

REVIEW ARTICLE OPEN ACCESS

Shifting Tides: A Decade of Business Climate Adaptation and Resilience Research (2013–2023)

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Correspondence: Domenico Villano (domenico.villano@unifi.it)**Received:** 20 June 2025 | **Revised:** 16 March 2026 | **Accepted:** 31 March 2026**Keywords:** business resilience | climate adaptation | climate change | climate resilience | systematic literature review | topic modeling

ABSTRACT

Climate change is causing significant disruptions to the socio-ecological systems in which organizations operate, presenting unprecedented challenges for businesses across sectors in adapting to shifting environmental conditions and building resilience to extreme weather events. This Systematic Literature Review synthesizes the evolution of theoretical and empirical research on business climate adaptation and resilience from 2013 to 2023, accounting for both sector-specific dynamics and cross-sectoral patterns that shape effective organizational responses. The study employs an integrated methodological framework that combines bibliometric analysis, topic modeling, and expert-driven qualitative validation. The findings reveal a central structural tension within the literature between firm-centric perspectives and system-oriented approaches. This divide reflects contrasting conceptualizations of firm embeddedness within social–ecological systems, alongside enduring challenges in bridging management scholarship with environmental sciences. This review provides a comprehensive synthesis of the field, identifies emerging themes and persistent research gaps, whereas informing strategies for improving business responses to accelerating climate challenges.

1 | Introduction

The escalating impacts of climate change (CC) are causing significant disruptions to the socio-ecological systems in which organizations operate (IPCC 2022). Rising global temperatures, shifting precipitation patterns and the increasing frequency and intensity of extreme weather events are creating unprecedented challenges for businesses across sectors (Winn et al. 2011). Recent events illustrate the magnitude of these challenges, including the 2023 wildfires on the Hawaiian island of Maui, which caused extensive damage to the tourism industry with substantial impacts on the island's economy (Yu 2024) and the floods that struck Northern Italy in the same year, which led to severe business disruptions and cascading losses across supply chains (Di Noia et al. 2025). Although certain industries, such as agriculture and tourism, are particularly vulnerable due to

their climate-sensitivity (Kaján and Saarinen 2013; Masud et al. 2017), the risks associated with CC directly or indirectly affect the entire productive system along value chains (Howard-Grenville et al. 2014). These risks differ fundamentally from typical business challenges such as regulatory changes, market fluctuations, or technological shifts, due to their scale, unpredictability, and long-term nature (Linnenluecke and Griffiths 2010; Howard-Grenville and Lahnenman 2021). To navigate these turbulent times and seize opportunities arising from CC, businesses must not only commit to reducing the environmental impact of their activities through climate mitigation efforts, but also develop robust strategies to manage climate-related risks and uncertainties (Klein et al. 2005). In this context, climate adaptation and resilience (CA&R) are no longer peripheral concerns but central to organizational viability and competitive advantage (Busch 2011). More broadly, as essential components of

Abbreviations: CA&R, climate adaptation and resilience; CC, climate change.

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