions were systematically pursued.

Advancing ES in sport requires more than policy statements or isolated initiatives, it requires systemic change in ES valuation, resourcing, and governance. For researchers, policymakers, and practitioners, this thesis contributes a conceptual model to better understand the factors that enable or constrain ES practice and to reimagine of leadership as a collective, context-responsive force. In an era of increasing environmental challenges and institutional complexity, the ability to lead

ES across organisational boundaries may prove as critical as any formal strategy.

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Appendices

Appendix A: Email to the to the identified/nominated participants

Dear ...,

Hope you are doing well!

My name is Xu He (Joey), I am a PhD student from Victoria University. On behalf of our research team, we are seeking senior sport managers to participate in a study identify key factors of organisational leadership for the development and delivery of environmental sustainability practices in Australian sport.

As the CEO of [national sport organisation], recognised for prioritising environmental sustainability practices, I warmly invite your organisation to participate in this research. Your organisations involvement would entail nominating senior managers to participate in a confidential semi-structured interview of approximately 45-60 minutes. The interview questions will relate to the development and implementation of priority environmental sustainability policies and initiatives in your sport.

In return for your organisation's participation, you will receive a summary report on the overall study findings. These findings will help your organisation to build capacity and refine policy and practices relating to effective environmental sustainability.

If you wish for your organisation to participate in this research, I kindly request that you provide me with the contact details of senior managers or pass this information onto the relevant staff members who can contact me on the details below. I will then make contact, provide further information about the study and organise a time to conduct the interview.

Thank you in advance for your organisation's participation in the research. If you have any queries or would like to know any more about this research, please do not hesitate to contact me.

Best regards,

Xu He

PhD Candidate, Victoria University

0415 899 567

xu.he1@live.vu.edu.au

Appendix B: Information to participants involved in research



INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH

You are invited to participate

You are invited to participate in a research project entitled *Identification of key factors of organisational leadership for the development and delivery of environmental sustainability practices in the Australian sport industry*.

This project is being conducted by student investigator Xu He as part of a PhD study at Victoria University under the supervision of Professor Camilla Brockett and Professor Elisabeth Wilson-Evered from the Institute for Health and Sport, Victoria University.

Project explanation

Sport has an impact on the natural environment, and in turn is affected by the natural environment. It is important to study environmental sustainability in sport given this mutual and dependent relationship – ‘no planet, no play’.

Climate change and extreme weather events are matters of international political, economic and societal concern. Given sport organisations have considerable real estate and reach, there is a need to critically examine how sport organisations consider environmental impact and develop priority areas for climate action initiatives.

Globally, the role of sport in climate action is a burgeoning area of public and research interest. To date however, there has been minimal research on the characteristics and outcomes of organisational policies, strategies and processes pertaining to environmental sustainability practices in Australian sport. This research is a timely opportunity to investigate the role of organisational leadership in planning and delivering environmental sustainability (ES) policy and practices amongst Australian national sport organisations.

What will I be asked to do?

If you agree to participate you will be asked to provide information in an interview of approximately 60 minutes. The interview will include open questions and discussion. You will be

asked about your knowledge and insights on environmental sustainability policies and practices in your sport organisation.

Participation is voluntary. You can choose to not respond to any questions that you feel are uncomfortable and you can withdraw at any time. With your consent, the interview will be audio-recorded. The information you provide will be confidential and all sources will be anonymous. If you decide at any time that you would no longer like to be involved in the research project, please inform any of the investigators (contact details below). You can discontinue your participation at any time without any penalty or prejudice.

What will I gain from participating?

Sharing your views and insights will greatly contribute to the existing knowledge base of sport's role in environmental sustainability. Specifically, your participation will enable us to gather valuable data to build on a new theoretical foundation for investigating the under-researched influence of organisational leadership factors on the development and delivery of environmental sustainability in Australian sport.

How will the information I give be used?

All data will be confidential and de-identified; it will be kept safe in a secure database protected by Victoria University. Only those people directly associated with the study will have access to your interview responses. If you give us your permission by signing the Consent Form, findings will be used in a PhD thesis and we plan to write articles about the research for publication. We may also present data from the study at conferences and meetings. In any publication or presentation, information will be provided in such a way that you cannot be identified.

What are the potential risks of participating in this project?

We do not expect that taking part in the interview will cause you any distress, however if you do experience any distress, contact details for psychological support services are provided below.

Again, participation is voluntary. You can choose not to respond to any questions that you are uncomfortable in answering and you can discontinue your participation at any time. If you decide at any time that you would no longer like to be involved in the research, please inform any of the investigators.

How will this project be conducted?

Data will be collected by interviewing participants. These interviews will be conducted either face-to-face, via telephone or an online meeting platform. If conducted face-to-face, interview locations may include a quiet office space at your place of employment or a quiet public place that is of easy access and comfortable for you. If conducted online, interviews can be done where most convenient for you. The only requirement is that the place remains as quiet place as possible.

Each interview will be audio-recorded and then transcribed verbatim. Only the investigators will have access to the transcripts and when the transcripts are analysed, they will be coded so that your personal details are removed. Your details will be kept in a secure database. The interview transcripts will be analysed to identify and report themes that will be used to provide new insights and organisational considerations to assist sports with developing relevant and effective environmental policies and practices.

Who is conducting the study?

The Institute for Health and Sport (iHeS), Victoria University

Any queries about your participation in this project may be directed to the Chief Investigator.

Chief Investigator:

Professor Camilla Brockett

Institute for Health and Sport (iHeS), Victoria University

Phone: 0412 085 588 Email: Camilla.Brockett@vu.edu.au

Other investigators:

Professor Elisabeth Wilson-Evered (Victoria University), Xu He (PhD student, Victoria University).

If you require support as a consequence of your participation in the study, please access the following psychological services:

Beyond Blue

1300 22 4636

www.beyondblue.org.au

Lifeline

13 11 14

www.lifeline.org.au

If you have any queries or complaints about how you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Appendix C: Consent form for participants involved in research

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into *Identification of key factors of organisational leadership for the development and delivery of environmental sustainability practices in the Australian sport industry*.

The principal aim of this research is to explore the role of organisational leadership and identify specific organisational strategies for the development and implementation of environmental sustainability practices in Australian sport organisations. Data will be collected in two parts: (1) document analysis of sport organisation policies and procedures regarding environmental sustainability, and (2) semi-structured interviews with senior managers who are responsible for environmental sustainability policy and practices from selected Australian National Sport Organisations (NSOs). The risks associated with your participation in this project are low, however if you do feel any distress in participating in this research you will be provided with details of appropriate support services that you are able to access.

CERTIFICATION BY SUBJECT

I,

of

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study:

Identification of key factors of organisational leadership for the development and delivery of environmental sustainability practices in the Australian sport industry being conducted at Victoria University by: Camilla Brockett (Chief Investigator)

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by: Xu He (Student Researcher)

and that I freely consent to participation involving the below mentioned procedures:

- Semi-structured interview of approximately 60 minutes in duration

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed: _____

Date: _____

Any queries about your participation in this project may be directed to the Chief Investigator:

Chief Investigator:

Professor Camilla Brockett

Institute for Health and Sport (iHeS), Victoria University

Phone: 0412 085 588 Email: Camilla.Brockett@vu.edu.au

Other investigators:

Professor Elisabeth Wilson-Evered (Victoria University), A/Professor Catherine Lou (Victoria University), and Xu He (PhD student, Victoria University).

If you require support as a consequence of your participation in the study, please access the following psychological services:

Beyond Blue

1300 22 4636

www.beyondblue.org.au

Lifeline

13 11 14

www.lifeline.org.au

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

[*please note: Where the participant/s are aged under 18, separate parental consent is required; where the participant/s are unable to answer for themselves due to mental illness or disability, parental or guardian consent may be required.]

Appendix D: The interview guide

Interview Schedule

1. Interview Identifier

Interviewer:		
Interviewee:		Participant ID:
Date:	Start Time:	Finish Time:
Notes (behavioural observations i.e., does the interviewee seem nervous, irritable, hurried, etc?):		
Office use: Interview Transcript		
Stored (file reference):	Created on (date):	By (initials):

Interview Schedule: Factors of effective leadership for the development and delivery of sustainable sport practices

Note: Informed consent form to be provided and completed prior to interview commencement.

Thank you for participating in this interview, my name is Xu (Joey) He, I am a PhD student researcher with the Institute of Health Sport at Victoria University. The purpose of this interview is to obtain your experiences of and views about environmental sustainability policy and practices in Australian sport.

We are interested in learning about your role and involvement in developing, implementing and evaluating environmental sustainability initiatives across your organisation, as well as your views on any challenges or enablers for implementing environmental sustainability practices in your sport.

You will be asked a series of questions from which your honest responses are requested. Can I just confirm how long you're available to chat with me? There are no right or wrong answers. Your responses will be confidential, de-identified and securely stored as a code. Your participation is voluntary and you have the right to withdraw from this interview at any time. If there is a question that make you feel uncomfortable, you can choose to skip it or not answer it.

With your permission, I would like to record today's interview to ensure I capture your responses correctly. Only my supervisors and I will have access to the recordings. The interview will be transcribed for analysis, with coded responses used in my thesis and journal articles and a summary report that will be broadly available.

By signing the informed consent form, you are agreeing to participate in this interview and permit your responses to be used as advised. Are you happy to continue with this interview? Do you have any questions?

I'll now press record on the tape on the recorder and commence the interview questions.

2.2 Interview Questions

Construct	Primary question	Secondary questions or prompts (use to clarify primary question, or if additional information is required from the interviewee).
Ice breaker/ background	<p><i>What is your current role in [sport organisation] and what aspects of your role relate to environmental sustainability policy and practices?</i></p> <p><i>What are your motivations for engaging in sport and sustainability?</i></p>	<p><i>How long have you worked in this role?</i></p> <p><i>What did you do before this role?</i></p>

<p>Current knowledge and experience of environmental sustainability in sport</p>	<p><i>I'd like to start discussing about your views about the role of sport in environmental sustainability</i></p> <p><i>Can you tell me, in your opinion, why is environmental sustainability important for sport, and specifically why it is important for your sport?</i></p> <p><i>What are the priority areas for environmental sustainability in your organisation?</i></p> <p><i>What environmental sustainability policies and practices currently exist in your sport?</i></p> <p><i>How does your role support/contribute to your sport's focus on environmental sustainability?</i></p> <p><i>As well as yourself, what other key Roles/ Person/s are there in your sport organisation that have responsibility for environmental sustainability policy or practices?</i></p>	<p><i>For example, ES initiatives across facilities/grounds, procurement, waste management.... (carbon management, green energy, infrastructure/ facility initiatives, energy efficiency, water/turf (resource) management, waste management, ES campaigns)</i></p> <p><i>Does your organisation have formal written policy? Or other documents? Is the policy accessible to the public? Are you able to share any documents relating to environmental sustainability practices in your organisation with the research team?</i></p> <p><i>Could you share the details of those roles and responsibilities please?</i></p> <p><i>Which role (or person) is accountable for leading the implementation of this policy? Are others involved? If so, how?</i></p>
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<p>Systems and metrics to deliver and evaluate ES policies practices</p>	<p><i>Does your organisation have any systems or processes to track the progress and impact of environmental sustainability practices (or initiatives)?</i></p> <p><i>If so, where do you report the outcomes of these practices?</i></p> <p><i>Can you provide any examples of specific environmental sustainability practices or initiatives that have been successful in your organisation?</i></p>	<p><i>For example any data management systems to track ES impact; and/or other metrics or indicators to measure success of environmental sustainability practices?</i></p> <p><i>Can you share any evidence of these successes in terms of project plans, reports or documents, media or awards relating to this example?</i></p>
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<p>Challenges for implementing ES policy</p>	<p><i>What do you consider are the key challenges or barriers for implementing sustainability policies and practices in your organisation.</i></p> <p><i>What do you see are the critical drivers or facilitators to implementing environmental sustainability practices?</i></p> <p><i>Overall, are you satisfied with how well your organisation is progressing environmental sustainability policy and practice? [Likert scale 1-10]</i></p>	<p><i>Internal or external factors...</i></p> <p><i>What are the roadblocks or barriers you face in implementing ES practices?</i></p> <p><i>What strategies have been implemented to address any barriers and ensure environmental sustainability practices are implemented?</i></p>
<p>Future role of sport and the ES</p>	<p><i>Given society's increasing awareness of climate change and environmental impact, what do you think will be the trends for environmental sustainability policy and practices in the sport sector in the next 5-10 years?</i></p> <p><i>What role do you see [your sport organization] having in advancing environmental sustainability practices in the future?</i></p>	<p><i>What steps could your organisation take in the future to make a difference to environmental sustainability practices in the sport sector?</i></p>

OTHER	<i>Is there anyone other than you I should ask to speak with who would provide any additional or extended perspective?</i> <i>Any other comments?</i>	
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Interviewer Comments

(Emotions experienced during the interview, suggestions for improvements to schedule, difficulties experienced)

Thank you for your generous time and comments; would you like to see the transcript of your answers? Yes/No?

Appendix E: Catalogue of analysed documents in study two

Document ID	Organisation	Document Name	Document Type	Public Access
D1	Athletics Australia	Athletics Australia Sustainability Strategy 2025 – 2030 DRAFT	Strategic Plan	No (Internal Document)
D2	Bowls Australia	Bowls Australia Environmental Sustainability Strategy	Strategic Plan	Yes
D3	Golf Australia	Golf Australia 2030 Australia	Strategic Plan	Yes
D4	Hockey Australia	Hockey Australia Climate Sustainability Strategy 2024	Strategic Plan	Yes
D5		Hockey Australia Strategic Plan 2023-24	Strategic Plan	Yes
D6		Hockey Australia Strategic Plan 2023-25	Strategic Plan	Yes
D7	Motorsport Australia	Climate and Environment Action Plan 2023	Action Plan	Yes
D8		Environment Committee - Terms of Ref July 2023 Final	Committee Terms of Reference	No (Internal Document)
D9		Motorsport Australia 2023 - 2025 Strategic Plan Metrics	Strategic Plan Metrics	No (Internal Document)

D10		Motorsport Australia Climate and Environment Action Plan 2022	Action Plan	Yes
D11		Motorsport Australia Environmental Policy	Policy	Yes
D12		Motorsport Australia Strategic Plan 2020-2022	Strategic Plan	Yes
D13		Motorsport Australia Strategic Plan 2023-2025	Strategic Plan	Yes
D14		Motorsport Australia Sustainability and Environmental Management Plan	Environmental Management Plan	Yes
D15		SEACHanger Award 2021 MSA Main Submission	Award Submission	Yes
D16	Netball Victoria	Environment Working Group Terms of Reference	Committee Terms of Reference	No (Internal Document)
D17		Green Action Plan 2023-2025	Green Action Plan	Yes
D18	Rowing Australia	Clean and Green Statement of Principles	Principles Statement	Yes
D19		National Participation Framework Planning Summary	Strategic Participation Framework	Yes
D20	Sailing Australia	Sailing 2032 The Strategic Plan for Australian Sailing 2022-2032	Strategic Plan	Yes
D21	Surf Life Saving South Australia	SLSSA ECOSurf Poster and Strategy Handout	Strategy Handout	No (Internal Document)
D22		SLSSA ECOSurf Project Achievements	Project Report	No (Internal Document)

D23	Surf Life Saving Australia	Surf Life Saving 2025 Strategic Plan	Strategic Plan	Yes
D24		Surf Life Saving Australia Policy Statement ECOSurf Program	Policy Statement	Yes
D25	Swimming Victoria	2024 Swimming Victoria Sustainability Survey - Google Forms	Survey	No (Internal Document)
D26		Sustainability Work Plan	Work Plan	No (Internal Document)
D27		Swimming Victoria 2023 Sustainability Working Group EOI	Working Group EOI	No (Internal Document)
D28	Victoria Racing Club	Racing Towards a Sustainable Future at VRC	Sustainability Report	Yes
D29	Victoria Institute of Sport	Earth Day Preso 22 April2024	Presentation	No (Internal Document)
D30		Sustainability Squad Meeting 1_2024	Meeting Minutes	No (Internal Document)
D31		Sustainability Squad Meeting 2 Minutes	Meeting Minutes	No (Internal Document)
D32		Sustainability Squad Meeting 3 Minutes	Meeting Minutes	No (Internal Document)
D33		VIS Initiative Brainstorm Raw Data	Brainstorm Notes	No (Internal Document)

D34		VIS Sustainability Planner	Sustainability Planner	No (Internal Document)
D35		VIS Sustainability Squad Climate Action Plan Executive Summary	Executive Summary	No (Internal Document)
D36	Water Polo Australia	WPA Climate Action Panel	Panel Report	Yes
D37		WPA Climate Action Strategy	Strategy Report	Yes
D38		WPA Climate Change Position Statement	Position Statement	Yes
D39		WPA Sun Safety, Extreme Weather and Playing Conditions Guidelines	Guidelines	Yes