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Enhancing Environmental Conservation in Recreational Sports Tourism From a Shared-Responsibility Perspective: A Qualitative Study of Recreational Kayaking in Hong Kong

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Correspondence: Vincent Wing Sun Tung (vincent.tung@polyu.edu.hk)**Received:** 10 February 2025 | **Revised:** 2 February 2026 | **Accepted:** 13 February 2026**Keywords:** destination management | environmental conservation | recreational sports tourism | shared responsibility**ABSTRACT**

Despite extensive literature on the demand for recreational sports tourism, more research is needed on stakeholders' shared responsibilities for environmental conservation. To address this gap, this study proposed an extended conceptualization of shared responsibility, examining stakeholders' perceptions, expectations and interactions in recreational sports tourism. Empirical data were collected through 28 semi-structured interviews with service providers, instructors and tourists in the context of recreational kayaking in Hong Kong, and analysed inductively via thematic analysis. Findings revealed bidirectional relationships among key actors, showing how responsibility for environmental conservation is shaped through expectations, reliance and intervention. This study establishes a conceptualization of shared responsibility in recreational sports tourism, offering insights into real-world practices of supply- and demand-side actors to inform effective policy interventions.

1 | Introduction

Recreational sports tourism shows rapid growth and high potential demand (UNWTO 2023). The growing trend in sports and awareness of health care, combined with worsening mental status, has amplified a tendency of recreational sports tourism, which provides physical and mental pleasure and enjoyment to tourists by combining tourism and fitness (Jaksic-Stojanovic et al. 2019; Liu et al. 2020). However, severe environmental impacts come along with recreational sports activities. For instance, recreation in country parks has caused littering issues while scuba diving activities have created damages to coral reefs (Leung 2022).

Upholding environmental conservation in recreational sports tourism requires shared responsibility across consumers and suppliers (Syróvátka 2020). This involves engaging tourists, employees, and management. Yet, Mascarenhas et al. (2021) noted

most studies focus on tourist perceptions, excluding employees and management. For instance, research on Bali's water crisis examined NGOs, tour operators and government but overlooked front-line employees (Cole et al. 2021). Similarly, surf tourism studies engaged tourists, instructors and enterprises but analysed narratives separately, failing to integrate responsibilities (Buckley et al. 2017). To date, research has not identified or connected stakeholder responsibilities in recreational sports tourism, despite evidence that collaboration to strengthen environmental conservation is essential for effective communication (McCullough et al. 2018).

To address this gap, this study identifies and connects stakeholder roles in environmental conservation within recreational sports tourism by extending a shared responsibility perspective. Shared responsibility distributes obligations among actors towards a common goal requiring collective action (McLennan and Eburn 2015). In political science, it applies

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when multiple players contribute to a harmful outcome, necessitating distribution (Nollkaemper and Jacobs 2012). It suggests all actors in a joint activity should share responsibilities rather than centralise them with one actor (Dahan et al. 2023). Unlike stakeholder management theory, which presents actor roles, shared responsibility emphasises link (e.g., expectations and assumptions) among actors. For example, a case study on Montenegro highlighted stakeholder challenges in sports tourism development (Jaksic-Stojanovic et al. 2019) but did not connect expectations of responsibility across stakeholders. Stakeholder management theory is useful for presenting roles (e.g., tourists and employees separately highlight perspectives) but does not require assumptions of one actor towards another (e.g., tourists assuming employee responsibility, or employees holding tourists accountable). Thus, this study adopts shared responsibility as a lens to examine stakeholder expectations and responsibilities, uncovering cooperation opportunities for environmental conservation in recreational sports tourism. The guiding research question is: 'How do key stakeholders in recreational kayaking in Hong Kong perceive their own and others' responsibilities for environmental conservation?'

Hong Kong, renowned for cultural assets and ecological landscapes (Chen 2022), has recently emphasised eco-tourism development (The HKSAR Government 2025) given its coastal geography and marine resources (Lee 2016). Kayaking is recognised as one of the best sports for exploring the city due to accessibility (TimeOut 2021). Its beginner-friendly design and rental availability make it appealing to tourists (Robson 2023). Despite lacking motors, kayaking creates environmental impacts by granting access to sensitive areas such as coves and cliff caves (Clausen et al. 2020). In Hong Kong, paddlers navigate freely under minimal regulatory oversight (Marine Department 2025), with only advisory guidelines in marine parks (Agriculture, Fisheries and Conservation Department 2025). For example, Green Egg Island, once accessible only to hikers and private vessels, has become a popular kayaking spot (Lo 2020). Expansion of rental services in an adjacent bay (Ta Kung Wen Wei Media 2022) has raised concerns about waste and degradation (Hong Kong Economic Times 2020). Similar worries emerged at a UNESCO-listed geopark promoted by the Hong Kong Tourism Board (Hong Kong Tourism Board 2020), where tourist influx has been linked to coral damage (Li 2025). Although recent studies examined responsible behaviour in outdoor recreation, they primarily targeted tourists, neglecting a broader stakeholder perspective (Chen and Cheung 2025).

To understand stakeholders' perceptions, expectations and practices of environmental conservation in recreational sports tourism from a shared responsibility perspective, this qualitative study conducted semi-structured interviews with 28 stakeholders in recreational kayaking in Hong Kong, including 8 service providers, 10 instructors, and 10 tourists. The study contributes theoretically and managerially to destination development and resource management by recognising shared responsibilities among stakeholders. It also seeks to inspire interest in applying shared responsibility theory to sustainable tourism, where its use remains limited despite applications in other social sciences. Practically, the study may help policymakers grasp real-world

perceptions of shared responsibilities, informing more effective policies and interventions.

2 | Literature Review

2.1 | Recreational Sports Tourism

Scholars have consistently highlighted the market growth in sports tourism, and recreational sports, particularly, are generally used to attract tourists to a destination despite the diverse typologies of sports tourism. The definition of sports and tourism is constantly evolving and complex (Van Rheenen et al. 2017). Sports tourism encourages tourists to temporarily leave their homes for spectating, adventure, recreational or competitive activities with the main motivation of sports (Hinch and Ito 2018).

Recreational sports tourism and outdoor recreation are often confused. Outdoor recreation includes non-competitive leisure activities conducted outdoors, even in urban areas, as part of daily or weekend routines (e.g., walking in small urban gardens), which disqualifies it as tourism behaviour (McCullough et al. 2018). By contrast, recreational sports tourism occurs in natural locations and is closely associated with nature-based tourism (Fredman and Tyrväinen 2010), defined as tourist activities in nature outside their usual surroundings during holidays.

In this study, recreational sports tourism refers to sporting activities in nature away from tourists' everyday environments. Recreational sports involve active participation and enjoyment as leisure, rather than spectating or competing (Jaksic-Stojanovic et al. 2019). Unlike competitive sports, recreational sports are informal, individually or collectively practiced, without formal organisation or competition and are easily accessible in terms of technique (Min and Jin 2010). Overall, this study conceptualises recreational sports tourism as the nexus of sports tourism, outdoor recreation, and nature-based tourism (see Figure 1).

2.2 | Environmental Conservation

Eco-sustainability has long been prioritised in tourism research, with growing attention to environmental sustainability in recreational sports tourism (Buckley et al. 2015). Scholars note increasing interest in nature conservation and sports tourism (Mascarenhas et al. 2021), yet most studies focus on mega-sport events (Carneiro et al. 2016). Recent work highlights high-quality studies on environmental impacts of outdoor tourism, though these are largely published in recreation and environmental studies rather than tourism literature (Butler 2024).

Recreational sports tourism is inseparable from nature, as it occurs in natural environments and shapes tourists' environmental interpretations (Liu et al. 2020). As shown in Table 1, only a few studies have examined its environmental impacts. A recent study revealed the vulnerability of recreational sports tourism businesses, particularly nearshore dive and boat operators, under pressures such as pollution and environmental degradation (Student et al. 2020).

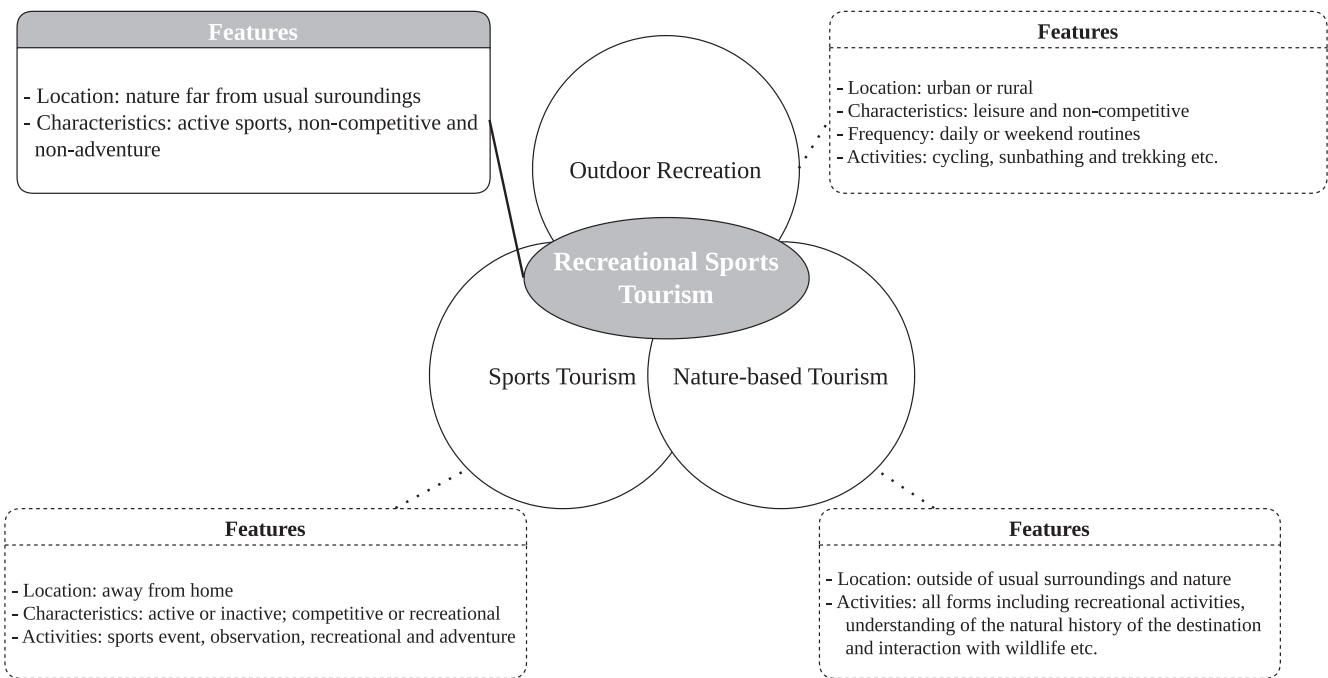


FIGURE 1 | Conceptualization of recreational sports tourism as the nexus among sports tourism, outdoor recreation, and nature-based tourism.

TABLE 1 | Select studies on the environmental impact of recreational sports tourism.

Sports	Objectives	Key findings	References
Diving	To develop a behavioural model for divers to reduce negative marine environmental impacts.	Divers' behaviour varies from their knowledge, affect and subjective norm.	Ha et al. (2020)
Paddling	To explore sustainable sports tourism in Japan as reflected in published research.	River maintenance and improvement programmes initiated by canoe clubs.	Hinch and Ito (2018)
Recreational fishing	To rank and assess risks and activities in marine recreational fishing.	Marine recreational fishing threatens ecological resilience, biodiversity and environmental contamination.	Lewin et al. (2019)
Hiking	To determine environmental impacts caused by hikers.	Hikers regard air quality and wild animal issues as the factors most affected by hiking.	Wu et al. (2021)
Outdoor climbing activities, canyoning and zipline	To evaluate climbing sports' impact on geological and naturalistic heritage.	Sports tourism development maintained environmental quality and natural resources.	Marrosu and Balvis (2020)
Water sports in general	To examine sports tourism's impact on environment, economy, and social aspects in Lake Sipin region.	Sports tourism development maintained environmental quality and natural resources.	Nugraha et al. (2020)

2.3 | Theory of Shared Responsibility

Shared responsibility is defined as distributing obligations among two or more actors who directly or indirectly contribute to harmful outcomes, towards a common goal, without attribution based on causation (McLennan and Eburn 2015). Definitions largely stem from social science, ecology, and political science. From an economic perspective, it extends across the supply chain to foster cooperation among all parties (Lenzen et al. 2007). In this study,

every stakeholder in recreational sports tourism is expected to share, rather than centralise, responsibility for environmental preservation. Although tourism literature rarely specifies shared responsibility theory, it often describes stakeholder roles in recreational sports tourism or environmental conservation. For example, Gstaettner et al. (2019) examined responsibilities for visitor safety in protected areas, while Grimwood et al. (2015) identified two constructions of responsibility in outdoor tourism: individual accountability and the ethic of leaving no trace.

Environmental responsibility should be attributed to stakeholders who add value to production and benefit from their actions (Sun et al. 2022). In recreational sports tourism, service providers, instructors, and tourists are the main actors directly sharing responsibility for conservation. Service providers can initiate environmental improvements during operations, with small businesses playing a vital role due to local knowledge and connections (Hinch and Ito 2018; Hritz and Cecil 2019). Instructors, as employees under providers, strongly influence activities through consumer and professional services (Chelladurai and Kim 2022). Employers expect them to demonstrate sports competencies and leadership to ensure tourist satisfaction and safety (Sutton 2020). Tourists, as demand-side stakeholders, are major actors, defined as those who travel primarily for active recreational participation (Gammon and Robinson 1997). Providers and instructors intervene to ensure tourists engage sustainably in recreational sports tourism.

Despite valuable insights, weaknesses remain in conceptual coverage of existing literature. First, studies did not specify stakeholder expectations in collaborative approaches. For example, they failed to show how tourists rely on employees or expect service providers to foster environmental conservation in recreational sports tourism. Similarly, research noted service providers assume employees implement organisational environmental policies but did not address how employees report actions back to employers. In other words, past studies identified stakeholders and roles uni-directionally (e.g., employees intervene when tourists act irresponsibly) rather than bi-directionally (e.g., tourists rely on instructors' information for responsible participation).

Second, existing literature did not capture the specific responsibilities or actions that are shared by stakeholders. The literature suggests that tourists and employees both have responsibilities to environmental conservation, yet the responsibilities were unspecified. For example, employees and tourists both share responsibility to clean up garbage together, in an effort to reduce environmental impact. Service providers have to ensure appropriate site selection and engage in promotional efforts to educate tourists and employees of their responsibilities towards the environment. As per these examples, specific responsibilities that stakeholders share with each other and towards environmental conservation in general were omitted from extant conceptualizations.

Finally, existing literature mainly focuses on service providers, employees, and tourists. There are also other key stakeholders that share responsibility towards environmental conservation. They may include sports unions, government policymakers, and other non-governmental organisations. These other stakeholders were not discussed in the conceptualization of shared responsibility in existing literature on recreational sports tourism. Overall, the present study addresses these conceptual gaps in the literature by extending a shared responsibility theoretical perspective that captures *bi-directional* and *specific* responsibilities of key actors (e.g., service providers, employees, and tourists), as well as the *roles* of other related stakeholders (e.g., government, sport union and non-governmental organisations) for environmental conservation in recreational sports tourism.

3 | Methodology

This study seeks to identify and connect stakeholder roles in environmental conservation within recreational sports tourism by extending a shared responsibility perspective. Situated in single-day recreational kayaking in Hong Kong, this study employed a qualitative approach, collecting narratives from service providers, instructors, and tourists through semi-structured interviews. The focus was on stakeholders' subjective understandings of responsibility, expectations of other actors, and the relational processes through which shared responsibility is negotiated (Fossey et al. 2002). As little is known about stakeholder perspectives and concepts such as responsibility and role expectations are interpretive and socially constructed, a qualitative approach is appropriate.

3.1 | Sampling and Data Collection

The sample consisted of kayaking service providers (employers), instructors (employees) and tourists. Service providers were licensed clubs qualified by the Hong Kong Canoe Union, offering rentals, classes and tours. Interviewed representatives, referred to as employers or managers, oversaw long-term development and daily operations, as kayaking businesses are typically small to medium-sized enterprises. Employees were instructors with at least one year of experience. Only recreational sports tourists above 18 years old were included. To reach these groups, purposive sampling supplemented by snowball referrals captured diverse stakeholder perspectives (Parker et al. 2019). Leveraging the first author's professional connections, participants were recruited based on eligibility, beginning with qualified service providers who referred instructors and tourists. Covering various enterprise scales and dispersed recreational users, the sample encompassed multiple stakeholders in the recreational sports ecosystem.

The total sample consisted of 28 interviewees. There was a gender-balanced sample of males and females at 14 interviewees each. Their ages ranged from 21 to 59 years old, and expectedly, the youngest interviewees were 'tourists' and the oldest interviewees were 'employees' (see Supporting Information Appendix 1). The sample distribution covers kayaking locations across 10 districts or areas in Hong Kong. A broad sample distribution by location ensures that interviewees' feedback on environmental conservation is reliably reflective of the situation across the city and not limited to just a particular district in Hong Kong.

Data were collected through 28 face-to-face semi-structured interviews, averaging 23 min, between January and February 2023. An interview guide with key questions was prepared in advance (see Supporting Information Appendix 2), developed in relation to the theory of shared responsibility, which examines stakeholder roles and expectations. Ethical approval was obtained from the home university's Institutional Review Board. Informed consent was provided in writing and verbally before each interview. Interviews were conducted in Cantonese or English, depending on participant preference, to avoid language barriers. Interviews were audiotaped with consent, transcribed, and translated into English for analysis. As both an experienced kayaking practitioner and researcher, the interviewer

maintained her flexibility during data collection, and initial coding occurred concurrently to assess emerging themes across stakeholder groups (Ahern 1999). Code saturation was reached when no new themes or relational patterns appeared in later interviews.

3.2 | Data Analysis

An inductive thematic analysis was adopted to categorise, analyse and report text corresponding to themes (Guest et al. 2011). Interview data were processed in several steps. First, the first author, a native Chinese speaker, transcribed and translated the data, followed by back-translation to ensure accuracy. Next, initial codes were manually listed after each interview by reviewing excerpts and comparing them with previous interviews to identify new ideas. Once data collection was complete, codes with similar meaning were grouped into categories to develop final themes connected to key actors. The first author conducted all coding manually. For example, service providers' assumptions about instructors included employees as role models, promoters, and professionals. Key quotes related to this theme were extracted for inclusion in the results. During analysis, three additional stakeholders—the Government, national sports union, and environmental organisations—were identified through careful note review. New themes and directions were established to broaden the study beyond key actors. Supporting Information Appendix 3 presents an example of the coding process. To enhance the credibility of the analysis, iterative comparison

across interviews and regular discussion of emerging interpretations among authors were undertaken.

4 | Findings and Discussion

The interviewees discussed their perceptions of the shared responsibilities towards environmental conservation by each of the major stakeholders in recreational sports tourism. Figure 2 presents an extended conceptualization of the theory of shared responsibility, depicting stakeholders' connections, responsibilities, and contributions to environmental conservation. While the study focused on key stakeholders, additional actors, including local government, non-governmental organisations and the sports union (i.e., national canoe association), emerged.

4.1 | Service Providers' Assumption on Instructors

Findings revealed that service providers have limited interaction with and control over tourist resulting in three categories assumption on employees (1) role model, (2) promotor and (3) professional development. A role model is a subcategory of leadership and is defined as someone who impacts individuals' thoughts or behaviours (Gächter and Renner 2018). Service providers emphasised that the instructors should be positive role models by being 'responsible for their behaviour' and 'consciousness' about their actions regarding environmental conservation. In response to the expectation, instructors also acknowledged the responsibility of role modelling by not 'throwing rubbish' (Interviewee #11) or

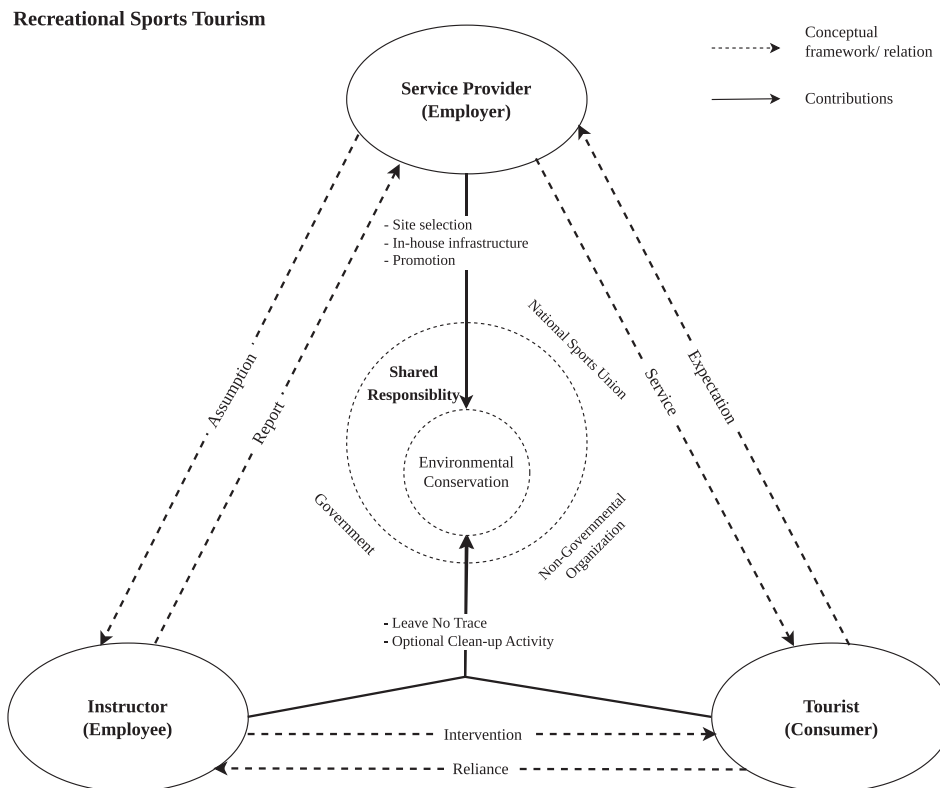


FIGURE 2 | Extended conceptualization of shared responsibility towards environmental conservation among stakeholders in recreational sports tourism.

'picking starfish' (Interviewee #18) while admitting their power of influence because of the authority in their 'title' (Interviewee #10), an instructor. The service providers, however, expressed higher expectations of their instructors. Apart from being aware of their own behaviour, instructors were also expected to *actively* pick up trash during work to trigger and motivate tourists to follow. While earlier research affirmed the pro-environmental behaviour of visitors impressed by tour guides in kayak tours (Randall and Rollins 2009), the findings highlighted a more demanding expectation from employers' perspectives that environmental responsibility should be embedded within instructors' professional identity and govern all their actions.

The management further assumes instructors to become promoters of environmental conservation. Interviewee #2 expected his employees to 'introduce the environment' such as natural 'attractions' and 'wildlife' in the destination of the customers. Interviewee #3 presumed that the customers' proficiency should be the main consideration of whether the instructor should promote nature conservation in the activity. For a beginner, the content would affect customers' impression of the employees, resulting in the worst customer experience. Additionally, during the paddling activity, service providers expected employees to have the experience of identifying biodiversity-sensitive areas and precautions on tourists' potential environmental damages.

Since some of the protected areas are only known by the instructors, they should remind students (tourists) not to go into the water when going to those areas ... Since the students may step on the coral without recognising. Also, the coach should remind the students to maintain a safe distance from the rocks since they may clash with the reserved rocks... (Interviewee #5).

Finally, professional development, such as educational training to develop green awareness, was crucial to ensure instructors' environmental knowledge, attitudes and behaviour. Stakeholders, however, carried varied opinions on who should assure employees' understanding towards environmental topics. Interviewee #1 expected employees to 'actively' equip themselves, whereas tourists assumed that managers should provide training. This latter standpoint echoed with existing literature regarding the responsibility of offering professional development, including professional knowledge about marine ecosystems and the detrimental impacts of tourism on natural habitats, on service providers (Set et al. 2023). By contrast, the former view suggested a tendency among some service providers to externalise responsibility for environmental education onto individual instructors, potentially implying why conservation education is understated by operators and excluded from instructors' core role as Huynh et al. (2024) flagged.

4.2 | Customer Experience Offered by Service Providers

Confirmation messages from service providers are crucial for customer experience, influencing preparation and equipment (Interviewee #11). First-time players, unfamiliar with preparation, often rely on disposable items instead of waterproof bags

or reusable containers. Expectations about activity duration also affect preparation, as some tourists anticipate a full-day event and purchase one-time gear. Respondents noted operators' responsibility to provide (Interviewee #6) or remind customers to bring (Interviewee #23) plastic bags for garbage storage, given tourists' limited experience. These narratives highlight environmental responsibilities shared with service providers across the customer journey, particularly before activities commence, when instructors assume a more prominent role. This extends Fragidis et al.'s (2022) findings on operators' responsibilities in shaping sustainable tourism experiences within recreational sports tourism.

The fundamental product provided by service providers is 'kayak rental services' (Interviewees #5 and #16) while ensuring the 'smooth operation of the centre' (Interviewee #9). Besides, Interviewee #17 explained different business models of service providers covering education-oriented and rental-oriented: 'There are two types of service providers, providing kayak teaching class and simply renting out the kayak. The former is more organised and might teach tourist certain environmental knowledge, yet the latter has no restriction or guidance'.

The responsible party for tracking inappropriate behaviour could be complex, as most interviewees reported that the local government should enforce regulations following surveillance while service providers have lack of knowledge and right to confine (Interviewee #1) the utilisation of equipment by tourists since they solely 'stay at their centre or store' (Interviewee #25). However, interviewee #17 proposed that service providers should enforce supervision on tourists' harmful practices by requiring tourists 'clean up' the waste they left or introducing sanitation surcharge. Although current literature frequently highlights the government's regulatory function in mitigating environmentally harmful tourism behaviours (e.g., Baloch et al. 2023), the data presented here reveal that service providers play a critical intermediary role between formal regulation and tourist conduct.

4.3 | Employees Reporting to Employers

Due to operational and administrative duties, service providers had limited interaction with tourists. Ironically, they were expected to rent equipment only to well-behaved tourists (Interviewee #26), yet their geographical constraints hindered supervision of tourist behaviour. Employees therefore played a crucial role in reporting unfavourable actions, enabling managers to prohibit unwelcome tourists from purchasing services (Interviewee #8).

Employees also carried real-time environmental information. By guiding tourists to open sea areas, they observed and assessed conditions, particularly pollution levels. They were expected to take pictures to report to management (Interviewee #21), allowing managers to inform staff about site selection and set expectations for tourists. Although these issues appear specific to kayaking, they apply broadly to recreational sports activities, which inherently occur in natural settings where providers

cannot accompany tourists, positioning instructors as primary supervisors and observers.

Employees should report unsuitable equipment to managers, as poor kayak procurement can generate marine debris. Kayak flotation systems typically use bulkheads or air-filled bags, yet some designs in Hong Kong rely on Styrofoam (Interviewee #13), which contributes to microplastic pollution. Although Styrofoam must be secured inside boats for safety, some centres simply place it in hatches without ties, risking debris release when tourists drain water. Nevertheless, managers may lack expertise in procuring appropriate equipment, underscoring the need for employees' vigilance and advice in ensuring sustainable tools.

4.4 | Employees' Direct Intervention With Tourists

Employees should set expectations prior to the tour to prevent customer dissatisfaction. In eco-tour, tourists mostly joined in family groups with high inter-personal tourists' motivation, such as family bonding and reunion, resulting in lower learning but a higher entertainment attitude. As Interviewee #18 explained: 'Employees should first state the objective clearly, like we are going to emphasise environmental conservation today. If we do not, tourists will think that they're simply here for fun and if you suddenly bring it up, they will find this annoying and will not be interested in these sports anymore'.

Employees should equip themselves with knowledge of geology and marine biodiversity to cultivate tourists' awareness of environmental conservation. Due to the high mobility of paddling sports, tourists could access protected areas with high environmental value. Employees in the tours were the 'tour guides' to share the information (Interviewee #17) and as Interviewee #27 described: 'Other than delivering skills, they (employees) should first learn about certain marine knowledge and share this with students. For example, typologies of creatures in this area with appropriate behaviour when facing with them'.

Some interviewees emphasised that employees' primary responsibilities are delivering techniques and ensuring customer safety. Thus, it is understandable that they did not highlight environmental conservation. Employees were also responsible for selecting appropriate sites for tours. In Hoi Ha Wan Marine Park, only mechanised vessels are regulated, while kayakers can access ecologically sensitive areas. Tourists, however, 'don't know where they should or should not enter' and have 'unlimited accessibility' (Interviewee #15), making instructors' decisions on suitable routes and coaching areas essential.

The emphasis on employees' intervention raises an important question: how is environmental responsibility enacted in recreational sports tourism without instructors? Similar debates appear in research on independent nature-based activities, such as hiking in conservation areas (Sun et al. 2024), where accountability is facilitated through signage, codes of conduct or indirect governance rather than interpersonal engagement (Poponi et al. 2020). Although these tensions lie beyond the empirical

scope of this study, they highlight a potential avenue for future research by drawing upon the current study: examining shared responsibility in the absence of employees or service providers, and how other actors may fill this gap in fostering environmentally responsible behaviour.

4.5 | Tourists' Reliance on Instructors

Tourists' environmentally favourable behaviours largely depended on instructors' reminders. Service providers noted that domestic tourists lack ecological sensitivity, causing significant environmental damage (Interviewee #6). Instructors should therefore highlight sustainable actions while tourists follow guidelines. Inexperienced tourists had vague conceptions of the tour, leading to poor preparation—for example, not expecting seawater contact or considering eco-friendly sunblock (Interviewee #26). Instructors also needed to remind tourists to avoid non-reusable packaging, which can easily become oceanic debris given unforeseen wind conditions at sea (Interviewee #23).

Correspondingly, tourists relied on instructors' encouragement to realise environmental contributions they were otherwise unaware of. Despite leisure motives, tourists were willing to pick up litter when (1) it was safe, (2) instructors also participated and (3) they were encouraged (Interviewee #28). While prior research affirmed tourists' satisfaction from pro-environmental behaviour (Zhang et al. 2024), these findings highlight instructors' mediating role in translating intention into guided action and overcoming situational constraints.

4.6 | Tourists' Expectations of Service Providers

Tourists expected managers to maintain a pristine environment, from the centre to surrounding nature. Service providers were blamed for damaging nature since they 'earn by providing recreational sports services' (Interviewee #23) and were expected to 'take care of the place' (Interviewee #21) and 'make sure the area is clean' (Interviewee #22). Providers should therefore state environmental guidelines in registration forms with required signatures to raise awareness (Interviewee #21). Their responsibility extended beyond reminders or centre upkeep to cleaning neighbouring oceans (Interviewee #27). These expectations align with research showing environmentally harmful practices reduce customer satisfaction and loyalty (Mathew et al. 2024). Findings further suggest tourists unconsciously associate providers with environmental quality, supporting Merli et al.'s (2019) study of coastal tourism where environmental conditions critically shaped ecosystem success, such as beach clubs.

Customers also wished service providers to manage their kayak storage in a proper tactic. Interviewees spotted service providers retaining their kayak assets only on the ocean instead of storing them in good condition. According to a promotional video filmed by the Hong Kong Tourism Board, the kayaks were floating on the seaside with a rope linking them (Hong Kong Tourism Board [HONG KONG] 2021). Gear and vessels used in the ocean, regardless, ought to be sprayed by fresh water to reduce the aquatic pests and stored in a proper

rack. As Interviewee #28 noted: 'water sports business in Sai Kung simply places their equipment floating on the sea-side which is harmful to nature. They should better pick the kayak back to the land for storage instead of simply occupying the ocean which belongs to marine creatures but not those businesses'.

4.7 | Major Actors' Contributions to Environmental Conservation

The solid arrow connecting the key stakeholders and the interior in Figure 2 illustrates the contribution catalysed by themselves towards environmental conservation.

4.7.1 | Instructors and Tourists

It is interesting that contributions of instructors and tourists are similar because of parallel influences towards the environment, instructors are 'just the ones who teach techniques but not others' (Interviewee #20). Although instructors had (1) more experience and knowledge of the sport, (2) higher authority in the tour and (3) extra responsibility of risk management, there was no additional outcome to nature caused by instructors compared with tourists. Even though the instructors were assumed to be role models to tourists regarding sustainable behaviours with higher standards, the actions they performed were much like tourists.

A key contribution is reducing nature's footprint. Respondents across groups agreed on the 'Leave No Trace' (LNT) principle to minimise human impacts, including avoiding disturbance to marine animals and leaving no waste. For example, participants should not obstruct marine life and should discourage others from doing so (Interviewee #18). In addition, instructors and tourists assisted in reducing marine debris by picking up the existing floating sea garbage. For example, the undertaking depended on 'whether they (instructors and tourists) have the protective equipment like the scarf and whether the area is safe' (Interviewee #27). While tourists relied on instructors' initiation and empowerment, both groups ultimately contributed to the same conservation effort.

4.7.2 | Service Providers

Service providers held an authoritative role in environmental protection through actions such as site selection, infrastructure, amenities and promotion. Nautical activity centres were clustered to minimise ecological impact; for instance, about five centres in Ma Lam Wat, Sai Kung (Interviewee #2) and over eight clubs in Approach Beach, Tsuen Wan (Interviewee #3). Although government restrictions on water sports centre development were absent (Interviewee #15), clubs tended to operate in neighbouring areas, reducing environmental influence. This reflects the symbiotic rationality of small enterprises in guiding sustainable practices (Liu et al. 2024).

Regardless of the centralization, inadequate sewage drains would still cause marine pollution. After paddling activity,

tourists would prefer bathing with body cleansers consisting of chemicals to remove salt. Certificated kayaking clubs would either adopt sewage filtration (Interviewee #18) or educate customers using the showering facilities of the public beaches (Interviewee #1). For clubs that failed to instal the infrastructure, they would admonish customers for just showering bodies with only salt-free water (Interviewee #7).

Besides, providing recycling and waste disposal facilities promotes responsible trash disposal and raises recycling awareness. When tourists see accessible disposal amenities at the centre, they are more incentivised to carry used materials back to land. Interviewee #2 noted that placing recycle bins in prominent club locations motivates tourists to categorise and dispose of recyclable materials. Finally, service providers also promote eco-sustainability. In-person communication and promotional posters were used by the managers in the kayaking club to popularise nature conservation messages, including the prohibition of rubbish disposal in nature and intervention of wild creatures (Interviewee #8). Meanwhile, service providers would also organise cleanup activities with their human resources (Interviewee #1).

4.8 | Other Related Stakeholders

Interviewees further discussed the responsibilities of other stakeholders: the government, environmental organisations and the national canoe union.

4.8.1 | Government

The government was identified as a key stakeholder with authority to enforce ecological justice in tourism. Interviewees expected government supervision and education, including fines and intensive monitoring, given the limited power of service providers to control customers. Respondents also suggested councils be established to discuss demand and resources for recreational sports development (Interviewee #6). Support could include subsidies for eco-friendly products, such as sunscreen, which is costlier than alternatives (Interviewee #15). In addition, the government holds responsibility for land-use planning and development blueprints. Concerns were raised about the absence of planning for private water sports clubs, with calls for guidelines restricting business development in Sai Kung (Interviewee #5), a kayaking spot promoted by the Hong Kong Tourism Board (Hong Kong Tourism Board 2023).

4.8.2 | National Sports Union

The union should also conduct promotions regarding natural sustainability. The current HKCCU's website consists of content majorly regarding 'safety' and 'techniques' with zero natural conservation-related content displayed. The union should align with its counterparts, British Canoeing and American Canoe Association (ACA), to maximise its efficacy in promoting nature conservation (British Canoeing 2023; American Canoe Association 2020).

More importantly, the union should educate all the key stakeholders on how to practice sustainable behaviours. From top to bottom, operational guidelines should be first issued to the service providers (Interviewee #4) following direct education to employees. To incorporate eco-educational content, specific environmental training should be included in paddling instructor certifications, as the current instructors lack environmental education (Interviewee #16).

Standardising the instruction syllabus and ensuring bilingual promotional materials are crucial for effective customer education. For example, the internationally recognised ACA's certifications require customers to review materials on environmental conservation before attending the class (Interviewee #9). As highlighted by an English-speaking interviewee, the promotional material launched should be bilingual to ensure the coverage of audiences (Interviewee #21).

The Hong Kong Canoe Union (HKCCU), the authority for paddle sports, oversees kayaking, canoeing, standup paddling and dragon boat. It is accountable for promoting environmental conservation through public campaigns and guidelines. Although mainly responsible for safety and techniques, interviewees stressed the union should also promote conservation online (Interviewee #28). As the 'mother organisation' of service providers, the union holds authority, professionalism and connections (Interviewees #1, #6, #15) and should intervene when players cause environmental harm (Interviewee #28). The union should align with British Canoeing and the ACA to strengthen conservation promotion (British Canoeing 2023; American Canoe Association 2020). More importantly, it should educate stakeholders on sustainable practices. Operational guidelines should be issued to providers (Interviewee #4), followed by direct training for employees. Environmental content should be integrated into instructor certifications, as current instructors lack such education (Interviewee #16).

Standardising syllabi and ensuring bilingual promotional materials are vital for customer education. For instance, ACA certifications require customers to review conservation materials before classes (Interviewee #9). As one English-speaking interviewee noted, bilingual materials are essential to reach wider audiences (Interviewee #21). In connection with Ulloa-Hernández et al.'s (2025) study on sporting events in protected and unprotected areas, respective sports entities were excluded as stakeholders. Meanwhile, Hugaerts and Könecke (2025) proposed a sustainability framework for national sports federations, including education through stakeholder engagement, ecosystem protection and equipment recycling. Since most research on federations has focused on sports events (Hugaerts et al. 2021), this paper identifies a future research avenue: examining the role of national sports associations in tourism development through recreational sports activities.

4.8.3 | Environmental Organisations

Natural-focused non-governmental organisations play a pivotal role in environmental conservation in recreational sports tourism because of their mission (Interviewee #20), financial

support received (Interviewee #28) and extensive network (Interviewee #21) distinguishing them from service providers. Unlike the government, the groups were believed to be relatively practical and effective (Interviewee #7). To raise awareness of environmental conservation, non-governmental organisations are recommended to organise educational activities in the form of recreational sports for both domestic and international tourists.

4.9 | Summary

Overall, the findings align with earlier scholarship on nature-based tourism, while presenting a shared responsibility perspective among stakeholders in recreational sports tourism. Interviewees echoed this view: 'everyone should make their best effort rather than relying on a certain party' (Interviewee #8), 'everyone has a similar share of the responsibility' (Interviewee #16) and 'environmental conservation requires collective effort, with no one person solely responsible' (Interviewee #22). Regardless of tourists' direct interaction with nature, expectations were placed on service providers, instructors and other actors to guide behaviour, provide support, and regulate practices. While conservation is a collective responsibility, behaviour and execution depend on stakeholders' capacity, authority and involvement within a broader relational framework as per Figure 2.

5 | Conclusion

This study addressed a core research question: 'How do key stakeholders in recreational kayaking in Hong Kong perceive their own and others' responsibilities for environmental conservation?' By identifying and connecting the roles of different stakeholders, this paper presented an extended conceptualization of shared responsibility, capturing the mutual relationships among key stakeholders and their contributions to environmental conservation. The study shared expectations and responsibilities that stakeholders have of each other, as well as potential areas of cooperation for environmental conservation in recreational sports tourism. Notably, contributions made by employees and tourists were aligned because of their simultaneous participation in the natural environment as instructors and consumers, respectively.

5.1 | Theoretical Implications

This research contributes to the tourism literature in several ways. This study extended the theory of shared responsibility as a valuable theoretical angle for investigating environmental conservation in recreational sports tourism, beyond existing work that focused on general safety management (Gstaettner et al. 2019). The study highlighted the expectations that multiple actors have of each other, as well as the potential and mutual responsibilities that they share to reduce environmental degradation. In doing so, this study highlighted the actions that different stakeholders could practice (e.g., site selection and clean-up activities) to facilitate ecological sustainability, thereby minimising the negative environmental consequences of recreational sports tourism.

This study contributes to the theory of shared responsibility by highlighting bidirectional relationships among stakeholders. While existing literature emphasised unidirectional ties, this paper extends the concept to bidirectional relationships. For example, prior work positioned service providers as main actors, enforcing assumptions and offering services, while tourists were passive in environmental conservation. This study addresses that limitation by illustrating collaborative relationships among actors. The extended concept demonstrates bidirectional linkages, showing shared responsibility between stakeholders towards each other.

As another example of bidirectional relationships, this study identified tourists' reliance on instructors for environmental conservation. Existing papers on recreational sports focused on customer safety (Cheng et al. 2022), with limited attention to conservation. A recent study highlighted the positive link between sporting experience and green behaviour (Mascarenhas et al. 2021). This study adds insights into the importance of instructor reminders and empowerment in fostering sustainable behaviour, beyond the role of service providers or zone managers in eco-sensitive areas (Gupta et al. 2022). It demonstrates the effectiveness of bottom-up communication in advancing the organisational performance of recreational sports enterprises.

This study contributes to the literature by illustrating relationships among major stakeholders. It aligns with managers' assumptions of employees' leadership capacity (Sutton 2020) while emphasising their active role in promoting eco-friendliness and creating a pro-environmental social context for tourists (Wu et al. 2021). The study also proposes examples of sustainable practices at service points to enhance ecological conservation in recreational sports centres. Beyond basic employee instructions, setting expectations for environmental protection is crucial to ensuring customer satisfaction.

This study uncovered the critical roles of the sports union and non-governmental organisations. Previous research focused mainly on government, with limited attention to connecting the sports union and NGOs to tourism, particularly, recreational sports. NGOs should promote environmental conservation values (Morfoulaki et al. 2023), while the government should lead sustainable development (Liu et al. 2020). The sports union's responsibility is also consequential and interconnected with all stakeholders.

5.2 | Managerial Implications

This study highlights how stakeholders (i.e., service providers, instructors, tourists, government bodies, and national sports unions) perceive and negotiate responsibilities in developing kayaking sustainably. While kayaking is popular for tourists due to rental availability and beginner accessibility, it also creates environmental impacts, particularly in sensitive areas such as caves and coves (Clausen et al. 2020). Preventive measures may require complex solutions depending on the type of impact (e.g., habitat loss, water pollution, soil erosion, wildlife disturbance), which may not rest solely with service providers or tourists. Nevertheless, the extended conceptualization offers important

implications for service providers in designing sustainable operational models for kayaking.

First, despite the dominant role of the instructor in assisting kayaking, managers should take the initiative in implementing changes due to the dearth of power of employees (Kupczyk et al. 2023). To meet this goal, green human resources management mentioned above could be applied in the kayaking sports tourism business. Managers could examine green employability skills and set accurate expectations when acquiring employees. In the recruitment process, employers could examine candidates' leadership qualities and clearly state the role of being an eco-promoter during kayaking.

Customers also bear responsibility for sustainable practices. Given tourists' limited experience and reliance on employees, they should acquire basic knowledge of kayaking and required gear to reduce single-use purchases. Even experienced tourists must follow guidance from service providers and instructors, who are familiar with destinations and biodiversity values. Business-to-consumer strategies, such as counterfactual prompts and negatively framed messages, can effectively encourage pro-environmental behaviour (He et al. 2024). With support from other key actors, positive behaviours can be cultivated among tourists, leading to responsible conduct and driving sustainable development in kayaking and recreational sports tourism (MacInnes et al. 2022).

Furthermore, this study urges government financial support for developing kayaking as environmentally friendly recreational sports tourism. Research shows rising demand for kayaking (Lewandowicz and Bac-Bronowicz 2021), alongside expectations from official stakeholders identified in this study. Mass promotion, funding, and a development blueprint are therefore recommended. The study also suggests sports unions provide kayaking-specific environmental guidelines for service providers, employees and tourists. Moreover, sports ecology training should precede instructor certification, and environmental behaviour should be mandatory for tourists by introducing it to the learning syllabus.

5.3 | Limitations and Future Research

This study has limitations that suggest directions for future research. Key stakeholders with significant authority, such as government and sports unions, along with peripheral actors like educational institutions and local communities, were not interviewed. Future studies should include them to better understand shared responsibilities. Moreover, this study focused only on kayaking and did not assess other recreational sports with varied ecological or geographical attributes, such as hiking or mountain biking, which also have environmental consequences. Examining shared responsibilities across diverse recreational sports would be valuable, particularly as new activities continue to emerge in this evolving field.

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The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Appendix S1:** Interviewees' profile. **Appendix S2:** Interview guide. **Appendix S3:** Example of the coding process.