AFRICAN JOURNAL OF HOSPITALITY, TOURISM AND LEISURE
2026, Vol. 15, No. 2, pp. 606-617
https://doi.org/10.46222/ajhtl.19770720.766

AJHTL
OPEN ACCESS

Research article

A supply chain resilience conceptual framework for climate-smart event enterprises

Frinwei Njihy Achu*[1], Portia Pearl Siyanda Sifolo [1] and Uwe Peter Hermann[1]

[1] Centre for Sustainable Tourism and Innovation, Faculty of Management Sciences, Tshwane University of Technology, Pretoria, South Africa

ABSTRACT

This article addresses a research gap in sustainable event management by developing a conceptual framework for climate-smart supply chain resilience in event enterprises. Grounded in Dynamic Capability Theory and the Technology-Organisation-Environment framework, it integrates climate change adaptation, smart practices, and supply chain resilience. Drawing on interdisciplinary literature, the framework identifies green sourcing, supplier diversification, localisation, AI-enabled digital procurement, and collaborative governance as key mechanisms. It also acknowledges that successful digital procurement in emerging economies is influenced by social, cultural, financial and organisational constraints, such as limited digital skills, poor data quality, infrastructure deficiencies, cybersecurity vulnerabilities, system downtime and nascent human-algorithm trust. Therefore, adaptive capacity, robust risk management, effective stakeholder coordination, and trust-building are crucial for mitigating climate-related disruptions. Theoretically, this framework integrates climate change and resilience into smart event enterprises and tourism supply chains. Practically, it offers actionable insights for smart event enterprises, policymakers, and destination managers to embed resilience into their strategies.

KEYWORDS

Supply chain resilience; climate-smart procurement; sustainable event supply-chains

Introduction

The event sector is a dynamic and economically significant component of the global tourism industry, contributing to destination branding, local economic development and social cohesion (Sharma et al.,2025). However, it is also highly vulnerable to external shocks, particularly those associated with climate change. Increasingly frequent extreme weather events, resource scarcity and environmental degradation are disrupting event planning, logistics and delivery, placing pressure on event enterprises to rethink how their supply chains are structured and managed (Sharma et al., 2025; Thakur-Weigold & Miroudot, 2024). In this context, the ability to anticipate, absorb and adapt to climate-related disruptions has become a strategic imperative, positioning supply-chain resilience as a critical capability for sustainable event management. Event supply-chains are organised around temporary coalitions of venues, caterers, logistics providers, accommodation establishments, security companies, technology suppliers and public authorities (Mair et al., 2021). Resilience cannot be achieved through internal procurement capability alone, as Wieland & Durach (2021) contend that supply-chain resilience emerges from adaptive collaboration and coordinated capabilities across network partners rather than from isolated organisational competencies. This is particularly relevant in developing country contexts, where resilience building in sport and event tourism has been linked to stakeholder collaboration, adaptable products, new relationships and coordinated value-chain responses (Daniels & Tichaawa, 2024). This paper addresses this gap by developing a conceptual framework for supply chain resilience in climate-smart event enterprises. Drawing on interdisciplinary insights from supply chain management, sustainability, digital transformation and event studies, this paper synthesises key constructs and relationships that underpin resilient, climate-responsive procurement practices. In this paper, collaborative governance is understood not only as an internal managerial capability but also as a network-level alliance capability that enables event organisers, suppliers, destination managers,

CORRESPONDING AUTHOR'S CONTACT: Frinwei Njihy Achu AchuFN@tut.ac.za
HOW TO CITE: Achu, F.N.A., Sifolo, P.P.S. & Hermann, U.P. (2026). A supply chain resilience conceptual framework for climate-smart event enterprises. African Journal of Hospitality, Tourism and Leisure, 15(2), 606-617 https://doi.org/10.46222/ajhtl.19770720.766

ISSN: 2223-814X (Online) | © 2026 AJHTL

This work is published by African Journal of Hospitality, Tourism and Leisure and is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Open Rubric

public authorities and technology providers to coordinate risk information, share resources and adapt collectively to climate-related disruptions. Procurement practices remain at the core of event supply-chains, influencing sourcing decisions, supplier relationships, cost structures and environmental performance (Makudza et al., 2023). Traditionally, tourism and hospitality supply-chains have prioritised efficiency and operational continuity, often underestimating long-term resilience and sustainability risks (Erol t al 2024). Yet, there is a growing urgency of climate change that demands a shift towards climate-smart procurement, which integrates environmental sustainability, risk awareness and adaptive capacity into sourcing and supplier management processes (Asante, 2025). This shift is critical for event enterprises, where temporary, fragmented, spatially concentrated and time-sensitive supply chains require resilience as a staged process: pre-event preparation, real-time response and post-disruption recovery and learning, aligning with the tourism research on dynamic capabilities across crisis phases (Prayag et al., 2024).

By conceptualising procurement as a strategic lever for resilience, this paper contributes to both theory and practice. Theoretically, it extends the discourse on supply-chain resilience by embedding climate change considerations within procurement processes in an event context. In addition, climate-smart procurement practices such as green sourcing, localisation, supplier diversification and collaborative governance align with broader environmental, social and governance expectations, particularly as climate-related disclosure standards increasingly require organisations to consider risks and relationships across the wider value chain, including sourcing, supply, distribution and regulatory environments (International Sustainability Standards Board [ISSB] 2023). Ultimately, the paper positions climate-smart procurement for event enterprises as central to building resilient event supply-chains capable of withstanding and adapting to the evolving climate change. Although recent studies have advanced event-related resilience and climate vulnerability frameworks, limited attention has been given to how AI-enabled digital procurement can serve as a strategic dynamic capability to strengthen supply-chain resilience in climate-smart event enterprises. Daniels & Tichaawa (2024), for example, propose a resilience-building framework for sport event tourism in developing contexts, while Mair (2024) develops a research agenda for understanding climate vulnerability in event management. However, these studies do not sufficiently explain how AI-supported procurement systems enable event enterprises to sense climate-related supply risks, seize adaptive sourcing opportunities and reconfigure fragmented supplier networks amid climate volatility. This paper, therefore, contributes by integrating AI-enabled procurement, DCT, climate-smart procurement practices,and supply-chain resilience into a single conceptual framework for climate-vulnerable event enterprises. In practice, this gap leaves event stakeholders without structured guidance on how to leverage AI-enabled digital procurement systems while also addressing the human, organisational and contextual barriers that shape adoption, including digital skills shortages, limited trust in algorithmic recommendations, concerns over job displacement, ethical uncertainty, data-quality limitations and the cost of implementation. Without an integrated conceptual framework, climate-smart strategies risk remaining reactive rather than enabling adaptive and proactive responses to climate-related disruptions.

Literature review

The status of climate change in the event tourism sector

Climate change remains one of the most pressing challenges of the 21st century, particularly for the tourism industry. The tourism value chain is vulnerable to the multifaceted and intensifying impacts of climate change (Sharma et al., 2025; Mataruse & Nyikahadzoi, 2023), which are exacerbated by the severity of extreme weather events such as hurricanes, floods, wildfires and droughts. Climate change disrupts transportation, damages infrastructure and affects the availability of raw materials, leading to global supply-chain disruptions and delays with the tourism industry included (Sifolo & Henama, 2017; International Center for Trade Transparency and Monitoring, 2023). As a case in point, the global supply chain attributed 35% of their delays in 2020 due to weather interruptions (Mishra et l., 2025). Event tourism, characterised by temporally compressed operations and complex multi-actor supplier networks, is particularly exposed to climate volatility (Luongo & Sepe 2025; Stylos, Zwiegelaar & Buhalis, 2021). Unlike permanent tourism establishments, events function as temporary, complex and time-sensitive systems that require the coordinated integration of multiple service providers, including infrastructure, catering, logistics, accommodation, security and technological support (Salaun, 2024). Climate-related disturbances may rapidly spread across interconnected event supply chains, causing operational delays, financial losses, reputational damage and even event cancellations (Erol et al., 2024; Prayag et al, 2024). With increasing climate volatility, resilience within supply-chains has become an issue of strategic organisational focus (MYRIAD-EU Project 2025), where resilience cannot be achieved by the event organiser alone; it also depends on network-level alliance capabilities, including shared risk information, supplier coordination, joint contingency planning and alliance learning across the event ecosystem (Seow et al., 2024; Wieland &

Durach, 2021). Aon South Africa (2023, NP) quoted Philip Cronje, who is the business unit manager of Aon South Africa's Sports, Recreation and Entertainment Division, saying that "…major events, from sports competitions to festivals, concerts and conferences are often hosted outdoors and have always been vulnerable to the whims of weather…." This statement emphasises that climate change is intensifying the risks posed by rising temperatures, extreme weather events and shifting seasons.

Extreme weather events have the potential to disrupt venue accessibility, damage temporary structures, delay logistics or reduce visitor participation (McKinley et al., 2025). McKinley et al. (2025) noted a significant increase in the frequency and severity of extreme weather-related disruptions to events and mass gatherings in the past decade, stating that "Analysis of a global database of event cancellations between 2010 and 2024 reveals a 340% increase in weather-related cancellations, with the most rapid acceleration occurring after 2020". This highlights the fragility of event systems in the face of environmental uncertainty. Resilience is increasingly understood as a dynamic, stage-based process rather than a fixed outcome (Orchiston et al., 2016; Prayag et al., 2024). In the context of tourism, resilience is defined as the industry's ability to effectively address disasters and self-inflicted crises, maintaining stability while ensuring the flexibility and diversity necessary for innovation and further development (Lamhour, Safaa & Perkumienė, 2023). This process unfolds across three key phases:

- Pre-event (pre-crisis): Resilience involves preparedness activities such as climate risk analysis, assessing supplier vulnerabilities, exploring alternative sourcing and developing contingency plans.
- Response phase (during disruption): It requires rapid decision-making, real-time coordination with suppliers, logistical adjustments and effective stakeholder communication.
- Recovery phase (post-event): Resilience goes beyond restoring operations to include rebuilding supplier relationships, reflecting on failures and strengthening future preparedness.

Overall, resilience depends on different dynamic capabilities activated at each stage, aligning with recent tourism research that emphasises how organisations adapt across pre-crisis, response and recovery phases (Prayag et al., 2024). An important dimension of event-sector climate sensitivity is the interdependence and fragmentation of event supply chains. Resilience in event supply chains should therefore not be treated solely as a firm-level capability; it also requires system- and network-level capabilities, including alliance management, collaboration, information sharing, learning and coordinated contingency planning across multiple actors (Dubey et al., 2021; Umar & Wilson, 2021; Thakur-Weigold & Miroudot, 2024). Recent tourism supply-chain resilience research also confirms that resilience is shaped by both organisational and supply-chain policies, regulations and inter-organisational coordination (Erol et al., 2024).

Case of weather-induced disruptions of climate-smart event enterprises

In the South African context, although no official statistics explicitly quantify the number of events cancelled because of climate-related disruptions, Nhamo et al. (2025: 1) state that "from the 2011–2020 decade recorded the highest number of extreme weather events, totalling over 1,800". Likewise, other studies have mentioned extreme weather events such as heavy rainfall, floods and storms that have increasingly disrupted tourism and event activities, leading to cancellations and operational interruptions (Giddy, 2019; Makuyana et al., 2023; Dube et al., 2023; Nhamo et al., 2025). Makuyana et al. (2023) describe flooding at OR Tambo International Airport in November 2026, halting ground and air operations and damaging runway lighting and baggage conveyors. Such impacts are directly relevant to event supply-chains because floods can restrict venue access, interrupt transport routes, delay supplier deliveries and reduce visitor mobility. Consequently, climate-driven supply-chain disruptions such as extreme temperatures, heavy rainfall, storms or flooding can significantly affect event readiness, as demonstrated by the 2022 KwaZulu-Natal floods, which led to widespread event cancellations (Dube et al. 2023). In the event sector in South Africa, evidence shows that climate variability has already disrupted major events. A clear example is the Cape Town Cycle Tour, which has experienced multiple disruptions over the past 15 years, including full cancellation due to adverse weather conditions, as well as route shortening or early termination from extreme weather on several occasions (Giddy, 2019). Similarly, the Cape Town Marathon has faced cancellations in certain years due to heavy rainfall (Aon South Africa, 2023). Together, these cases suggest that major climate events may lead to the cancellation of hundreds to thousands of tourism-related bookings and event activities per disaster episode, underscoring a critical gap in event-specific data within South Africa. A similar pattern has been observed in Cameroon, where no official statistics exist on the number of events affected by climate-induced disruptions. Nevertheless, the scale of climate impacts is well documented. According to the National Observatory on Climate Change, between 2019 and 2024, more than 311,000 people were affected by climate-related disasters, resulting in 121 deaths and the destruction of nearly 50,000 hectares of crops, thereby exacerbating socio-economic vulnerabilities (Africa24TV, 2026). These disruptions also extend to event contexts. Evidence from Cameroon further highlights the vulnerability of tourism and event

destinations to climate-related disruptions. Preparations for the Africa Cup of Nations (AFCON) were affected by infrastructure challenges and adverse weather conditions, exposing weaknesses in event planning and destination readiness (Kindzeka, 2020). Similarly, severe flooding in Limbe in July 2023 disrupted transportation, damaged businesses and affected community activities following prolonged heavy rainfall (International Federation of Red Cross and Red Crescent Societies (IFRC), 2023). These events demonstrate how climate-related disruptions can affect tourism infrastructure, event operations, and local economies, underscoring the need for resilient event supply chains and proactive risk management strategies.

This evidence from South Africa and Cameroon suggests that climate-induced disruptions have significant implications for tourism and event ecosystems, although event-specific statistics remain limited. Rogerson & Rogerson (2020) argue that tourism enterprises in South Africa are highly vulnerable to external shocks and disruptions. Similarly, Daniels and Tichaawa (2024) notes that the informal nature of tourism and event-related activities in Cameroon makes accurate measurement and documentation difficult. Furthermore, Aon South Africa (2023) highlights that climate change is increasingly affecting the planning and delivery of major events, thereby contributing to operational and reputational risks. This gap highlights the need for more systematic data collection on event cancellations, supplier disruptions, logistical delays and recovery costs. It also highlights the need for climate-resilient strategies that extend beyond individual event enterprises to include network-level collaboration among organisers, suppliers, venues, transport providers, destination managers, public authorities and technology partners. In fragmented event supply-chains, resilience depends on the combined effect of firm-level dynamic capabilities, alliance management, supplier learning, digital coordination and collaborative governance across the wider event ecosystem (Mandal & Dubey, 2020; Prayag et al., 2024; Seow et al., 2024).

Dynamic capabilities theory (DCT) and technology organisation environment (TOE)

The study is grounded in DCT (Teece et al., 1997; Mikalef & Gupta, 2021). DCT was developed to address how organisations could continuously integrate, build and reconfigure internal and external competencies to respond to environmental shifts (Teece et al., 1997). Recent studies indicate that dynamic capabilities facilitate the balance between exploiting existing competencies and exploring new opportunities in uncertain environments (Farzaneh et al., 2022). To strengthen the analysis of adoption conditions, the TOE framework is considered as a complementary lens to DCT. While DCT like in other sectors, may also be used to explain how event enterprises sense, seize and reconfigure resources in response to climate disruptions, the TOE framework clarifies the contextual factors that shape whether AI-enabled procurement may be adopted and used effectively. The technological context includes digital infrastructure, data quality, system interoperability and cybersecurity. The organisational context includes managerial support, digital skills, financial resources, trust in AI recommendations and change readiness. The environmental context includes supplier capacity, regulatory support, climate exposure, market pressure and the wider digital ecosystem (Yang et al., 2024). DCT considers three interrelated processes. Sensing opportunities and threats, seizing them through strategic action, and transforming organisational resources and routines to remain aligned with evolving market conditions (Teece, 2018; Sebrek et al., 2025; Heikinheimo et al., 2025). Specifically, the Dynamic Capabilities Theory conceptualises organisational adaptation through three core capabilities sensing, seizing and reconfiguring which collectively enable organisations to identify environmental changes, respond through strategic action, and transform resources to sustain competitiveness and resilience.

- Sensing represents the organisational capability to systematically scan, interpret and identify emerging opportunities and threats arising from environmental, technological and market changes, including climate-related risks (Teece, 2018; Warner & Wäger, 2019; Mikalef & Gupta, 2021; Heikinheimo, 2025).
- Seizing refers to the organisational capability to mobilise resources and make strategic investment decisions to capture opportunities and mitigate risks, particularly through innovation, digital technologies and adaptive business processes (Teece, 2018; Warner & Wäger, 2019) and lastly,
- Reconfiguring is adjusting resources, processes, and supplier networks that go beyond internal restructuring in climate-smart event enterprises, as event delivery relies on temporary, fragmented supply chains.

In the context of climate-smart event enterprises, these capabilities are strengthened through collaborative networks that facilitate information exchange, resource mobilisation and collective learning among event suppliers, public authorities, and destination stakeholders (Teece, 2018; Warner & Wäger, 2019). Prayag et al. (2024;714) argue that dynamic capabilities support organisational resilience across pre-disruption, short-term response and long-term recovery stages. This staged view is particularly relevant to event enterprises because events are temporary, time-sensitive and dependent on tightly coordinated supplier networks. In this paper, sensing is linked to pre-event climate-risk scanning and supplier vulnerability assessment; seizing is

linked to real-time procurement decisions, contingency sourcing and resource mobilisation; and reconfiguring is linked to post-disruption supplier restructuring, logistics redesign and organisational learning. Jiang et al. (2022) developed a resource-based typology of dynamic capabilities for tourism organisations facing natural disasters, showing that tourism firms require more than generic strategic flexibility. Their work supports our framework by demonstrating that climate-smart event enterprises require capabilities for risk scanning, resource mobilisation, coordination with external actors, adaptation of service delivery and learning from disruptions. DCT provides a robust lens for understanding how organisations respond to climate-induced disruptions through adaptive procurement and digital innovation (Morgan ei al., 2025; Mfarrej, 2025). Within the DCT perspective, AI-enabled procurement is positioned as a strategic capability that fosters sensing, seizing and reconfiguring capacities under conditions of climate volatility. AI-enabled procurement supports sensing by improving risk anticipation through supplier data, climate information, logistics visibility and predictive analytics. It supports seizing capability by enabling faster and more informed sourcing decisions, supplier evaluation, contingency planning and resource allocation. It supports reconfiguring by enabling event enterprises to restructure supplier networks, switch suppliers, redesign logistics and adapt procurement routines when climate-related disruptions occur (Abbate et al., 2026; Kurrahman et al., 2025). However, the framework does not assume that AI-enabled procurement automatically produces resilience. Its effectiveness depends on organisational readiness, data quality, human–algorithm trust, digital skills, supplier participation, ethical safeguards, infrastructure quality and financial feasibility. This is particularly important in emerging economies, where event enterprises may face resource constraints, infrastructure gaps and limited capacity to absorb the costs of advanced digital tools. Therefore, AI-enabled procurement is conceptualised not as a stand-alone technological solution, but as a strategic capability whose resilience value depends on human, organisational, technological and institutional conditions.

The rapid growth of internet access and the emergence of AI have accelerated digital transformation across procurement systems globally (Organisation for Economic Co-operation and Development, 2024). E-procurement platforms, supplier relationship management systems and integrated digital infrastructures are increasingly embedded within organisational operations, reshaping how firms manage sourcing, supplier coordination and risk mitigation (Tiwari & Sharma, 2025). In this context, AI has enhanced procurement processes through predictive analytics, automated supplier evaluation, risk detection and process optimisation, thereby improving transparency, responsiveness and adaptive capacity within supply-chains (d'Angella & Inversini, 2025; Tiwari & Sharma, 2025; Pagare et al., 2025). Despite these developments, the application of AI-enabled procurement within the event sector remains, in practice, both theoretically and practically underdeveloped. Existing studies indicate that event organisations still use AI primarily for operational and administrative functions rather than for strategic resilience and sustainability management. As d'Angella & Inversini (2025:387) observe, "findings reveal that event professionals currently use AI mainly for operational and back-office tasks rather than for strategic purposes, highlighting a significant disconnect between the transformative potential of AI and its actual implementation in the event sector".
Accordingly, AI-enabled digital procurement should not be viewed as an automatic solution to climate-related supply-chain disruptions, but rather as a conditional strategic capability whose effectiveness depends on organisational readiness, staff competencies, governance structures and human–algorithm trust. Climate-smart event enterprises therefore require procurement systems capable of supporting risk sensing before events, rapid sourcing decisions during disruptions and supplier network reconfiguration during recovery. Against this background, this paper contributes by integrating AI-enabled procurement, DCT, and staged supply-chain resilience into a unified framework for climate-smart event enterprises (Prayag et al., 2024; Hradecky et al., 2022).

Supply chain resilience

As the world grows increasingly interconnected, global disruptions and local disturbances, including natural disasters such as earthquakes, tornadoes and floods, as well as sudden shifts in inflation, market trends, political policies and climate change, influence the global supply chain (Guo et al., 2025). As a result, several researchers have highlighted the need for resilience; hence, the concept of supply-chain resilience has gained increasing attention globally and in sub-Saharan Africa. Organisations seek to manage disruptions arising from environmental, economic and technological uncertainties (Queiroz et al. , 2020; Brusset & Teller, 2017). Hosseini Shekarabi et al. (2025: 261, 262) argue that "the interaction between the external environment and supply-chain networks is vital to the functioning of both businesses and society. This underscores the need for resilient supply-chain networks that can effectively adapt to climate-related, economic, and operational disruptions while maintaining service delivery. According to Guo et al. (2025: 450), supply-chain resilience refers to the ability of a supply-chain "to return to its original state or move to a new, more desirable state after being disturbed". Supply chain resilience, therefore, implies the capacity of

supply networks to mitigate risks, respond effectively to disruptions and recover from disturbances that generate imbalances between supply and demand (Dolgui et al., 2020; Queiroz et al., 2020; Ivanov, 2021). Hart Nibbrig et al. (2025: 2) further argue that organisational resilience relies on relational factors and digital tools that support adaptability and quick response to disruptions. In and the event context, resilience is critical due to the time-sensitive nature of event delivery and the high degree of coordination required among multiple interdependent service providers (Getz & Page, 2019; Ritchie & Jiang, 2019). Scholars frequently conceptualise supply-chain resilience through four core pillars: anticipation, absorption, adaptation and recovery (Hosseini et al., 2025; United Nations Office for Disaster Risk Reduction, 2017; Ivanov & Dolgui, 2020). The four pillars represent complementary resilience capabilities that operate across the pre-disruption, disruption and post-disruption stages of supply-chain management. Their relevance to climate-smart event enterprises is discussed below.

Anticipation refers to the organisational capability to identify potential disruptions, foresee risks and proactively prepare appropriate mitigation responses before disruptions occur (Ivanov & Dolgui, 2020; Hosseini et al., 2025). In event supply-chains, anticipation operates primarily as a pre-event preparedness capability, through which event enterprises scan environmental conditions, assess supplier vulnerabilities, monitor weather and logistics risks and develop contingency procurement strategies before disruptions occur. This staged interpretation is important because events are temporary, time-sensitive and dependent on coordinated supplier readiness. Therefore, anticipation should not be treated as a static resilience attribute, but as an early-stage dynamic capability that enables event organisers to reduce the likelihood of operational failure during event execution (Ivanov & Dolgui, 2020; Chowdhury et al., 2021; Chowdhury et al., 2021).

Absorption relates to the capacity of supply-chains to withstand disruptions without significant loss of functionality (Doetsch & Huchzermeier, 2024; Suthumdilok, et al., 2026). Suthumdilok et al. (2026; 7) noted that "absorptive capability refers to the ability of a supply-chain to withstand disruptions and maintain its structure and function without significant degradation". This capability is characterised by resistance to shocks, operational stability and continuity of key processes during disruption events. It is typically enabled through mechanisms such as redundancy (e.g., safety stock and backup suppliers), flexibility in sourcing and logistics and enhanced visibility through digital systems, which collectively allow firms to sustain performance despite external disturbances (Guo et al., 2024). Within climate-smart event enterprises, shocks may include extreme rainfall, flooding, heatwaves, transport delays, venue inaccessibility, power interruptions, supplier failure or the unavailability of temporary infrastructure (McKinleyet al., 2025; Nhamo el al., 2025). Operational stability refers to the ability of the event supply chain to continue delivering essential functions despite these disruptions, including venue preparation, catering, logistics, safety services, accommodation coordination, ticketing, waste management, and technical support. (Goldblatt, 2014; Getz & Page, 2019). Key processes during disruption, therefore, include activating backup suppliers, adjusting delivery schedules, rerouting logistics, communicating with stakeholders and maintaining minimum service continuity during the event (Hosseini, et al., 2025; Thakur-Weigold & Miroudot, 2024).

Adaptation refers to an organisation's capacity to modify processes, structures, and relationships in response to changing conditions. Suthumdilok et al. (2026:8), noted that "adaptation capability refers to the ability of a supply-chain to adjust its operations, structures and relationships in response to disruptions and environmental changes". Adaptive supply-chains are characterised by flexibility, rapid decision-making and the ability to reconfigure supplier networks when disruptions occur, as "adaptation involves structural adjustments such as reconfiguration of supply networks and flexible decision-making" (Ivanov & Dolgui, 2020:5), with flexibility and speed being critical during disruptions (Queiroz et al., 2020:7). In the context of climate volatility, adaptation may involve sourcing alternative suppliers, adjusting logistics schedules or implementing new procurement practices that priorities resilience and sustainability, as "adaptation strategies include switching suppliers, rerouting logistics, and revising operational plans" (Ivanov, 2021:4), alongside the adoption of "adaptive procurement practices and supplier diversification" to manage environmental uncertainties (Belhadi et al., 2021:6).

Finally, the concept of *recovery* in the supply chain represents the ability of supply-chains to restore operations following a disruption. As Ivanov (2021:4) explains, "recovery refers to the ability of a supply-chain to return to its original or an improved state after a disruption". Effective recovery mechanisms allow organisations to resume normal activities, rebuild supplier relationships, and minimise long-term impacts on performance, as "recovery includes the capability to restore operations and performance levels after disruption while mitigating long-term negative impacts" (Hosseini, Ivanov,& Dolgui, 2019:120), and enables firms to "re-establish supply-chain relationships and resume normal operations" (Chowdhury & Quaddus, 2017:715). For events, recovery is a post-disruption capability that restores operations, rebuilds supplier relationships, compensates for service interruptions, protects the destination's reputation and applies lessons learned. Beyond returning to normal, it also improves future preparedness through learning, supplier evaluation, revised contracts and stronger contingency planning. This processual view aligns with the

tourism resilience literature, which notes that dynamic capabilities differ across the preparedness, response and recovery stages (Prayag et al., 2024; Jiang et al., 2022).

In this paper, supply-chain resilience is therefore conceptualised as a staged and dynamic process rather than a static outcome. During the pre-event stage, anticipation enables event enterprises to identify climate risks, assess supplier vulnerability and prepare contingency procurement options. During the event-response stage, absorption and adaptation enable the supply-chain to maintain core operations, activate backup suppliers and adjust logistics in real time. During the post-disruption recovery stage, recovery capabilities support the restoration of operations, stakeholder confidence, supplier relationships and organisational learning. This staged view is particularly relevant to event enterprises because events are temporary, spatially concentrated and highly dependent on coordinated supplier performance within fixed timeframes (Prayag et al., 2024; Jiang et al., 2022; Seow et al., 2024). AI-enabled procurement in climate-smart event enterprises requires caution, especially in emerging economies where resource constraints, uneven infrastructure, and limited digital skills hinder adoption. Implementation is shaped by organisational readiness, data quality, cybersecurity, affordability and human trust. Schoeman & Seymour (2022) found that even South African managers who see AI's benefits face low adoption due to skills, data maturity, culture, and absorptive capacity. Broader African studies cite ethical concerns, algorithmic bias, limited finance, and regulatory uncertainty (Schoeman & Seymour, 2022; Pasipamire and Muroyiwa, 2024; Ayinaddis, 2025). Therefore, this paper positions AI-enabled procurement as a potential strategic enabler of resilience, not an automatic solution.

Note on methodology

This conceptual paper employs a qualitative, theory-driven, desk-based research methodology to develop a climate-smart supply chain resilience framework specifically tailored for the event sector. The study synthesises an extensive interdisciplinary body of literature, drawing insights from supply chain management, event studies, sustainability transitions, tourism, and climate adaptation scholarship. DCT and the TOE framework serve as the foundational theoretical lenses, guiding the conceptualisation and integration of key constructs. Through systematic literature review, thematic analysis, and iterative conceptual mapping, the research identifies and links critical dimensions, including green sourcing, supplier diversification, AI-enabled procurement, adaptive capacity, and collaborative governance. Particular attention is given to the contextual realities of emerging economies. As this study is purely conceptual, not involving primary data collection or human participants, the highest standards of research ethics were upheld through rigorous citation practices, transparency in the synthesis process, intellectual honesty in acknowledging limitations, and the avoidance of bias in the interpretation and integration of existing literature.

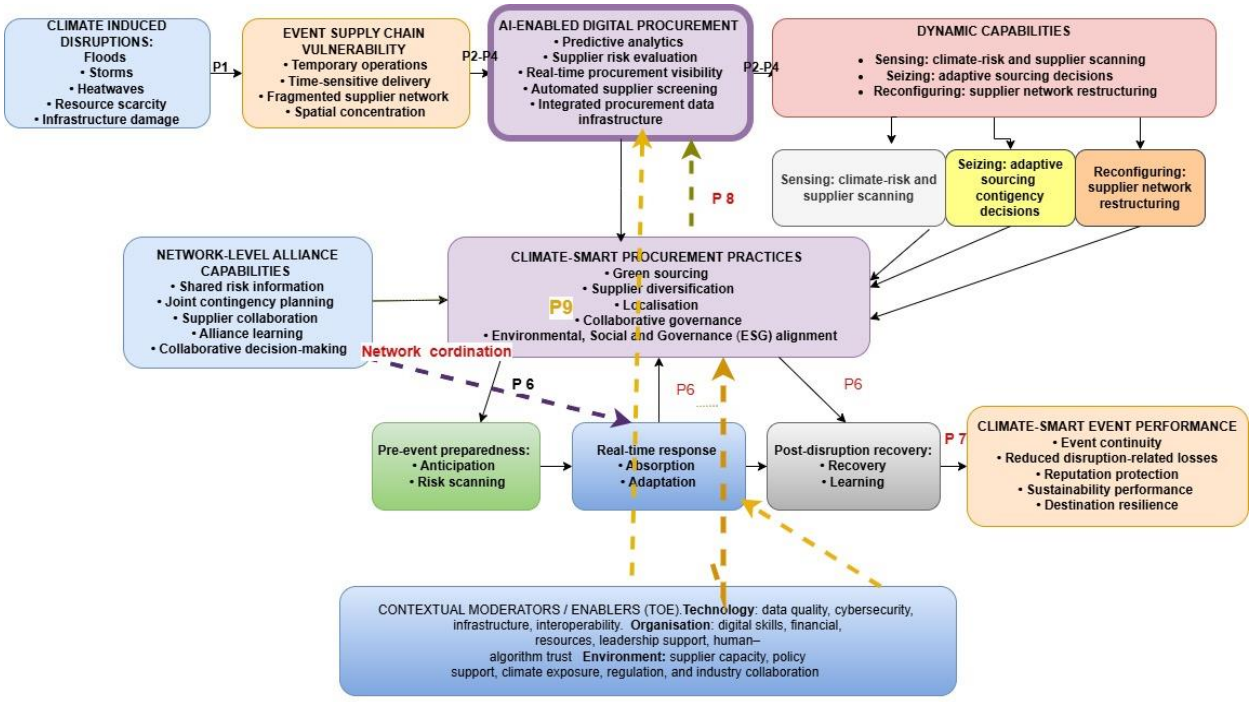
Results and discussion

While the resilience literature provides valuable insights into how organisations respond to disruptions, limited research has explored how digital technologies and AI-enabled procurement systems may support these resilience dimensions within event supply-chains. For climate-smart event enterprises, for instance, “their role in building resilience and managing disruptions remains underexplored” in tourism contexts (Sigala, 2020:316). Figure 1 depicts the proposed supply chain resilience conceptual framework for climate smart event enterprises. Furthermore, the intersection between climate risk, digital procurement capabilities and AI-driven decision-making remains insufficiently conceptualised within tourism event supply-chains. Toorajipour et al. (2021) show that AI has growing potential in supply-chain management, and Mandal & Dubey (2020) demonstrate the relevance of tourism IT adoption and risk-management orientation for supply-chain agility and resilience. Limited research has integrated these insights into a procurement-driven framework for climate-smart event enterprises. Despite growing recognition of climate-related risks and digital transformation within the tourism industry, “there is still a lack of comprehensive frameworks integrating digital transformation and resilience capabilities” (Belhadi et al., 2021:3), indicating that an integrated framework explaining how these elements interact to enhance event supply-chain resilience remains underdeveloped.

Conceptual framework: Climate-smart event supply chain resilience framework

The proposed framework elucidates how event enterprises can enhance their adaptive capacity to climate-induced disruptions by synergistically integrating AI-enabled digital procurement, dynamic capabilities, climate-smart procurement practices, and staged supply-chain resilience. The framework commences by identifying salient climate-induced disruptions, such as floods, storms, heatwaves, extreme rainfall, infrastructure damage, and resource scarcity. These disruptions critically augment the vulnerability of event

supply chains, given the transient, spatially concentrated, time-sensitive, and multi-supplier dependent nature of events, encompassing numerous stakeholders. Consequently, a disruption affecting a single stakeholder can precipitate cascading effects throughout the entire event ecosystem.



Legends : Solid arrows =propose direct relationship, dash arrows = moderating mediating or cross cutting influnces.

Figure 1: Climate-smart event supply chain resilience framework
Source: Authors

Addressing this inherent vulnerability, the framework positions AI-driven digital procurement as a strategic asset, transcending its conventional role as merely an administrative or cost-saving function. AI-enabled procurement fortifies predictive analytics, supplier evaluation, risk detection, real-time monitoring, procurement visibility and data-driven decision-making. These functionalities empower climate-smart event enterprises to identify supplier vulnerabilities, track climate-related risks, evaluate alternative suppliers and recalibrate sourcing decisions pre-, peri-, and post-disruption. Nevertheless, the framework refrains from positing that AI-enabled procurement inherently confers resilience. Its efficacy is contingent upon eight critical elements: organisational readiness, data quality, digital skills, cybersecurity, reliable infrastructure, affordability, supplier participation and the cultivation of trust between human actors and algorithmic systems. This emphasis is substantiated by extant research on AI adoption, which demonstrates that organisational readiness, trust, financial resources, data integrity and requisite skills significantly influence the adoption and effective deployment of AI systems (Hradecky et al., 2022; Bach et al., 2023). Hradecky et al. (2022:1-2) notably employed the TOE lens to assess AI readiness within the exhibition sector, while Schoeman and Seymour (2022:264) illustrate that South African medium-sized enterprises, despite acknowledging AI benefits, may fail to adopt AI due to internal capability and organisational impediments. Figure 1 contextualises the climate-smart event supply chain resilience framework within the developing world context. From this foundation, the following propositions are deduced:

P1: Climate-induced disruptions amplify the vulnerability of event supply chains due to the inherent characteristics of event enterprises, which operate through temporary, time-sensitive, spatially concentrated and interdependent supplier networks.

P2: AI-enabled digital procurement positively influences the sensing capability within climate-smart event enterprises by enhancing the identification of climate risks, supplier vulnerabilities and logistics disruptions.

P3: AI-enabled digital procurement positively influences seizing capability by facilitating faster and more informed strategic sourcing, contingency planning, and procurement decision-making.

P4: AI-enabled digital procurement positively influences reconfiguring capability by enabling efficient supplier switching, logistics redesign and adaptive restructuring of event supply networks.

P5: Sensing, seizing, and reconfiguring capabilities positively influence the adoption of climate-smart procurement practices within event enterprises.

P6: Climate-smart procurement practices, encompassing green sourcing, supplier diversification, localization, AI-enabled digital procurement systems, ESG alignment and collaborative governance, positively influence staged supply-chain resilience.
P7: Network-level alliance capabilities, including information sharing, supplier learning, joint contingency planning, and collaborative governance, strengthen the relationship between climate-smart procurement practices and supply-chain resilience.
P8: Supply chain resilience, manifested through anticipation, absorption, adaptation, and recovery, positively influences climate-smart event enterprise performance across pre-event preparedness, real-time response and post-disruption recovery stages.
P9: Dynamic capabilities mediate the relationship between AI-enabled digital procurement and staged supply-chain resilience outcomes in climate-smart event enterprises.
P10: Technological, organisational and environmental factors, including digital readiness, data quality, cybersecurity, interoperability, financial resources, digital skills, human–algorithm trust, supplier capacity, policy support, infrastructure quality and climate exposure, moderate the relationship between AI-enabled procurement, climate-smart procurement practices, and staged supply-chain resilience outcomes.

Conclusion

Climate change is increasingly reshaping the operational environment of event enterprises, exposing event supply chains to disruptions such as extreme weather, infrastructure failures, transportation interruptions, and supplier instability. This paper has argued that building resilient, climate-smart event supply chains requires more than traditional, efficiency-focused procurement approaches. Drawing on DCT, a conceptual framework was developed that positions climate-smart procurement and AI-enabled digital systems as strategic mechanisms for strengthening supply chain resilience in event enterprises. The framework highlights the importance of supplier diversification, localisation, collaborative governance, adaptive capacity, and digital procurement systems in enabling event organisations to anticipate, respond to, and recover from climate-induced disruptions. Therefore, event enterprises must adopt adaptive and sustainability-oriented strategies that integrate climate-smart procurement, digital transformation, stakeholder collaboration and dynamic capability development. This will assist with the strategies in emerging economies that are influenced by contextual constraints such as limited digital skills, weak infrastructure, financial limitations, cybersecurity concerns and low human-algorithm trust. The paper contributes to the growing body of literature on event management within the broader tourism industry resilience by integrating climate-smart event management, supply chain resilience and digital procurement within a single conceptual framework. This paper advances literature in four ways. First, it extends existing event resilience and climate vulnerability frameworks by specifically integrating AI-enabled digital procurement into climate-smart event supply-chains. Second, it extends DCT within the event sector by positioning AI-enabled procurement as a strategic capability that supports sensing, seizing and reconfiguring across the pre-event preparedness, disruption response, and post-disruption recovery stages. Third, it incorporates network-level capabilities by recognising that resilience in fragmented event supply-chains depends on supplier collaboration, alliance learning, stakeholder coordination and shared risk governance. Fourth, it advances a context-sensitive framework for emerging economies by acknowledging that AI-enabled procurement is shaped by digital readiness, financial constraints, human-algorithm trust, policy support, supplier capacity and infrastructure conditions. Future research should empirically test the proposed framework across diverse event contexts and emerging-economy settings to strengthen its practical applicability and theoretical development.

References

Abbate, S., Centobelli, P., Cerchione, R., & Oropallo, E. (2026). Organizational sustainable artificial intelligence capabilities: Scale development, validation, and implications. *Journal of Innovation & Knowledge, 11*(1), 100863. https://doi.org/10.1016/j.jik.2025.100863

Africa24TV. (2026). *Cameroon – Climate disaster management: An ONACC platform to anticipate crises.*https://africa24tv.com/cameroon-climate-disaster-management-an-onacc-platform-to-anticipate-crises/

Aon South Africa. (2023). *Climate change in the world of major events.* https://aon.co.za/insights/climate-change-in-the-world-of-major-events/

Asante, D. (2025). Sustainable procurement: A review and future research directions. *International Journal of Business Ecosystem & Strategy, 7*(4), 573–588. https://doi.org/10.36096/ijbes.v7i4.778

Ayinaddis, S. G. (2025). Artificial intelligence adoption dynamics and knowledge in SMEs and large firms: A systematic review and bibliometric analysis. *Journal of Innovation & Knowledge*, *10*(3), 100682. https://doi.org/10.1016/j.jik.2025.100682

Bach, T. A., Khan, A., Hallock, H., Beltrão, G., & Sousa, S. (2023). A systematic literature review of user trust in AI-enabled systems: An HCI perspective. *International Journal of Human–Computer Interaction, 39*(6), 1251–1266. https://doi.org/10.1080/10447318.2022.2138826

Belhadi, A., Mani, V., Kamble, S. S., Khan, S. A. R., & Verma, S. (2021). Artificial intelligence-driven innovation for enhancing supply chain resilience and performance under the effect of supply chain dynamism: An empirical investigation. *Annals of Operations Research.* Advance online publication. https://doi.org/10.1007/s10479-021-03956-x

Brusset, X., & Teller, C. (2017). Supply chain capabilities, risks, and resilience. *International Journal of Production Economics, 184*, 59–68. https://doi.org/10.1016/j.ijpe.2016.09.008

Chowdhury, M. M. H., & Quaddus, M. (2017). Supply chain resilience: Conceptualization and scale development using dynamic capability theory. *International Journal of Production Economics, 188*, 185–204. https://doi.org/10.1016/j.ijpe.2017.03.020

Chowdhury, P., Paul, S. K., Kaisar, S., & Moktadir, M. A. (2021). COVID-19 pandemic-related supply chain studies: A systematic review. *Transportation Research Part E: Logistics and Transportation Review, 148*, 102271. https://doi.org/10.1016/j.tre.2021.102271

d'Angella, F., & Inversini, A. (2025). Artificial intelligence in events. In L. Nixon, A. Tuomi, & P. O'Connor (Eds.), *Information and communication technologies in tourism 2025* (pp. 387–398). Springer. https://doi.org/10.1007/978-3-031-58839-6_39

Daniels, T., & Tichaawa, T. M. (2024). The path to resilience in sport event tourism: South African stakeholder responses to a crisis. *Development Southern Africa, 41*(4), 795–809. https://doi.org/10.1080/0376835X.2024.2350383

Doetsch, S., & Huchzermeier, A. (2024). The intersection of supply chain resilience and sustainability from a theoretical and practical perspective: An integrated framework. *Journal of Cleaner Production, 484*, 144306. https://doi.org/10.1016/j.jclepro.2024.144306

Dolgui, A., Ivanov, D., & Sokolov, B. (2020). Reconfigurable supply chain: The X-network. *International Journal of Production Research, 58*(13), 4138–4163. https://doi.org/10.1080/00207543.2020.1774679

Dube, K., Nhamo, G., Chikodzi, D., & Chapungu, L. (2023). Mapping and evaluating the impact of flood hazards on tourism in South African national parks. *Journal of Outdoor Recreation and Tourism, 43*, 100661. https://doi.org/10.1016/j.jort.2023.100661

Dubey, R., Bryde, D. J., Blome, C., Roubaud, D., & Giannakis, M. (2021). Facilitating artificial intelligence powered supply chain analytics through alliance management during the pandemic crises in the B2B context. *Industrial Marketing Management, 96*, 135–146. https://doi.org/10.1016/j.indmarman.2021.05.003

Erol, İ., Öztel, A., Dogru, T., Peker, İ., Neuhofer, I. O., & Benli, T. (2024). Supply chain resilience in the tourism and hospitality industry: A comprehensive examination of driving and restraining forces. *International Journal of Hospitality Management, 122*, 103851. https://doi.org/10.1016/j.ijhm.2024.103851

Farzaneh, M., Wilden, R., Afshari, L., & Mehralian, G. (2022). Dynamic capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *Journal of Business Research, 148*, 47–59. https://doi.org/10.1016/j.jbusres.2022.04.030

Getz, D., & Page, S. J. (2019). *Event studies: Theory, research and policy for planned events* (4th ed.). Routledge. https://doi.org/10.4324/9780429023002

Giddy, J. K. (2019). The impact of extreme weather on mass-participation sporting events: The case of the Cape Town Cycle Tour. *International Journal of Event and Festival Management, 10*(2), 95–109. https://doi.org/10.1108/IJEFM-04-2018-0027

Goldblatt, J. (2014). *Special events: Creating and sustaining a new world for celebration* (7th ed.). Wiley. https://doi.org/10.1002/9781118838912

Guo, Y., Liu, F., Song, J.-S., & Wang, S. (2025). Supply chain resilience: A review from the inventory management perspective. *Fundamental Research, 5*(2), 450–463. https://doi.org/10.1016/j.fmre.2024.08.002

Hart Nibbrig, M., Sharif Azadeh, S., & Maknoon, M. Y. (2025). Adaptive resilience strategies for supply chain networks against disruptions. *Transportation Research Part E: Logistics and Transportation Review, 200*, 104172. https://doi.org/10.1016/j.tre.2025.104172

Hautamäki, P., & Heikinheimo, M. (2025). Fully leveraging AI in B2B sales: Exploring sales managers' capabilities and organizational knowledge processes. *Journal of Business Research, 194*, 115396. https://doi.org/10.1016/j.jbusres.2025.115396

Heikinheimo, M., Hautamäki, P., Julkunen, S., & Koponen, J. (2025). Dynamic capabilities and multi-sided platforms: Fostering organizational agility, flexibility, and resilience in B2B service ecosystems. *Industrial Marketing Management, 125*, 179–194. https://doi.org/10.1016/j.indmarman.2025.01.006

Hosseini, S., Ivanov, D., & Dolgui, A. (2019). Review of quantitative methods for supply chain resilience analysis. *Transportation Research Part E: Logistics and Transportation Review, 125*, 285–307. https://doi.org/10.1016/j.tre.2019.03.001

Hosseini Shekarabi, S., Kiani Mavi, R., & Romero Macau, F. (2025). Supply chain resilience: A critical review of risk mitigation, robust optimisation, and technological solutions and future research directions. *Global Journal of Flexible Systems Management, 26*, 681–735. https://doi.org/10.1007/s40171-025-00458-8

Hradecky, D., Kennell, J., Cai, W., & Davidson, R. (2022). Organizational readiness to adopt artificial intelligence in the exhibition sector in Western Europe. *International Journal of Information Management, 65*, 102497. https://doi.org/10.1016/j.ijinfomgt.2022.102497

International Center for Trade Transparency and Monitoring. (2023). *The impact of climate change on global supply chains.* https://icttm.org/the-impact-of-climate-change-on-global-supply-chains/

International Sustainability Standards Board. (2023). *IFRS S2 climate-related disclosures.* IFRS Foundation. https://www.ifrs.org/supporting-implementation/supporting-materials-for-ifrs-sustainability-disclosure-standards/ifrs-s2/

Ivanov, D., & Dolgui, A. (2020). Viability of intertwined supply networks: Extending the supply chain resilience angles towards survivability. *International Journal of Production Research, 58*(10), 2904–2915. https://doi.org/10.1080/00207543.2020.1750727

Ivanov, D. A. (2021). Digital supply chain management and technology to enhance resilience by building and using end-to-end visibility during the COVID-19 pandemic. *IEEE Transactions on Engineering Management, 68*(6), 1722–1732. https://doi.org/10.1109/TEM.2021.3095193

Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2022). A resource-based typology of dynamic capability: Managing tourism in a turbulent environment. *Journal of Travel Research, 61*(5), 1006–1023. https://doi.org/10.1177/00472875211014960

Kindzeka, M. E. (2020, July 1). *Cameroon plans to improve infrastructure as AFCON is postponed to 2022.* Voice of America. https://www.voanews.com/a/africa_cameroon-plans-improve-infrastructure-afcon-postponed-2022/6192049.html

Kurrahman, T., Tsai, F. M., Lim, M. K., Sethanan, K., & Tseng, M. L. (2025). Generative AI capabilities for green supply chain management improvement: Extended dynamic capabilities view. *International Journal of Logistics Research and Applications*, 1–28. Advance online publication. https://doi.org/10.1080/13675567.2025.2479006

Luongo, S., & Sepe, F. (2025). Destination management and the actors in the MICE industry. In F. Sepe & S. Luongo (Eds.), *Strategic destination governance* (pp. 73–103). Springer. https://doi.org/10.1007/978-3-031-60241-6_4

Mair, J. (2024). Climate challenges for event management: A research agenda. *Journal of Policy Research in Tourism, Leisure and Events, 17*(4), 1–10. https://doi.org/10.1080/19407963.2024.2393362

Mair, J., Ritchie, B. W., & Walters, G. (2021). Towards a research agenda for post-disaster and post-crisis recovery strategies for tourist destinations: A narrative review. *Current Issues in Tourism, 24*(1), 1–26. https://doi.org/10.1080/13683500.2019.1570271

Makudza, F., Jaravaza, D. C., Govha, T., Mukucha, P., & Saruchera, F. (2023). Enhancing supply chain agility through e-procurement in a volatile frontier market. *Journal of Transport and Supply Chain Management, 17*, a847, 1–12. https://doi.org/10.4102/jtscm.v17i0.847

Makuyana, T., Nhamo, G., & Dube, K. (2023). The Great O.R. Tambo International Airport flood: Dealing with the harsh realities of climate-induced extreme weather events. *African Journal of Hospitality, Tourism and Leisure, 12*(5SE), 1765–1772. https://doi.org/10.46222/ajhtl.19770720.464

Mandal, S., & Dubey, R. K. (2020). Role of tourism IT adoption and risk management orientation on tourism agility and resilience: Impact on sustainable tourism supply chain performance. *International Journal of Tourism Research, 22*(6), 800–813. https://doi.org/10.1002/jtr.2381

Mataruse, P., & Nyikahadzoi, K. (2023). Climate change impacts on tourism in communities adjacent to national parks: A case study of communities adjacent to Mana Pools National Park, Zimbabwe. *Cogent Social Sciences, 9*(1), 2211394. https://doi.org/10.1080/23311886.2023.2211394

McKinley, S., Geoerg, P., Haghani, M., & Feliciani, C. (2025). Mapping the impact of extreme weather on global events and mass gatherings: Trends and adaptive strategies. *International Journal of Disaster Risk Reduction, 127*, 105628. https://doi.org/10.1016/j.ijdrr.2025.105628

Mfarrej, M. F. B. (2025). Exploring the nexus between climate change, water scarcity, and security dynamics in the Middle East and North Africa. *Nexus Research, 2*(1), 100168. https://doi.org/10.1016/j.nexres.2025.100168

Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management, 58*, 103434. https://doi.org/10.1016/j.im.2021.103434

Mishra, V., Sharma, P., & Khound, K. (2025). Global supply chain shocks and trade resilience: A review post-COVID and Ukraine crisis. *Journal of Marketing & Social Research, 2*(5), 336–348. https://doi.org/10.61336/jmsr/25-05-38

Morgan, M. O., Uwah, I. E., Okon, E., Okongo, J. N., & Ogar, G. W. (2025). Moderating role of dynamic capabilities on environmental forces influencing the sustainability of eco-tourism destinations in developing countries. *Multidisciplinary Reviews, 9*(5), 2026236. https://doi.org/10.31893/multirev.2026236

MYRIAD-EU Project. (2025). *Sectoral brief: Enhancing tourism destination resilience: Insights of the MYRIAD-EU multi-risk approach.* https://doi.org/10.5281/zenodo.17787282

Nhamo, G., Chapungu, L., & Mutanda, G. W. (2025). Trends and impacts of climate-induced extreme weather events in South Africa (1920–2023). *Environmental Development, 55*, 101183. https://doi.org/10.1016/j.envdev.2025.101183

Orchiston, C., Prayag, G., & Brown, C. (2016). Organisational resilience in the tourism sector. *Annals of Tourism Research, 56*, 145–148. https://doi.org/10.1016/j.annals.2015.11.002

Organisation for Economic Co-operation and Development. (2024). *Digital transformation of public procurement.* OECD Publishing. https://www.oecd.org/en/publications/digital-transformation-of-public-procurement_79651651-en.html

Pagare, S. S., Kanade, T. M., Patil, S., Shete, S., & Jadhav, V. (2025). Artificial intelligence and digital transformation in supply chains: A review of technologies driving agility and resilience. In *Proceedings of the International Conference on Operations and Supply Chain Management 2025 (ICOSCM 2025)* (pp. 201–223). Atlantis Press. https://doi.org/10.2991/978-94-6463-914-8_14

Pasipamire, N., & Muroyiwa, A. (2024). Navigating algorithm bias in AI: Ensuring fairness and trust in Africa. *Frontiers in Research Metrics and Analytics, 9*, 1486600. https://doi.org/10.3389/frma.2024.1486600

Prayag, G., Jiang, Y., Chowdhury, M., Hossain, M. I., & Akter, N. (2024). Building dynamic capabilities and organizational resilience in tourism firms during COVID-19: A staged approach. *Journal of Travel Research, 63*(3), 713–740. https://doi.org/10.1177/00472875231164976

Queiroz, M. M., Ivanov, D., Dolgui, A., & Fosso Wamba, S. (2020). Impacts of epidemic outbreaks on supply chains: Mapping a research agenda amid the COVID-19 pandemic. *Annals of Operations Research, 319*, 1159–1196. Richards, G. (2021). *Rethinking cultural tourism.* Edward Elgar Publishing. https://doi.org/10.4337/9781789905441

Ritchie, B. W., & Jiang, Y. (2019). A review of research on tourism risk, crisis and disaster management. *Annals of Tourism Research, 79*, 102812. https://doi.org/10.1016/j.annals.2019.102812

Rogerson, C. M., & Rogerson, J. M. (2020). COVID-19 and tourism spaces of vulnerability in South Africa. *African Journal of Hospitality, Tourism and Leisure, 9*(4), 382–401. https://doi.org/10.46222/ajhtl.19770720-26

Salaun, V. (2024). Logistical transition in temporary organisations: The case of the event industry. *Supply Chain Forum: An International Journal, 25*(2), 165–179. https://doi.org/10.1080/16258312.2023.2252726

Sebrek, S. S., Romme, A. G. L., & Kosztyán, Z. T. (2025). How to create dynamic capabilities: A design science study. *Technovation, 143*, 103204. https://doi.org/10.1016/j.technovation.2025.103204

Schoeman, F., & Seymour, L. F. (2022). Understanding the low adoption of AI in South African medium-sized organisations. *EPiC Series in Computing, 85*, 257–269. https://doi.org/10.29007/c4rr

Seow, A. N., Choong, Y. O., Low, M. P., Ismail, N. H., & Choong, C. K. (2024). Building tourism SMEs' business resilience through adaptive capability, supply chain collaboration and strategic human resource. *Journal of Contingencies and Crisis Management, 32*(2), e12564. https://doi.org/10.1111/1468-5973.12564

Sharma, G. D., Taheri, B., Chopra, R., & Parihar, J. S. (2025). Relationship between climate change and tourism: An integrative review. *The Service Industries Journal, 45*(3–4), 426–453. https://doi.org/10.1080/02642069.2023.2254714

Sifolo, P. P. S., & Henama, U. S. (2017). Implications of climate change for tourism in Africa. *GeoJournal of Tourism and Geosites, 20*(2), 191–198.

Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research, 117*, 312–321. https://doi.org/10.1016/j.jbusres.2020.06.015

Stylos, N., Zwiegelaar, J., & Buhalis, D. (2021). Big data empowered agility for dynamic, volatile, and time-sensitive service industries: The case of the tourism sector. *International Journal of Contemporary Hospitality Management, 33*(11), 4015–4036. https://doi.org/10.1108/IJCHM-12-2020-1403

Suthumdilok, P., Nimsai, S., Punnakitikashem, P., & Kantabutra, S. (2026). Towards a theory of supply chain resilience: An integrative review. *Sustainability, 18*(5), 2497. https://doi.org/10.3390/su18052497

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51*(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Thakur-Weigold, B., & Miroudot, S. (2024). *Promoting resilience and preparedness in supply chains* (OECD Trade Policy Papers No. 286). OECD Publishing. https://doi.org/10.1787/be692d01-en

Tiwari, M., & Sharma, P. (2025). The role of artificial intelligence across the source-to-pay framework: Theoretical and practical aspects. *Digital Business, 5*(2), 100160. https://doi.org/10.1016/j.digbus.2025.100160

Umar, M., & Wilson, M. (2021). Supply chain resilience: Unleashing the power of collaboration in disaster management. *Sustainability, 13*(19), 10573. https://doi.org/10.3390/su131910573

United Nations Office for Disaster Risk Reduction. (2017). *The Sendai Framework terminology on disaster risk reduction: Resilience.* https://www.undrr.org/terminology/resilience

Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, *52*(3), 326–349. https://doi.org/10.1016/j.lrp.2018.12.001

Wieland, A., & Durach, C. F. (2021). Two perspectives on supply chain resilience. *Journal of Business Logistics*, *42*(3), 315–322. https://doi.org/10.1111/jbl.12271

Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A multiple case study. *Technological Forecasting and Social Change*, *201*, 123251. https://doi.org/10.1016/j.techfore.2024.123251