

A systematic literature review on tourism-related sustainability concepts with emphasis on sustainable transformation

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Abstract

In the academic discourse on tourism, the concepts of sustainable transformation and sustainable transition have recently emerged alongside the more established notions of sustainable development, sustainability, and sustainable tourism. However, these terms are often used inconsistently—interchangeably or as distinct constructs—creating conceptual ambiguity and confusion within the literature. The literature has tended to explore these concepts in isolation rather than in an integrative manner. To address this ambiguity, this study builds on existing research and aims to contribute to conceptual clarification. Employing the CAD (collection, analysis, and discussion of data) framework, a systematic literature review was conducted to analyse the contribution of the concept of sustainable transformation to the sustainability discourse in tourism. A total of 437 articles related to sustainability and tourism from 2015 to 2025 were compiled from the Web of Science and Scopus databases. The results show an increasing number of tourism-related sustainability papers that employ different sustainability concepts yet share similar underlying principles. Among these concepts, sustainable transformation represents an emerging trend. It denotes radical change and is often used in spatial contexts, highlighting transformation as simultaneously systemic and disruptive.

Keywords: Sustainability, tourism, transition, transformation, literature review

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1. Introduction

Sustainability and other sustainability concepts have been extensively discussed in tourism literature (Buckley, 2012; Molina-Collado *et al.*, 2022; Ruggerio, 2021; Sharpley, 2020). However, these concepts have evolved over time and new concepts such as sustainable transformation in tourism have emerged. Scholars highlight both the dynamic nature of tourism-related sustainability concepts (Molina-Collado *et al.*, 2022), and the emergence of new ones (Molina-Collado *et al.*, 2022; Weaver, 2022), with the roots of the sustainability discourse dating back to 1987 (Hall, 2022; WCED, 1987). This evolution reflects the need to adapt sustainability frameworks to the changing social, economic, and environmental contexts in which tourism operates (Hall, 2022; Molina-Collado *et al.*, 2022). While some researchers have examined specific dimensions of sustainability and the way related concepts have evolved (Bramwell, 2016; Ruggerio, 2021; Weaver, 2022), broader and more holistic perspectives are still needed (Bramwell, 2016; Hall *et al.*, 2015).

This article follows Molina-Collado *et al.*'s (2022) contributions, who describe the emergence of new and alternative tourism-related sustainability concepts as the progression, evolution, or dynamics of sustainability. Long-established concepts in this field include sustainable development in tourism (Butler, 1991; Hall *et al.*, 2015; Sharpley, 2020; UNWTO, 2013), sustainability (Bramwell, 2016; Font & McCabe, 2017; Saarinen, 2006), and sustainable tourism (Buckley, 2012; Butler, 1999; Font *et al.*, 2019; Hall, 2022). More recently, related concepts such as sustainable transformation in tourism (Bertella, 2023; Fennell & Bowyer, 2019; Kumar *et al.*, 2024; Lupini *et al.*, 2024) and sustainable transition in tourism (Falcone, 2019; Nieuwland, 2024; Rastegar *et al.*, 2023; Viana-Lora *et al.*, 2023) have emerged. Despite more than 30 years of research, the ambiguous nature of tourism-related sustainability concepts has often been highlighted, as discussed by Bramwell (2016), and previously noted by Butler (1999) and Sharpley (2000).

This paper examines five key concepts in the field of tourism: sustainable development, sustainability, sustainable tourism, sustainable transition, and sustainable transformation, with a particular focus on the latter. It aims to clarify their current meaning and address the following research gap, thereby preventing misunderstanding and conceptual confusion: despite the importance of tourism-related sustainability concepts being widely acknowledged by numerous scholars, their definitions remain unclear (Choi, 2016; Kumar, 2024; Moyle *et al.*, 2020; Ruggerio, 2021). As noted by Scott (2021), this issue is particularly evident in the context of sustainable transformation in tourism. Such conceptual ambiguity surrounding tourism-related sustainability concepts, as noted by Choi (2016), Moyle *et al.* (2020), and Ruggerio (2021), necessitates new theories and methods to advance this research direction, as suggested by Moyle *et al.* (2020). As these authors point out, this reflects the lack of a holistic definition encompassing the broader aspects of sustainability in tourism. Following Holden *et al.* (2014), the lack of conceptual clarity may prevent the development of useful tools that politicians require to address challenges at different geographical levels.

This study focuses on "transformation" rather than on "transition" on the basis of the etymological origins of the terms. Both derive from Latin, with transformation including the "form", referring to a shape or change. Accordingly, Folke *et al.* (2010) describe "transformation" as a change in shape. Building on this distinction, Hall (2025) defines "transition" as referring to change within specific societal sub-systems, while "transformation" addresses broader societal change processes at global, national, regional, and local scales. In this sense, transition may be seen as a pathway towards transformation. The concept of sustainable transformation in tourism has often been applied in business strategy, especially by consulting firms, such as EY (2022). In line with broader sustainability trends in tourism (Becken & Coghlan, 2024; Choi, 2016; Wilkinson & Coles, 2024) and more generally in sustainability and development debates (Scoones, 2007), sustainable transformation in tourism is frequently used as a buzzword or mainstream term, just as transition and transformation at large, as

discussed by Hölscher *et al.* (2018). However, some researchers have engaged with the concept in more depth, particularly with specific aspects or types of tourism such as trip experiences (Tasci & Godovykh, 2021), volunteer tourism (Magrizos *et al.*, 2021) and tourism food consumption (Fennell & Bowyer, 2019). Despite these contributions, further systematic reviews and bibliometric analyses such as the work of Fennell and Bowyer (2019)—a review of sustainable transformation, though with a focus on tourism food consumption—are necessary to advance the research field at the interplay of sustainability and transformation (Salomaa & Juhola, 2020). In this line of research, Salomaa and Juhola (2020) claim that there remains a need for a clear and comprehensive definition of sustainable transformation processes, particularly in tourism (Kumar, 2024). Moyle *et al.* (2020) argue that further theoretical and definitional progress may enhance the contributions of academia to industry. In response, this study aims to contribute to a clearer and more comprehensive understanding of the concept of sustainable transformation in tourism.

Scientific analyses of enablers provide valuable insights into their contextual relationships by revealing both their driving and dependency potential. Such analyses help to classify enablers, clarify their roles, and identify constraints or areas for improvement, as highlighted by Mangla *et al.* (2018). These authors understand enablers as key factors that influence the success of sustainability initiatives within organisations. Following Ghobakhloo (2023), enablers are critical for achieving sustainable development, which is the basis for sustainable transformation. In the literature, terms such as drivers, facilitators, and catalysts are often used interchangeably with enablers; this article adopts the same approach. For instance, Mangla *et al.* (2018) included the terms "drivers", "key factors", and "enablers" in their systematic literature review. Lesar and Weaver (2026) also use the terms "facilitate" and "enable" interchangeably, referring to tools that facilitate significant contributions to the Sustainable Development Goals (SDGs) as "SDG champions", enabling large-scale contributions. Scott and Gössling (2022) discuss catalysts in a similar context, emphasising that scientific research acts as a catalyst to accelerate the transition to climate-resilient tourism. They argue that addressing research gaps through robust methodologies can enable tourism to contribute to a decarbonised economy. The United Nations General Assembly (2015) adopts similar terminology: while private business activity, investment, and innovation are labelled major drivers, sport is described as an important enabler, with innovation and capacity-building facilitating sustainable development.

The tourism sector has a significant impact on the international economy, as noted by the United Nations Conference on Trade and Development (2020) and the World Travel and Tourism Council (2024). According to the latter, including direct, indirect, and induced effects, the tourism sector contributed 9.10% to global GDP in 2023. Tourism as an industry needs to engage with sustainable transformation on the basis of its global magnitude, its multi-scalar nature, and the numerous impacts it has on sociocultural, economic, and ecological dimensions (Fennell & Bowyer, 2019). Tourism is described as a multidisciplinary and interdisciplinary field (Coles *et al.*, 2006; Farrell & Twining-Ward, 2004) that acts as a catalyst for change within destinations. However, as Becken (2024) and Higham *et al.* (2013) argue, this requires effective governance and management to prevent and mitigate negative externalities. Boley *et al.* (2017) note that destinations incorporating sustainable tourism practices into their strategies tend to perform better, particularly in terms of resident satisfaction and perceptions.

Tourism can contribute to sustainability, as noted by Saarinen (2006) and UNWTO (2013, 2023). Buhalis *et al.* (2023) argue that the tourism industry may play a critical role in advancing the Sustainable Development Goals (SDGs) and delivering sustainable outcomes. Moreover, the editorial perspective of the *Journal of Sustainable Tourism* further emphasises that tourism not only can but also should serve as a tool for sustainable development (Font *et al.*, 2019). Fennell and Bowyer (2019) underline that a restructuring of the entire tourism industry is necessary in the process of sustainable transformation in tourism. Hence, addressing sustainable transformation in tourism is essential both because of its

capacity to drive positive change and due to the pressing need to adapt to current challenges within the sector. This article focuses on tourism, a complex and interdisciplinary research field (Coles *et al.*, 2006; Farrell and Twining-Ward, 2004), which can provide insights for other sectors as well.

This study aims to address gaps in research and contribute to a clarification of the concept of sustainable transformation within the context of other tourism-related sustainability concepts. It seeks to answer the following research questions: How has the frequency of use of tourism-related sustainability concepts changed over time? How do the five tourism-related sustainability concepts differ? What does the concept of sustainable transformation contribute to the sustainability discourse in tourism? An initial literature review maps the temporal distribution of published articles across tourism-related sustainability concepts to provide an overview of research. Subsequent systematic literature reviews define the five concepts, identifying their enablers and interconnections. The analysis of the output of the literature review places particular emphasis on the combination of the terms "sustainable" and "transformation" in tourism. This approach ensures a manageable number of papers for analysis and provides an overview of current definitions and enablers, while identifying common patterns.

Although this paper concentrates on the use of these concepts within tourism, the conceptual debate has also taken place well beyond this particular field of knowledge. Over recent decades, academic debate on sustainability concepts has evolved from the early concern with the limits to growth (Meadows *et al.*, 1972) to the notion of sustainable development introduced by the Brundtland Report (WCED, 1987), framing sustainability as a normative balance between environmental, social, and economic dimensions. In the tourism field, sustainable tourism has emerged as a sector-specific term, which, as noted by Saarinen (2006), translates the concept of sustainable development into a practical framework for managing impacts and ensuring destination viability. Subsequent frameworks—sustainable transitions (Markard *et al.*, 2012; Geels, 2019) and sustainable transformations (Olsson *et al.*, 2017; Scoones *et al.*, 2020)—highlight the dynamics, scale, and systemic character of change. However, Hölscher *et al.* (2018) consider these two concepts provide nuanced perspectives on how to describe desirable, radical, and non-linear societal change.

This article therefore examines how five key tourism concepts—sustainable development, sustainability, sustainable tourism, sustainable transition, and sustainable transformation—intersect and diverge by analysing their definitions, key enablers, and points of convergence and distinction. Thus, this article contributes to the clarification of these debates and to the advancement of both theoretical and empirical understanding, while acknowledging that these concepts have broader relevance beyond tourism.

The paper is organised as follows. First, the current state of research is critically discussed. Second, definitions of the five tourism-related sustainability concepts are compiled from existing research. Next, the methodology for the systematic literature reviews is presented. The main results from the secondary research are then presented, followed by the interpretation and discussion of the results. The paper concludes by addressing the research questions, proposing directions for further research, and noting limitations.

2. Conceptual Framework

2.1. The emergence of sustainable transition and sustainable transformation

The concept of sustainable transition refers to a long-term process characterised by profound, multi-dimensional changes in socio-technical systems, as discussed by Geels (2019). According to Markard *et al.* (2012) and Tourais and Videira (2021), it involves fundamental shifts from established practices to more sustainable modes of production and consumption. This transition encompasses the movement from one societal structure to another, often within specific subsystems such as energy or mobility, as

noted by Hölscher *et al.* (2018). While this transition emphasises gradual system shifts, the concept of sustainable transformation refers to a structural or systemic approach in economies, societies, and politics, aimed at achieving the SDGs and broader sustainability objectives, as argued by Scoones *et al.* (2020). Olsson *et al.* (2017) define transformation as a large-scale change towards global sustainability and social innovation, with the capacity to respond to new risks and progress along sustainable pathways.

2.2. *The relevance of enablers in sustainability research*

Enablers of tourism-related sustainability concepts play a key role in advancing research in this field. Torres-Delgado and Font (2024), for instance, explore both enablers and constraints in the development and use of sustainability indicators. These authors argue that the challenges of sustainability need to be addressed and that frameworks like the SDGs need to be advanced. Lesar and Weaver (2026) emphasise that elevating the SDGs from "focals" to "enablers", including best practices and organisational tools, can improve the effectiveness of sustainability initiatives. Focusing on sustainable transformation, Ghobakhloo (2023) highlights that the synergies that result from complementary enablers are essential for further advancing the Industry 5.0 transformation. Incorporating enablers into concept definitions may help to clarify the concepts' differences and similarities. This study aims to identify key enablers associated with tourism-related sustainability concepts, and to analyse their interrelations to better understand their role in contributing to sustainable transformation in tourism. To this end, it examines enablers across all tourism-related sustainability concepts to assess their alignment, contribution, and potential differences with those driving sustainable transformation.

2.3. *Tourism-related sustainability concepts and enablers*

2.3.1. **Sustainable development in tourism**

Most definitions of sustainable development are based on the "Brundtland Report" by the World Commission on Environment and Development (WCED, 1987). This report defines the concept of sustainable development as meeting present needs without compromising the ability of future generations to meet their own needs. Holden *et al.* (2014), and the United Nations General Assembly (2015) emphasise minimising immediate and future negative impacts on living beings and the planet while maximising positive impacts. The concept of sustainable development in tourism is often defined in line with general definitions of sustainable development, as indicated by Hall *et al.* (2015), and UNWTO (2013). It describes how society organises its economic structures and activities to support environmental sustainability and promote global social well-being. Hall *et al.* (2015) describe the integration of economic, social, and environmental aspects rather than focusing only on environmental impacts. Sustainable development in tourism is often deemed unachievable and characterised as a gradual process without a clear beginning or end. Sharpley (2020) confirms this view with the statement that there is no universally accepted measure of being "developed", and by definition, it can never be fully attained. He further claims that long-term economic growth cannot be environmentally sustainable. According to an earlier statement of Sharpley (2000), sustainable development theory in tourism can be effectively examined by combining development theory with the concept of sustainability. Following this author, adding 'development' highlights the dynamic, continuously evolving nature of sustainability within the broader human development process. Although the concept of sustainability in tourism is often defined in alignment with sustainable development (Higgins-Desbiolles *et al.*, 2019), Ruggerio (2021) claims that the concepts of sustainable development and sustainability in tourism have slightly different meanings and applications.

Key enablers of sustainable development in tourism include managing natural and socio-cultural resources within destination areas, as emphasised by Buhalis *et al.* (2023) and the United Nations General Assembly (2015). Given the complex nature of tourism (Butler, 1991), knowledge needs to be accessible for all stakeholders involved, the collaboration between different sectors such as science and

politics needs to be strengthened, and the coherence of policies needs to be enhanced (United Nations General Assembly, 2015). These authors highlight the importance of continuous monitoring through indicators. Such indicators, particularly when organised into a practical toolkit, help to measure and evaluate the impact of tourism initiatives on progress toward the Sustainable Development Goals (SDGs), thereby supporting the 2030 Agenda for Sustainable Development (UNWTO, 2023).

2.3.2. Sustainability in tourism

Following Han (2021), the concept of sustainability in tourism traditionally refers to a balance among environmental, social, and economic dimensions to meet visitors' satisfaction. Some approaches add culture or socio-cultural aspects as a fourth pillar of sustainability (Han, 2021; Saarinen, 2006). Dwyer (2023) and Holden *et al.* (2014) distinguish between weak and strong sustainability. Weak sustainability allows for compensation among different capitals (e.g. natural, human capital, and cultural). Strong sustainability asserts that one form of capital cannot be replaced by others. This distinction shapes how sustainability is implemented in practice. Moreover, following Bramwell (2016), sustainability in tourism is better understood as an approximation—a degree of balance among these dimensions—rather than as a fixed or final state. Numerous scholars have identified key enablers of sustainability. Early on, Butler (1991) identified knowledge and shared understanding of various tourism-related factors as vital for stakeholder collaboration, and finally for sustainability in tourism. Molina-Collado *et al.* (2022) add that such understanding also fosters effective policy coordination. Ensuring that sustainability initiatives reflect community needs requires the active participation of local residents in decision-making (UNWTO, 2023). According to Ruggiero (2021), these decision-making processes should be guided by clear objectives and strategies. Bramwell (2016) and UNWTO (2023) underline the role of management practices and tools in implementing sustainability. Finally, indicators can help measure and monitor progress and effectiveness to enable sustainability, as highlighted by Buhalis *et al.* (2023) and Font and McCabe (2017).

2.3.3. Sustainable tourism

Weaver (2007) highlights that sustainable tourism is sometimes (incorrectly) understood as a specific type of tourism, historically associated with small-scale, locally controlled "alternative" tourism. However, Lesar and Weaver (2022) and Weaver (2022) state that sustainable tourism has evolved into a goal that all forms of tourism strive to achieve. These authors note that this evolution has been accompanied by a growing focus on economies of scale, driving efforts to integrate sustainable practices into mass tourism. The most widely accepted definitions of sustainable tourism, reflecting this broader view, are presented in the following section. According to UNEP and UNWTO (2005) and UNWTO (2013), the goal of sustainable tourism is to ensure optimal use of environmental resources to conserve natural heritage and biodiversity, while respecting the socio-cultural authenticity of host communities and ensuring a fair distribution of benefits to all stakeholders. Advancing sustainable tourism requires interdisciplinary collaboration, strategic policies and planning, and improved communication and knowledge mobilisation, as highlighted by Borges *et al.* (2014), Bramwell *et al.* (2017), and Scott (2021). These efforts, as reflected by Hall (2022), rely on transparent and open knowledge transfer to engage stakeholders effectively. To further enhance this knowledge transfer, researchers develop and integrate theories and methods to build a systematic body of knowledge, advancing understanding and application in the field (Fodness, 2017; Moyle *et al.*, 2020). For instance, as noted by Font *et al.* (2019), published research provides guidance and information regarding sustainable tourism practices. Moreover, several authors emphasise the role of indicators in translating data into actionable strategies and enabling long-term planning (Choi & Murray, 2010; Choi & Sirakaya, 2006; Font & McCabe, 2017; Scott, 2021; UNWTO, 2013; Weaver, 2022).

2.3.4. Sustainable transition in tourism

In tourism, the concept of sustainable transition has gained significant attention in recent years, though its origins trace back further. Initially, Farrell and Twining-Ward (2004) described this transition as a journey or path, rather than a fixed endpoint or achievable goal. More recently, Falcone (2019) and Niewiadomski and Brouder (2024) have described these transitions as steps toward sustainability as an end point. Sustainable transitions in tourism may be discontinuous, characterised by potential radical shifts and socio-institutional changes, as noted by Falcone (2019). These transitions aim to foster more effective tourism practices that support sustainable futures (Rastegar *et al.*, 2023). Following Niewiadomski and Brouder (2024) and Viana-Lora *et al.* (2023), sustainable transitions in tourism involve moving toward new models that enhance community well-being and reduce environmental harm. Falcone (2019) states that such transitions can be observed across various sectors like energy, where efforts focus on reducing environmental impact. Nieuwland (2024) introduces another model, defining sustainable transition as an alternative economic model that shifts away from growth and embraces frameworks like degrowth. The goal is to replace less sustainable practices with more sustainable alternatives, as emphasised by Magnusson *et al.* (2024). A related concept is the "just transition" in tourism, defined by Rastegar and Ruhanen (2023) as ensuring prosperity and well-being toward sustainability. Scott (2021) as well as UNWTO (2023) confirm the need for deep emission reductions toward a low-carbon pathway. In this context, a sustainable transition in tourism underlines the urgent need for action, as emphasised by Wilkinson and Coles (2024). Rastegar *et al.* (2023) attribute this urgency for action toward sustainable futures to the dual recognition of tourism's vulnerability to climate change and its significant contribution to the problem. In accordance with Scott and Gössling (2022), this suggests a need for rapid transitions in tourism practices.

Tourism, as a complex and interconnected multi-actor and multi-dimensional system, can contribute to a broader sustainable transition by adopting justice principles and sustainability values that respect the needs of local communities, as highlighted by Falcone (2019). Key enablers of a sustainable transition in tourism include improved communication, knowledge mobilisation, and strategic policy and planning engagement, as suggested by Falcone (2019) and Farrell and Twining-Ward (2004). Scott (2021) and Farrell and Twining-Ward (2004) claim that enhanced research capacity and interdisciplinary collaboration are essential. Moreover, as highlighted by UNWTO (2023), the use of indicators and measurements is critical to align with the SDGs, thereby guiding this transition process. Rastegar *et al.* (2023) add the importance of identifying both short and long-term measures to ensure just, sustainable, and equitable outcomes. These authors stress the importance of combining bottom-up (e.g. user practices) and top-down (e.g. regulatory, institutional) approaches to facilitate a "just transition" in tourism. Technological advancements also play a crucial role in enabling sustainable transition in tourism. Falcone (2019) and Viana-Lora *et al.* (2023) argue that such advancements, together with external landscape pressures, can accelerate the shift towards sustainability in tourism. The alignment of these factors creates the necessary conditions for a successful sustainable transition in tourism.

2.3.5. Sustainable transformation in tourism

The concept of sustainable transformation in tourism is mostly used as a synonym for positive change or development, as noted by Fennell and Bowyer (2019) and Leichenko and Taylor (2024). It focuses on a long-term balance between economic, social, and environmental aspects, as noted by Leichenko and Taylor (2024), while ensuring an equitable distribution of tourism's benefits and preserving local cultures, as emphasised by Leichenko and Taylor (2024) and UNWTO (2023). Fennell and Bowyer (2019) further stress the importance of reducing negative impacts on local communities. Buhalis *et al.* (2023) and Liu *et al.* (2024) emphasise the necessity of achieving a more sustainable and responsible future in tourism and hospitality, which may support progress toward the SDGs. The definition of sustainable transformation in tourism is ambiguous. Although this transformation aims at ensuring long-term

ecological sustainability, it is defined as a fundamental shift that restructures the industry to reduce its negative impacts and move beyond incremental or conventional approaches, fostering systemic change, as suggested by Fennell and Bowyer (2019) and Kumar (2024). This transformation is described as not linear. It is characterised by uncertainty and non-linearity, as noted by Bertella (2023). It can therefore be understood as dynamic. For instance, according to Estrada and Reyes Álvarez (2023), Leichenko and Taylor (2024), and Liu *et al.* (2024) sustainable transformation in tourism includes transformations in digital and energy systems, as well as spatial dimensions such as land use and urbanisation. Estrada and Reyes Álvarez (2023) and Liu *et al.* (2024) stress the role of the digital transformation in enhancing sustainability, promoting smart city development, and facilitating value co-creation in urban areas for the benefit of all stakeholders. To effectively realise this transformation and address challenges like climate change, Becken and Coghlan (2024) state that the industry must transform to create a balanced relationship between human activity and the natural environment.

This knowledge production and application is crucial for a sustainable transformation in tourism, as noted by Falcone (2019), Kumar *et al.* (2024), and Lupini *et al.* (2024). Achieving sustainable transformation in this sector requires a cross-disciplinary approach that integrates environmental education to raise awareness and promote sustainable practices, as emphasised by Pan *et al.* (2018). Falcone (2019) adds cultural values, heritage, and other social processes as enablers for this transformation. The successful application of this framework relies on effective governance. Pan *et al.* (2018) and Yang *et al.* (2022) argue that governance and public policy need to foster stakeholder engagement, integration, and collaboration to ensure a holistic approach that includes all effects of tourism. This contributes to achieving sustainable transformation in tourism by establishing strategic partnerships among academia, industry, and government, as well as by incorporating a thorough understanding of sustainability principles and implementing SDG-aligned practices, as noted by Kumar (2024) and Liu *et al.* (2024). UNWTO (2023) emphasises that the SDGs are essential for driving a sustainable transformation of the tourism sector. Following Fennell and Bowyer (2019), this involves using measures and indicators to assess current statuses and goals, with technology acting as a facilitator of change. In line with this, innovative ideas such as tourism product innovation (Gastaldello *et al.*, 2024) and the implementation of technologies may contribute to sustainability (Leichenko & Taylor, 2024). These authors describe recent crises, such as the COVID-19 pandemic and climate change, as catalysts for a sustainable transformation in tourism. The exact places or factors within a system, where one small change has such a transformative power that it can cause additional larger changes, are also referred to as leverage points (Bertella, 2023; Meadows *et al.*, 1972).

This theoretical framework presents the five concepts and their enablers. To examine how tourism-related sustainability concepts have evolved and assess the contribution of sustainable transformation in tourism to the broader sustainability discourse, a systematic literature review is required.

3. Materials and Methods

The present research is based on systematic literature research aimed at providing a holistic and comprehensive overview of the current research and gaps in investigation. It seeks to synthesise and build upon the diverse perspectives found in existing literature. This paper follows the CAD framework, which refers to a specific method of systematic literature analysis, namely the collection, analysis, and discussion of data retrieved, as described by Bichler *et al.* (2022) and Schönherr (2024). Systematic literature research enhances the reliability of results and helps to find empirically relevant concepts based on gaps in literature. It also ensures transparency and replicability, thereby facilitating further research, as highlighted by Snyder (2019). Following Flemming and Noyes (2021), the synthesis of systematic reviews provides more value than single studies, since they enable a richer interpretation and include diverse perspectives. This deductive approach refines an existing theoretical framework through predefined criteria for literature selection and analysis, as noted by Lim *et al.* (2022).

Subsequently, the systematic literature review procedure is described in more detail, starting with the data collection.

3.1 Data Collection

Data collection (C) involves four steps:

Steps 1 & 2: Research Aim, Selection of Databases and Key Words.

After identifying the theoretical gap and formulating the research questions, the databases and key words (or search words) were selected. The chosen widely used and well-established databases were Scopus and Web of Science, as recommended in prior research by Kumpulainen and Seppänen (2022) and Prancutė (2021). The selection of key words was based on a preliminary screening of relevant papers. A general search using "sustainability" and "touris*" identified the most named tourism-related concepts "sustainability", "sustainable development", "sustainable tourism", "sustainable transition", and "sustainable transformation". A complementary search on Google Scholar confirmed that the term "sustainable transformation" in tourism appears more frequently than "sustainability transformation" in tourism, with authors such as Bertella (2023), Fennell and Bowyer (2019), Kumar *et al.* (2024), and Lupini *et al.* (2024). The definitions and enablers of the five concepts were examined by searching titles, abstracts, and keywords using the search words, which are described in the following in more detail.

Searches focused on the title, abstract, and keywords, including the following key word combinations: (1) "sustainability" and "touris*", (2) "sustainable development" and "touris*", (3) "sustainable tourism", (4) "sustainable" and "touris*", (5) "transition" and "touris*", and (6) "transformation" and "touris*"; combined with one or more of the following terms: "definition", "concept", "description", "determination", "delimitation", "characterization", "characterisation", "meaning", "explanation", "terminology", "scope", "enablers", "facilitators", "catalysts", "drivers", "success factors", "key factors", or "underlying factors". These search terms were refined and validated through iterative testing and collaborative discussion, as recommended by Snyder (2019).

This search resulted in a total of 28,571 papers before applying methodological criteria (Figure 1). To refine the research scope within the broad field of sustainability concepts—extensively studied across specific areas of tourism—this method incorporated literature reviews and relevant synonyms. Therefore, for the concepts of sustainable development in tourism, sustainability in tourism, and sustainable tourism, searches included one or more of these key words: "literature review", "review article", "systematic review", "integrative review", "meta-analysis", "synthesis of literature", "state of the art review", "narrative review", "comprehensive review", "critical analysis of literature", or "review of existing research". To streamline the research on the concepts of sustainable transition and sustainable transformation in tourism—areas with comparatively limited exploration—the authors incorporated the key word "process" to reflect the dynamic character of the two concepts as ongoing processes.

This asymmetry in document types reflects the differing maturity levels of the tourism concepts under study. The long-established concepts sustainable development (Butler, 1991; Sharpley, 2020), sustainability (Bramwell, 2016; Saarinen, 2006), and sustainable tourism (Buckley, 2012; Butler, 1999; Font *et al.*, 2019) are often synthesised in review articles, as recommended by Snyder (2019). The emerging concepts sustainable transition (Niewiadomski & Brouder, 2024) and sustainable transformation (Bertella, 2023; Salomaa & Juhola, 2020), however, have a comparatively limited body of review literature available (less than ten reviews), making a review-only approach unfeasible for these concepts at the time of data collection. Therefore, this paper follows the approach of Snyder (2019) and Torraco (2005) to review the existing primary literature on the emerging concepts. Kim *et al.* (2025) add that this approach provides broader thematic coverage than traditional systematic reviews by synthesizing higher-order review articles instead of empirical studies. This review therefore relies on

review articles where possible and expands its methodology to primary research studies, where insufficient review literature is available to date.

Researchers have confirmed extensive research over the years regarding the terms "sustainability", "sustainable", and related concepts in tourism (Bramwell, 2016; Molina-Collado *et al.*, 2022; Moyle *et al.*, 2020; Sharpley, 2020). Therefore, only papers from the last ten years were included to ensure actuality and capture the newest trends, resulting in a total of 2,547 papers covering the five concepts (Figure 1). The ten-year period includes the years before, during, and after the COVID-19 pandemic and was chosen because of the emergence of the concepts under study, reflected in a noticeable increase in publications across the period. It also follows established methodological approaches for defining and justifying a clear publication period that reflects current research developments (Xiao & Watson, 2019; Snyder, 2019).

Step 3: Quality Criteria.

This review considered only English-language publications, which is the most widely used scientific language, consistent with earlier works by Herrera-Franco *et al.* (2020) and Xiao and Watson (2019). To ensure high quality analysis, the inclusion criteria with the limitation to peer-reviewed articles was applied, in line with the approach of Hong *et al.* (2017) and Pranckutė (2021). This criterion offers the advantage that review articles include numerous articles themselves. Given the limited number of review articles addressing the terms "transformation" and "transition" in tourism, all peer-reviewed publications—including both primary studies and reviews—were considered. In contrast, for "sustainability" in tourism, "sustainable development" in tourism and "sustainable tourism" only review articles were included, given the large number of available publications in this field. Duplicates were removed manually, resulting in 815 papers (Figure 1).

Step 4: Relevance Assessment.

The scan through abstracts helped to assess the paper's relevance to the research topic, as recommended by Xiao and Watson (2019) and Snyder (2019). Special focus lay on definitions and enablers of tourism-related sustainability concepts, especially those addressing the terms "sustainable" and "transformation" within the tourism sector. Following Levy and Ellis (2006) and Webster and Watson (2002), backward and forward screening was conducted using qualitative citation criteria, focusing on the most cited papers, in this case according to the Scopus database. More specifically, these papers were then screened to identify further relevant papers for the research, focusing on who cites them and which works they cite. These additional papers were added to the articles analysed within the systematic literature review on definitional components and enablers.

3.2 Data Analysis

Within the data analysis (A) the bibliometric analysis was conducted, as highlighted by Bichler *et al.* (2022). A total of 437 papers were coded and visualised using the qualitative analysis software GABEK®. Some articles appeared more than once when they covered more than one of the core concepts analysed in this study. Consequently, 635 sentences—referring to the paragraphs in which terms or drivers of one of the selected concepts are defined—were coded and analysed across the 437 articles. The corresponding terms were then selected manually to ensure accuracy. Definitions and enablers were coded and analysed separately, using capital letters for definitions and lowercase letters for enablers, to distinguish between components defining the five concepts and those enabling them. To enhance reliability, all coding decisions were reviewed independently by two researchers, and disagreements were resolved through discussion until consensus was reached. Enablers complement the definitions, as they may provide valuable insights into their contextual relationships that shape sustainability processes as highlighted by Mangla *et al.* (2018). Zelger and Oberprantacher (2002) claim that GABEK® ensures a clear representation of complex qualitative relationships by illustrating the connections

between concepts and the corresponding terms identified in each article. GABEK® clusters of terms coded within the same sentence were constructed to display the connections of enablers or defining variables in relation to each concept in a semantic network graph. Each number reflects the frequency with which one term is connected to another. To ensure comparability and avoid asymmetry due to varying sample sizes across concepts, results were analysed and displayed as frequencies instead of absolute numbers.

3.3. Data Discussion

The data discussion (D) synthesises existing knowledge with newly gathered information. First, resulting from a previous search, the change in the frequency of use of the five tourism-related sustainability concepts was presented and compared. Special emphasis was placed on the total number of papers published since the first recorded use of each term. To identify recent changes, the overall evolution was also compared to the last ten years. To answer the research questions on how the five tourism-related sustainability concepts differ and what the concept of sustainable transformation contributes to the sustainability discourse in tourism, a semantic network analysis of each of the five concepts was applied, incorporating definitions and enablers. Following Drieger (2013), this approach included a visual text analysis that focused on the structure and interpretation of conceptual networks. It allows for the retrieval of information from unstructured text and supports the generation of structured knowledge.

The analysis is carried out using the GABEK®/WinRelan® method, following the approach described by Zelger and Oberprantacher (2002). This software enables the visualisation of conceptual relationships through semantic network graphs and the quantitative assessment of associated terms. As these authors demonstrate, representing linguistic data as conceptual networks facilitates the exploration of meanings and interconnections within a social context, supporting the construction of knowledge maps from complex qualitative material. The WinRelan® method has been used across the social sciences, and more specifically within tourism research, as illustrated for instance by Gelter *et al.* (2022), who applied it to analyse stakeholder perceptions in smart tourism destinations. The resulting frequency data are subsequently presented in tables to enable systematic comparison among the five concepts. According to Mangla *et al.* (2018), the identification of common enablers helps both practical implementation and future research. Specifically, the terms "sustainable" and "transformation" are first defined separately and then analysed together to clarify the concept of sustainable transformation in tourism. Subsequently, the combined concepts of sustainable transformation and sustainable transition in tourism, along with their associated enablers, are then analysed by calculating and aggregating the relative frequencies of each term to avoid asymmetry as a cause of a different total of articles related to each concept.

To compare all five tourism-related sustainability concepts, the components of their definitions and their enablers are displayed with their relative frequencies (see Table 3 & Table 4). For instance, the enabler "stakeholders" appears in 15 out of 61 papers retrieved using the search terms "sustainability" and "touris*", resulting in a relative frequency of $(15/61) \times 100 = 24.59\%$ (see Table 4). GABEK®'s sentence-level clusters ensure that potentially ambiguous terms (e.g., "stakeholders") always appear within their contextual relationships, since each term is displayed once per sentence together with all other relevant words that define or enable the concept under analysis.

3.4. Graphical outline

The methodology of the systematic literature review involved several key steps, as graphically outlined in Figure 1. Building on the CAD framework, as described by Bichler *et al.* (2022) and Schönherr (2024), it followed three main phases: "C - Data Collection", "A - Data Analysis", and "D - Data Discussion".

Figure 1 indicates the number of papers identified at each step, providing transparency of the selection process.

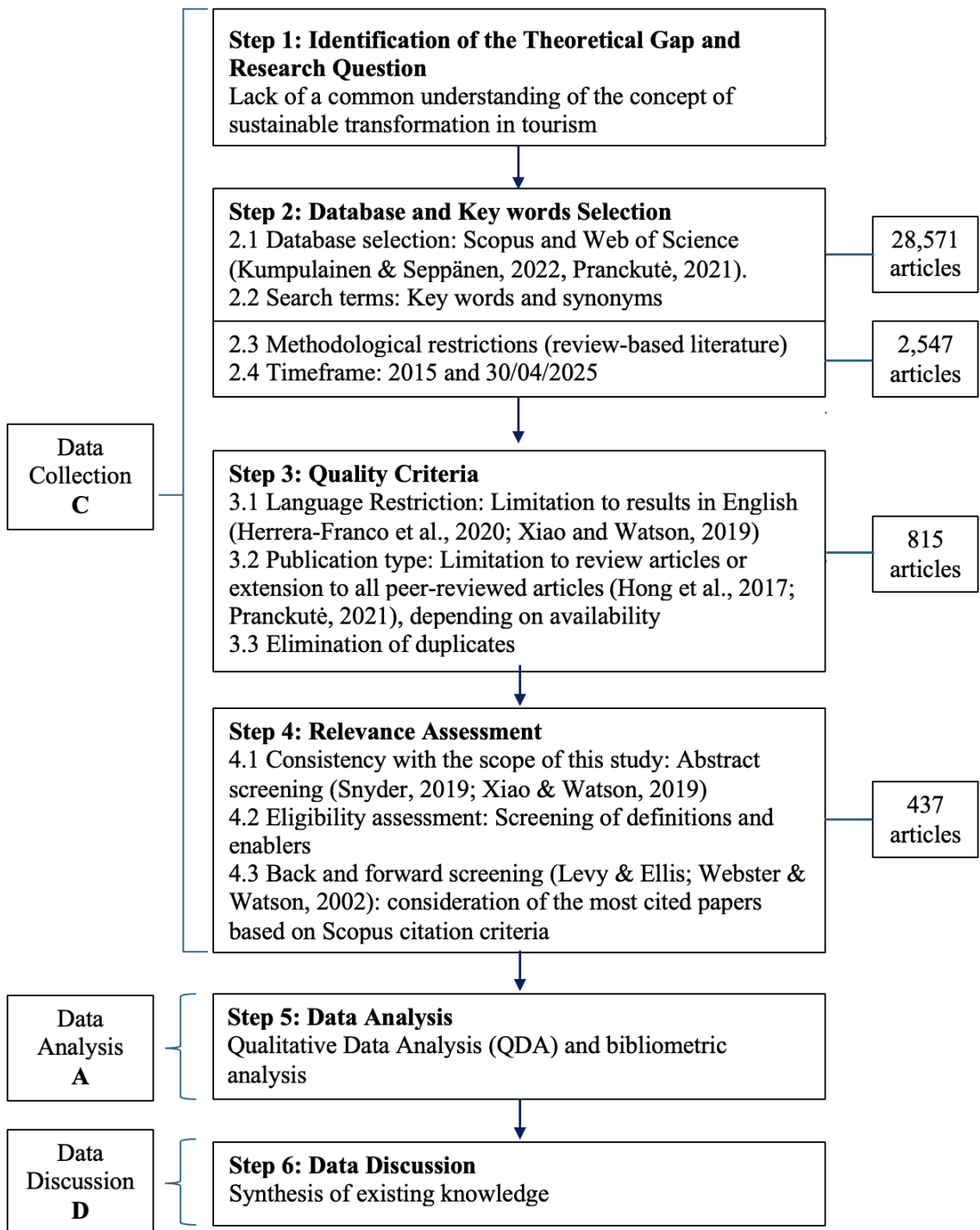


Figure 1. Overview of the research design and systematic review process based on the CAD framework.
Source: own elaboration based on Bichler et al. (2022); Schönherr (2024)

4. Results

4.1. Evolution of tourism-related sustainability concepts

The concept of sustainability in tourism first appeared in high-ranked journals in 1986, with its prevalence increasing exponentially since the 2000s. Figure 2 shows the evolution of the frequency of use of sustainability and the other four tourism-related sustainability **concepts** over the past few decades, with a notable surge in recent years. The visualisation in Figure 2 uses a logarithmic scale on the vertical axis to account for the large differences in frequency between concepts. This scale displays the visual distance between 10 and 100 in the same way as the distance between 100 and 1,000.

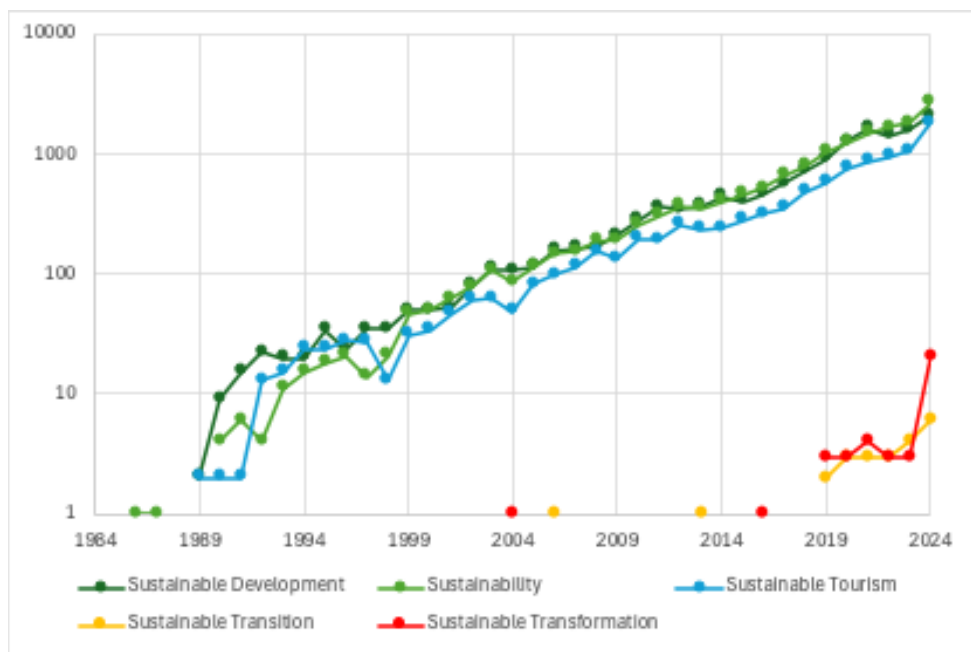


Figure 2. Evolution of articles published using sustainability concepts in tourism (log scale).

Source: own elaboration based on a Scopus search

To examine the evolution of tourism-related sustainability research, an additional Scopus search was conducted. This search analysed papers by title, abstract, keywords, and full metadata, distinct from the main search of this study. Figure 2 displays all papers published from the first recorded use of the terms until the end of 2024, using "sustainable tourism" or "touris*" in combination with "sustainable development", "sustainability", "sustainable transition", or "sustainable transformation". To complement the overall publication trends illustrated in Figure 2, the analysis compared the most recent decade (2015-2024) with the entire period covered, highlighting recent developments.

The results show that the terms "sustainable development" and "touris*" appear in 11,148 papers in the last decade and 14,436 papers over the full period, while "sustainability" and "touris*" appear in 12,466 papers in the last ten years and 15,511 papers over the full period. "Sustainable tourism" is mentioned in 7,481 and 9,627 papers, respectively. The combination "sustainable transition" and "touris*" is found in 21 and 23 papers, respectively. Similarly, "sustainable transformation" and "touris*" co-occur in 38 papers in the last decade and in 39 papers over the entire period. In the last ten years, 80% of papers on "sustainability" in tourism, 78% of papers on "sustainable tourism", and 77% of papers on "sustainable development" in tourism were published. During the same period, approximately 97% of all papers on "sustainable transformation" in tourism and 91% of papers on "sustainable transition" in tourism were published.

4.2. Authors' geographical affiliations

Table 1 presents the geographical distribution of research from 1988 to May 2025, focusing on the terms "sustainable" and "touris*", and "transformation" and "touris*". This clustering offers insights into the regions and authors' geographical affiliations that contribute most actively to the discourse, as previously applied by Donthu *et al.* (2021) and Pranckutė (2021). Identifying gaps in author affiliations helps assess whether diverse perspectives and regional contexts are adequately represented in the research landscape. Table 1 corresponds to the step after the keyword search, but before applying the methodological selection criteria. The table shows the relative share of author affiliations per country. The total number of affiliations is 8,442 for papers with the key words "sustainable" and "tourism," and 1,770 for those with "transformation" and "tourism." Authors may hold multiple affiliations, and individual papers may include multiple co-authors with different affiliations. China, the United Kingdom, Italy, and Spain emerge as prominent geographical locations for author affiliations across both research fields. Notably, China ranks first for both "sustainable" (9.06%) and "transformation" (11.64%) in tourism-related research. These trends align with the overall distribution of tourism-related articles in Scopus, based on a general search using the search term "touris*" for the same period. Although China leads in both categories, nearly half of all author affiliations are based in European countries. Affiliations in Asia account for approximately one third (or 33%) of recorded affiliations. While other regions—North America, Oceania, Africa, South America, and the Caribbean—collectively account for less than 22% of all affiliations.

Table 1. Author geographical affiliations by country, related to the key words "sustainable" and "touris*" and the key words "transformation" and "touris*", from 1988 to 2025.

Key words "sustainable", and "touris*"	Author affiliations (n= 8,442)	Key words "transformation", and "touris*"	Author affiliations (n= 1,770)
China	9.06%	China	11.64%
United Kingdom	5.85%	United States	6.95%
Italy	5.69%	United Kingdom	5.99%
Spain	5.26%	Spain	5.48%
Indonesia	5.02%	Italy	5.42%
United States	4.64%	Australia	4.69%
Australia	4.51%	Russian Federation	3.67%
Portugal	3.60%	Portugal	3.11%
India	3.44%	Indonesia	2.94%
Germany	2.62%	India	2.88%
Russian Federation	2.44%	Germany	2.77%
Malaysia	2.37%	Poland	2.71%
Others	45.50%	Others	41.75%

Source: own elaboration based on a Scopus search

4.3. Patterns of conceptual overlap among tourism-related sustainability concepts

To facilitate a comparison of sustainable transformation in tourism with the other four concepts, this section presents comparative frequencies of definitional terms based on key terms associated with each tourism-related sustainability concept. Specifically, Table 2 compares the concepts of sustainable development, sustainability, sustainable tourism, sustainable transition, and sustainable transformation.

The table outlines the connecting terms related to these five concepts, analysed for the period from 2015 to May 2025, showing how frequently each term appears within the respective concept. Terms that reach a minimum frequency of 18%, within at least one concept, are selected due to a notable increase after 17%. Higher percentages suggest stronger associations in relation to the concepts given in the headings of each column. Accordingly, terms such as "economic", "social", and "environmental" show the strongest overall associations. The analysis also shows strong interconnections among the five tourism-related sustainability concepts. For instance, "sustainable tourism" is associated with sustainable development in 34.38% of the papers, with the concept of sustainable transition in 29.92%, with the concept of sustainable transformation in 29.30%, and with the concept of sustainability in tourism in 19.67% of the tourism-related papers analysed in this literature review. Although certain terms appear more frequently in relation to one specific concept, connections to the other four concepts may also exist.

Table 2. *Main terms identified in relation to each tourism-related sustainability concept, from 2015 to 2025.*

Terms	Sustainable development	Sustainability	Sustainable tourism	Sustainable transition	Sustainable transformation	Average
Economic	40.63%	59.02%	64.86%	47.82%	41.93%	50.85%
Environmental	53.13%	72.13%	56.76%	32.00%	31.37%	49.08%
Social	46.88%	55.74%	56.76%	32.33%	37.91%	45.92%
Future	12.50%	19.67%	48.65%	19.67%	17.46%	23.59%
Cultural	18.75%	26.23%	27.03%	15.54%	16.97%	20.90%
Balance	25.00%	31.15%	21.62%	12.03%	12.64%	20.49%
Impact	15.63%	11.48%	40.54%	5.54%	6.29%	15.90%
Long-term	21.88%	13.11%	18.92%	11.42%	11.13%	15.29%
Practice	9.38%	16.39%	21.62%	13.77%	14.11%	15.05%
Need	15.63%	9.84%	27.03%	9.50%	9.50%	14.30%
Process	9.38%	4.92%	5.41%	23.35%	24.88%	13.59%
Resource	3.13%	16.39%	29.73%	8.86%	9.47%	13.52%
Growth	12.50%	6.56%	21.62%	10.13%	14.43%	13.05%
Management	3.13%	11.48%	8.11%	23.19%	17.68%	12.72%
Community	3.13%	11.48%	18.92%	13.79%	12.82%	12.03%
Protection	3.13%	9.84%	32.43%	7.29%	6.94%	11.93%
Sociocultural	9.38%	18.03%	10.81%	6.33%	7.15%	10.34%
Change	3.13%	8.20%	2.70%	16.47%	20.36%	10.17%
Spatial	3.13%	1.64%	0.00%	4.48%	18.26%	5.50%

Table 2 shows, beyond the three core dimensions, that the concept of sustainability in tourism is most frequently linked to the terms "balance" (31.15%) and "cultural" (26.23%). "Cultural" and "need" are frequently associated with both sustainable development in tourism (18.75% and 15.63%, respectively) and sustainable tourism (27.03% each). "Resource" is often linked with sustainable tourism (29.73%) and sustainability in tourism (16.39%). The concept of sustainable tourism is further frequently linked to "future" (48.65%), "impact" (40.54%), and "protection" (32.43%). Meanwhile, the terms "process" and "change" are frequently linked to both concepts, sustainable transformation (24.88% and 20.36%,

respectively) and sustainable transition (23.35% and 16.47%, respectively) in tourism. The results also indicate that "spatial" (18.26%) and "urban" (14.83%) are most frequently associated with the concept of sustainable transformation in tourism compared to the other tourism-related sustainability concepts. Table 2 presents the terms ranked according to their average frequency across all five concepts. White cells indicate concept-specific peaks, whereas grey shading reflects lower percentages of connections between enablers and concepts along a continuous white-to-grey scale.

4.4. Definitional components and core associations of sustainable transformation in tourism

To define the concept of sustainable transformation in tourism, a bibliometric analysis determined the terms related to "sustainable" and "transformation", each of them in combination with "touris*". The analysis specifically focused on transformation, the differentiating term in this concept. Following Salomaa and Juhola (2020), understanding the concept of sustainability transformation in tourism requires analysing the relationship between the concepts of sustainability and transformation. This study applied the same logic to sustainable transformation in tourism. This approach also allows the identification of indirect associations, as some studies connect transformation to tourism through "sustainable" rather than addressing transformation explicitly. To identify terms that define these concepts, the words "definition", "concept", "description", "determination", "delimitation", "characterization", "characterisation", "meaning", "explanation", "terminology", or "scope" were added during the research filter. The resulting terms are depicted in Figure 3. A total of 79 papers (review articles) containing the terms "sustainable" and "touris*", and 244 papers (peer-reviewed articles and reviews) containing the terms "transformation" and "touris*" were analysed. The percentages reported here differ from the combined sustainable transformation frequencies because the connections are calculated separately for each concept to show the direct connections of the enablers to "transformation" and the indirect connections to "sustainable".

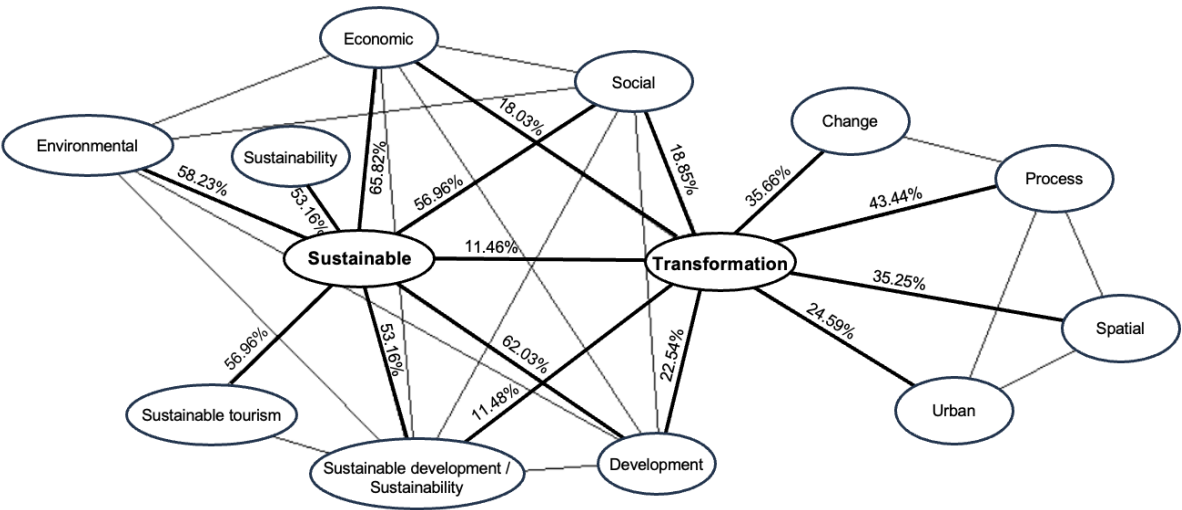


Figure 3. Main definitional connections associated with the terms "sustainable" and "transformation" in tourism, from 2015 to 2025
 Source: own elaboration processed with GABEK® software

Figure 3 displays the top six most frequent connections of "sustainable" and "transformation" to their definition components. Among the 79 papers including "sustainable" and "touris*", terms that include the word "sustainable", such as "sustainable development" (53.16%) and "sustainable tourism" (56.96%), are frequently used. The most frequent connections related to both "sustainable" and "transformation"

in the tourism context are "economic" (65.82% and 18.03% of the studies, respectively), "social" (56.96% and 18.85%, respectively) and "development" (62.03% and 22.54%, respectively). The term "environmental" is used in 58.23% of papers analysing "sustainable" and "tourism", but in fewer than 5% of those addressing "transformation" and "tourism". The most frequent terms related to the terms "transformation" and "tourism" are "process" (43.44%), "change" (35.66%), "spatial" (35.25%), and "urban" (24.59%). In Figure 3, thicker lines and corresponding percentages indicate the strength of association between "transformation" and "sustainable" and their respective definitional terms. Only the six most frequent terms per concept are shown, based on a significant drop in frequency after the sixth term.

4.5. Enablers of tourism-related sustainability concepts

A total of 437 papers were coded to identify the frequency of enablers associated with the five tourism-related sustainability concepts. These papers were identified in Step 4, the relevance assessment, and constitute the basis for the literature analysis. Some articles may cover more than one key concept and therefore appear multiple times. Consequently, 635 sentences were coded and analysed across the 437 articles. These sentences refer to those parts of the articles where drivers of the selected concepts are defined. Table 3 presents the frequency for the main enablers across the concepts, with all concepts assigned equal weight in relation to their respective concept. The procedure involved first calculating the enabler frequency for each concept individually and then deriving the average of these frequencies. The most frequently identified enablers are "stakeholders" (37.35%), "management" (32.18%), "knowledge" (26.96%), "policy" (23.60%) "decision-making" (22.04%), and "strategy" (20.98%). Additionally, the enablers "local" (19.79%) and "community" (17.45%) are also widely used in scientific research.

Table 3. *Main enablers identified across the five tourism-related sustainability concepts in the database, 2015 to 2025.*

Enablers	Average share of main enablers within the codified sentences focusing on any of the five concepts (n=635)
stakeholders	37.35%
management	32.18%
knowledge	26.96%
policy	23.60%
decision-making	22.04%
strategy	20.98%
local	19.79%
community	17.45%

Tables 3 and 4 display the frequency of each enabler within the five tourism-related sustainability concepts. The enablers included appear in at least 15% of the articles addressing one or more of these concepts, as frequencies below this threshold were considerably lower. Table 3 highlights the most frequently cited enablers—such as stakeholders, management and knowledge—while Table 4 displays the enablers ranked by their standard deviation across all concepts, with a minimum threshold of 0.03. Enablers refer to the factors identified in the reviewed literature as facilitating tourism-related sustainability concepts. The percentages shown represent the share of coded sentences within each concept that reference the respective enabler, indicating the relative frequency of occurrence. The use of standard deviation, dispersion of frequencies across the concepts, helps to distinguish whether an enabler is common to all five concepts or predominantly associated with one or a few of them. In Table 4, consistent with Table 3, white cells indicate concept-specific peaks, whereas grey shading reflects

lower percentages of connections between enablers and concepts along a continuous white-to-grey scale.

Table 4. *Main enablers across tourism-related sustainability concepts ordered by highest standard deviation, from 2015 to 2025.*

Terms	Sustainable development	Sustainability	Sustainable tourism	Sustainable transition	Sustainable transformation	Standard deviation
SDGs	46.88%	13.11%	5.41%	0.48%	0.41%	0.17
stakeholders	53.13%	24.59%	45.95%	33.28%	29.79%	0.11
management	37.50%	27.87%	48.65%	24.03%	22.85%	0.1
planning	9.38%	11.48%	29.73%	11.33%	12.29%	0.08
local	9.38%	19.67%	32.43%	20.91%	16.56%	0.07
policy	25.00%	16.39%	35.14%	22.86%	18.61%	0.07
measure	21.88%	16.39%	5.41%	8.88%	8.60%	0.06
indicators	21.88%	13.11%	24.32%	10.46%	12.37%	0.06
participation	6.25%	4.92%	18.92%	4.45%	5.61%	0.05
resource	15.63%	9.84%	10.81%	13.57%	10.69%	0.05
tourist	3.13%	3.28%	16.22%	3.16%	4.19%	0.05
innovation	9.38%	9.84%	21.62%	8.95%	10.60%	0.05
technology	18.75%	16.39%	5.41%	13.27%	12.91%	0.05
understanding	6.25%	19.67%	18.92%	14.88%	12.72%	0.05
governance	15.63%	11.48%	21.62%	14.54%	12.54%	0.04
knowledge	25.00%	29.51%	32.43%	23.51%	24.34%	0.03
government	12.50%	8.20%	8.11%	16.00%	11.51%	0.03

Note: percentages represent the share of enablers within the 635 sentences which were coded and analysed across all articles

Table 4 shows that all five concepts share mostly the same enablers, though their relative frequencies vary slightly. However, some enablers are characteristic of specific conceptual applications or do not appear across all of them. For example, the "SDGs" (46.88%), "measure" (21.88%), and "indicators" (21.88%), are particularly associated with sustainable development in tourism. However, "understanding" (19.67%), "technology" (16.39%), and "measure" (16.39%) are particularly associated with research on sustainability in tourism. Along with "indicators" (24.32%), the enablers "planning" (29.73%) and "innovation" (21.62%) are most frequently identified in relation to studies on sustainable tourism, while "participation" (18.92%) and "tourist" (16.22%) appear almost exclusively in this context. "Planning" (12.29%) and "innovation" (10.60%) also appear frequently in relation to studies on sustainable transformation in tourism, though less than in sustainable tourism. The enablers "government" (16.00%) and "resource" (13.57%) are widely used in scientific research on sustainable transition and remain relevant for sustainable transformation in tourism (11.51% and 10.69%, respectively). COVID-19 remains significantly below the established 15% threshold but emerged during and after the pandemic year as a context-specific enabler with comparatively higher relevance in sustainable transition (2.88%) and, in particular, sustainable transformation (4.10%). This results in a comparatively high standard deviation, because COVID-19 remains marginal across the other concepts.

4.6. Enablers of sustainable transformation in tourism

The analysis compares the enablers of sustainable transformation in tourism with those of the other four tourism-related sustainability concepts, aiming to understand its unique contributions to sustainability. Figure 4 illustrates the key enablers associated with the terms "sustainable" and "transformation", each combined with "touris*". To identify enabling terms, the search included "enablers", "facilitators", "catalysts", "drivers", "success factors", "key factors", or "underlying factors". As previously shown, Figure 3 focuses on the definitional aspects of these concepts, whereas Figure 4 emphasises the enablers and the intensity of their interconnections. The analysis was based on 79 review articles related to "sustainable" and "touris*" and 244 peer-reviewed articles and reviews related to "transformation" and "touris*". The higher frequency of enablers in the first search ("sustainable" and "touris*") can be explained by the inclusion of systematic literature reviews, which synthesise and provide a more focused discussion of enablers compared to the transformation search, where enablers are more broadly distributed. Despite overlaps, some enablers are more frequently related to either "sustainable" or "transformation" in the tourism context. For instance, "stakeholders" is frequently related to both terms (48.10% and 11.48% respectively). "Knowledge" (39.24%), "management" (35.44%), and "decision-making" (31.65%) are more frequently related to "sustainable" and "touris*", while "strategy" (13.52%), "policy" (11.89%), and "indicators" (11.46%) are relatively more frequently related to "transformation" and "touris*". Based on the visualisation of the top six enablers—chosen due to a noticeable drop in frequency after the sixth—the enablers "culture" (13.11%), "community" (12.30%), and "technology" (11.89%) appear specifically in relation to "transformation" and "touris*". Although not shown in the visualisation, enablers such as "innovation" (only 11.07% for transformation) remain relevant, despite falling just below the threshold. In Figure 4, the thicker lines and percentages highlight the strength of the enablers associated with the terms "transformation" and "sustainable".

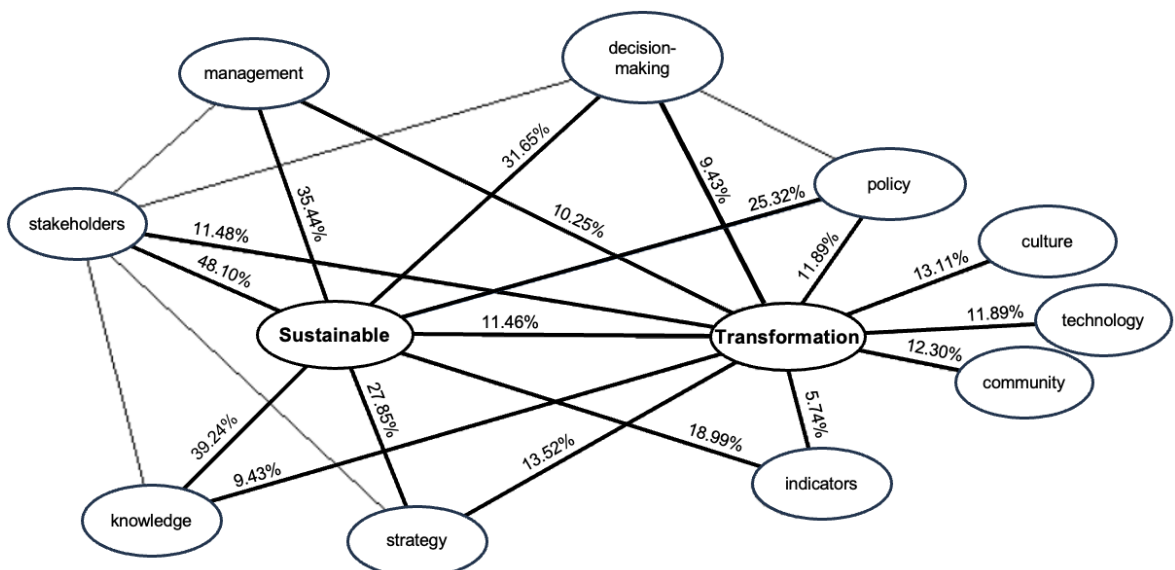


Figure 4. Main enablers associated with "sustainable" and "transformation" in tourism, based on the systematic literature review (2015-2025).

Source: own elaboration processed with GABEK® software

Furthermore, the semantic network analysis reveals the specific contextual conditions under which sustainable transformation is invoked in the literature. As shown in Table 2 and Figure 3, the concept of sustainable transformation is distinctively characterised by a pronounced empirical association with

spatial and structural dimensions. Terms such as "spatial" (35.25% in Figure 3) and "urban" (24.59% in Figure 3) appear with significantly higher frequencies in relation to transformation compared to sustainability. Additionally, the prominence of specific enablers like "community" (12.30%) and "culture" (13.11%) in relation to transformation (Figure 4) suggests a stronger focus on community-level and spatially embedded change processes. This empirical clustering around spatial conditions, urban contexts, and community-level change indicates that sustainable transformation in tourism is particularly associated with structurally constrained destination contexts. These findings provide an empirical basis for the subsequent discussion of how such structural conditions may relate to mature or saturated destinations, where existing development paths and incremental transition approaches may become increasingly insufficient.

5. Discussion

5.1. *Evolution of tourism-related sustainability concepts*

To answer the final research question about the contribution of the concept of sustainable transformation in tourism to the overall sustainability discourse, the first research question centres on how the frequency of use of the most frequently referenced tourism-related sustainability concepts has evolved, underlining both the continuity and change within the sustainability discourse in tourism. Notably, 97% of all analysed papers on "sustainable transformation" and 91% on "sustainable transition" in tourism were published within the last ten years, indicating a growing prominence in recent years—with significant contributions from Bertella (2023), Fennell and Bowyer (2019), and Niewiadomski and Brouder (2024). In contrast, during the same period, the proportions for "sustainable tourism", "sustainability", and "sustainable development" in tourism were equal to or below 80%. This indicates a lasting, but increasing focus on these concepts, which were and have remained central in research, with key contributions from Hall (2022), Han (2021), Saarinen (2006), UNWTO (2013), WCED (1987), and Weaver (2022). Some authors link this rise in tourism-related sustainability research to the growing awareness of climate change impacts (Peeters *et al.*, 2024; Scott, 2021), and policy initiatives promoting sustainable practices (Molina-Collado *et al.*, 2022). However, several scholars critically argue that the sustainability term may, or already has, become a mere buzzword (Becken & Coghlan, 2024; Choi, 2016; Wilkinson & Coles, 2024). Despite these challenges, integrating sustainability into tourism research and practice remains vital, as underlined by Saarinen (2013). The findings of this study show that tourism-related sustainability concepts differ in their timing and patterns of emergence within the tourism sustainability discourse. While established concepts emerged early and remained central, sustainable transformation and sustainable transition are comparatively recent concepts that gain prominence alongside, rather than replacing, existing sustainability frameworks in tourism.

5.2. *Differences and similarities among the tourism-related sustainability concepts*

To respond to the final research question about the contribution of sustainable transformation in tourism to sustainability, this concept was then compared to the other four tourism-related sustainability concepts to identify their similarities and differences. Previous literature consistently highlights that terms such as "economic", "social", and "environmental" are commonly associated with all five concepts, as noted by Leichenko and Taylor (2024), Niewiadomski and Brouder (2024), UNEP and UNWTO (2005) and the United Nations General Assembly (2015). While some of these authors describe the balance of these three dimensions in a broader way, others put emphasis specifically on the stakeholders across all concepts. Against this background, the present analysis synthesises this literature and underlines the three dimensions "economic", "social", and "environmental" as the most frequently referenced in relation to the five concepts. At first glance, this appears contradictory. Although sustainable transformation in tourism is theoretically framed as radical and systemic, the most frequently associated terms remain "economic" and "social". Rather than implying the absence of radical and systemic change, this pattern suggests that the literature articulates transformation through established sustainability dimensions.

UNEP and UNWTO (2005) argue that sustainable tourism considers both current and future economic, social, and environmental impacts by addressing the needs of visitors, industry, the environment, and host communities, while ensuring that environmental protection and economic development reinforce each other. Further, Weaver (2022) notes that sustainable tourism may provide a holistic framework that integrates the principles of sustainable development and sustainability in tourism. This article underlines Weaver's statement with "sustainable tourism" appearing frequently across all concepts, indicating that while 'sustainable tourism' serves as an overarching meta-concept, it lacks the analytical granularity to define specific pathways of change on its own. Consequently, rather than functioning as a mutually exclusive category, it provides the foundational framework within which transition and transformation are operationalized. Therefore, it functions as an umbrella term that integrates all positions within the two-dimensional framework in Table 5.

In the following, the definitions of the remaining four concepts are outlined by contrasting the theoretical framework with the literature review. In line with Ruggerio (2021), sustainability in tourism and sustainable transition in tourism are more frequently applied to specific geographical contexts or features, such as a local scale, as highlighted by Falcone (2019) and Hall (2025), or to specific contexts within tourism, as noted by Saarinen (2006). By contrast, and consistent with Hall (2025), Hölscher *et al.* (2018), and Saarinen (2006), sustainable development and sustainable transformation in tourism refer mostly to a system change, for example on a global scale (Saarinen, 2006) or a larger, and even fundamental scale (Fennell & Bowyer, 2019; Hall, 2025).

While some authors claim that the concepts of sustainability and sustainable development in tourism have no achievable end-state (Bramwell, 2016; Sharpley, 2020), both concepts are often described as normative goals (Bramwell, 2016; Holden *et al.*, 2014; WCED, 1987). By contrast, sustainable transition and sustainable transformation in tourism are not necessarily normative (Hall, 2025). While analytically non-normative, these concepts are often mobilised in policy and governance debates to inform context-specific sustainability strategies. Sustainable transition and sustainable transformation are concepts characterised by highly complex and uncertain dynamics (Markard *et al.*, 2012; Geels, 2019), particularly in the tourism context (Hall, 2025), and imply radical and non-linear changes (Bertella, 2023; Hall, 2025). Following Hall (2025) and Farrell and Twining-Ward (2004), sustainable transition in tourism describes incremental adaptive shifts, whereas sustainable transformation in tourism implies larger disruptive changes with lasting significant impact, as noted by Hall (2025) and Leichenko and Taylor (2024).

Although some strands of literature appear to diverge, these differences do not represent contradictions but rather enrich existing definitions and underline the current diversity of conceptual approaches. For instance, sustainable transformation in tourism aims to ensure long-term ecological sustainability while explicitly fostering systemic change, as suggested by Fennell and Bowyer (2019) and Kumar (2024).

In line with the core finding of the aforementioned authors, this article synthesises the literature to highlight the concepts' singularities. In Table 5, the core tourism-related sustainability concepts are briefly summarised and clustered, based on two analytical dimensions of sustainable change in tourism: their conceptual orientation (normative goal or dynamic pathway), and their scope (tourism-focused or systemic perspective). The columns distinguish between goal-oriented (normative goals) and pathway-oriented (dynamic pathways) concepts. The rows differentiate between a tourism-focused and a systemic perspective approach. The resulting two-dimensional matrix categorises tourism-related sustainability concepts accordingly.

While the five concepts share a strong overlap in core dimensions and enablers, the analysis suggests that they differ primarily along three dimensions. Scope of change refers to where change occurs, nature of change to what kind of change it is, and pattern of change to how the change unfolds over time. Table 6 summarises the key differences between sustainable transition and sustainable transformation in tourism. The findings align and expand broader transition and transformation literature (Hölscher *et al.*, 2018), and tourism-specific literature (Hall, 2025), which compare both concepts along dimensions of (system) change, as reflected in the findings of this review.

Table 5. *Identification of key features of tourism-related sustainability concepts.*

	Normative goal	Dynamic pathway
Tourism-focused	Sustainability in tourism: Balance among environmental, social, and economic dimensions to meet visitor satisfaction (Dwyer, 2023; Han, 2021).	Sustainable transition in tourism: Incremental adaptive shifts, primarily within tourism (Hall, 2025; Farrell & Twining-Ward, 2004), that include multi-actor development processes, as underlined by Hall (2025).
Systemic perspective	Sustainable development in tourism: Long-term processes in tourism aiming to meet present needs without compromising the ability of future generations to meet their needs (United Nations General Assembly, 2015; WCED, 1987).	Sustainable transformation in tourism: Larger disruptive changes with lasting significant impact, including multiple actors and development processes (Hall, 2025; Leichenko & Taylor, 2024). This is often related to spatial change in terms of land use or urbanisation (Estrada & Reyes Álvarez, 2023; Leichenko & Taylor, 2024; Liu <i>et al.</i> , 2024).

Although the concepts show considerable overlap and the interpretation should be considered in light of the concept-specific selection strategy used to construct the review corpus, this study seeks to draw a threshold between sustainable transition and sustainable transformation in tourism. The threshold of sustainable transformation in tourism is reached when change processes simultaneously meet *all* three dimensions described in Table 6: (1) the scope of change extends beyond tourism-specific subsystems to broader, multi-scalar systems; (2) the nature of change involves a fundamental restructuring rather than a pathway- or journey-oriented process; and (3) the pattern of change unfolds through non-linear, systemic, disruptive, and uncertain dynamics rather than primarily gradual change. This interpretation is supported by the stronger association of tourism-related transformation literature with terms such as "process" and "spatial" (see Table 2 and Figure 3), indicating a greater emphasis on multi-scalar dynamics, process-oriented change, and spatial restructuring, which is consistent with the dimensions of scope and patterns of change identified in this study.

Taken together, the findings suggest that the emergence of sustainable transformation in tourism should not be interpreted as a conceptual rupture or replacement of earlier sustainability frameworks. Instead, it reflects an intensification and reorientation of long-standing sustainability debates in response to increasing systemic pressures, such as climate change, spatial restructuring, and governance complexity. The strong conceptual alignment and overlapping enablers identified across the five concepts indicate continuity rather than substitution, with differences emerging primarily in terms of scale, governance intensity, and orientation towards systemic change. This helps explain why sustainable transformation coexists with, rather than displaces, established sustainability concepts within the tourism literature.

Table 6. Comparison of sustainable transformation and sustainable transition in tourism by scope, nature, and pattern of change

Dimensions of change	Sustainable transition in tourism	Sustainable transformation in tourism
Scope of change	Change within specific subsystems (Hölscher <i>et al.</i> , 2018) (tourism-focused) (Hall, 2025).	Change across broader societal systems and multiple scales (global, national, regional, and local) (Hall, 2025).
Nature of change	Journey or path, rather than a fixed endpoint (Farrell and Twining-Ward, 2004).	Fundamental shift that restructures the industry and moves beyond incremental approaches (Fennell & Bowyer, 2019; Kumar, 2024).
Pattern of change (Dynamics)	Primarily gradual, process-oriented change (Scoones <i>et al.</i> , 2020).	Non-linear, systemic, disruptive, and uncertain change processes (Bertella, 2023).

5.3. Comparison of enablers across tourism-related sustainability concepts

In terms of enablers, distinctions among the five tourism-related concepts—sustainable development, sustainability, sustainable tourism, sustainable transformation, and sustainable transition—are minimal. Moyle *et al.* (2020) note that the similarity of enablers reinforces the notion of conceptual confusion and even immaturity. The overlap identified in this study reflects the frequent interchangeable use of tourism-related sustainability concepts in the literature, which explains why enablers alone provide limited differentiation, and underscores the contribution of this study as a synthesis and conceptual clarification. Yet, the findings expand this view by revealing distinctive features that help to differentiate and operationalise them. Enablers specifically related to the concept of sustainable transformation in tourism, compared to the other four tourism-related sustainability concepts, are highlighted in the following.

To ensure conceptual comparability across tourism-related sustainability concepts, the review distinguishes between COVID-19 as an enabler in sustainability discourses and its role as an accelerator of change processes. Leichenko and Taylor (2024) specifically state that COVID-19 can be interpreted as a catalyst that reveals underlying transformation dynamics, in line with broader arguments that both the COVID-19 pandemic and climate change act as catalysts for societal transformations. COVID-19 may be seen as a critical empirical manifestation of systemic disruption with a potential for transformation, as noted by Scott (2021). Similarly, Rastegar (2022) conceptualises a sustainability transition in tourism as a longitudinal process and argues that current crises, such as climate change and the COVID-19 pandemic, reinforce the urgency to "reset", "rethink", and "reorient" tourism systems.

For instance, Fennell and Bowyer (2019) and Nieuwland (2024) relate "government" and "resource" to both sustainable transformation and sustainable transition in tourism, reflecting shared political and institutional enablers, and the involvement of local stakeholders. The findings of this article reinforce these arguments, as "government" and "resource" are most frequently associated with sustainable transformation and sustainable transition in tourism. The review further indicates that these enablers are relatively evenly distributed across all five concepts, with a standard deviation of 0.03 for "resource" and 0.01 for "government". "Planning" and "innovation" are more often associated with the concepts of

sustainable transformation in tourism and sustainable tourism, highlighting the importance of strategic approaches, such as time and preparation (Fennell & Bowyer, 2019), energy consumption, and human resources (UNWTO, 2013). Consistent with these authors, this article shows that "planning" and "innovation" are the enablers most strongly associated with the concepts of sustainable transformation in tourism and sustainable tourism.

Table 7. *Differential dynamic pathways in tourism sustainability.*

Enabler	Sustainable Transition (Adaptive/ Primary Tourism-focused)	Sustainable Transformation (Disruptive/Systemic)
Knowledge & Learning	Efficiency-oriented: focus on metrics, KPIs and benchmarks to support strategic policy and planning within tourism (Falcone, 2019).	Transformative knowledge: reflexive, cross-disciplinary learning, environmental education, and critical rethinking of tourism—environment relations (Pan <i>et al.</i> , 2018; Kumar <i>et al.</i> , 2024; Lupini <i>et al.</i> , 2024).
Governance & Policy	Strategic management: tourism-focused policy, planning, and coordination to steer structural change in the sector (Falcone, 2019; Farrell & Twining-Ward, 2004).	Integrative governance: public policy fostering stakeholder integration, collaboration, and holistic consideration of tourism's systemic effects (Pan <i>et al.</i> , 2018; Yang <i>et al.</i> , 2022).
Stakeholders	Sectoral involvement: strengthened collaboration and involvement of tourism actors (Falcone, 2019; Viana-Lora <i>et al.</i> , 2023; Wilkinson & Coles, 2024).	Transdisciplinary engagement: engaging non-tourism sectors (energy, technology, civic society) shaping system-level change (Pan <i>et al.</i> , 2018).
Innovation & Tech	Enabling acceleration: digitalisation of services and resource efficiency (e.g., carbon footprint reduction), facilitating tourism-focused change under external pressures (Falcone, 2019; Rastegar & Ruhanen, 2023).	System-facilitating innovation: disruptive technologies that decouple growth from environmental impact and reconfigure the destination (Fennell & Bowyer, 2019; Gastaldello <i>et al.</i> , 2024; Pan <i>et al.</i> , 2018).

Overall, the findings indicate that all five concepts share a largely similar set of enablers. Promoting tourism-related sustainability concepts requires that all stakeholders share a common goal, as emphasised by various researchers (Buhalis *et al.*, 2023; Falcone, 2019; Lupini *et al.*, 2024; UNWTO, 2023; Yang *et al.*, 2022). Across all five concepts, an overarching management is needed to achieve the objectives, as noted by Farrell and Twining-Ward (2004), Fennell and Bowyer (2019), the United Nations General Assembly (2015), and UNWTO (2013). Knowledge serves as a key link between stakeholders, as highlighted by Butler (1991), Farrell and Twining-Ward (2004), Lupini *et al.* (2024), UNEP and UNWTO (2005), and the United Nations General Assembly (2015). Decision-making processes at the local level that consider the needs of the respective stakeholders contribute to sustainable development in tourism, sustainability in tourism, and sustainable transition in tourism, as highlighted by Sharpley (2020), UNWTO (2023), and Wilkinson and Coles (2024). Further, Lupini *et al.* (2024), UNWTO (2013), and UNWTO (2023) emphasise the active participation of stakeholders in the decision-making processes as an enabler for sustainability in tourism, sustainable tourism, and sustainable transformation in tourism. Across sustainable development in tourism, sustainability in tourism, sustainable tourism and sustainable transition in tourism, policies and strategies mainly refer to legal and regulatory frameworks, as noted by Farrell and Twining-Ward (2004), the United Nations General Assembly (2015), UNWTO (2013) and UNWTO (2023). In the context of sustainable transformation in tourism, their focus is on facilitating a holistic approach, as noted by Yang *et al.* (2022).

The proposed typology in Table 5 clarifies the conceptual boundaries of tourism-related sustainability; however, its practical implementation depends on how specific enablers are deployed to drive change.

To provide the necessary operational clarity, the following analysis focuses specifically on the two concepts that represent dynamic pathways of change within the framework: sustainable transition and sustainable transformation in tourism. The analysis suggests that the identified enablers—including knowledge, governance, stakeholders, and technology—are not static resources, but dynamic levers whose function must be recalibrated according to adaptive/tourism-focused versus disruptive/systemic pathways. Table 7 delineates these differential dynamic roles of enablers.

This article reinforces and synthesises the findings of the aforementioned authors, by consistently identifying enablers such as "stakeholders", "management", "knowledge", "decision-making", "policy", and "strategy" in relation to all five tourism-related sustainability concepts. However, Table 7 shows that these enablers fulfil different functions depending on whether they are mobilised within adaptive transition pathways or disruptive transformation pathways.

5.4. Practical implications

The conceptual clarification developed in this study has direct practical implications for tourism governance and policy-making. By distinguishing between sustainable development and sustainability as normative orientations, and sustainable transition and sustainable transformation as dynamic pathways of change, the framework enables a more differentiated and context-sensitive application of sustainability concepts across destinations and stakeholder groups.

For emerging or less consolidated destinations, the findings suggest that policy and management efforts should primarily follow a sustainable transition pathway characterised by adaptive and tourism-focused change. In such contexts, sustainability functions as a guiding framework through which strategic and coordinated interventions—such as planning instruments, indicators, benchmarks, and efficiency-oriented technological innovation—can shape development trajectories before unsustainable patterns become institutionalised. Destination Management Organisations (DMOs) play an important coordinating role in this phase, but responsibility is shared with public authorities, which provide regulatory frameworks, and private tourism actors, whose operational practices determine resource use and impact profiles. As highlighted in the literature, these interventions primarily aim to strengthen coordination, learning, and adaptive capacity within existing governance structures (Farrell & Twining-Ward, 2004; Falcone, 2019).

In contrast, mature or saturated destinations, particularly those facing capacity constraints, environmental and socio-economic pressures, as noted by Butler (1980) and Tooman (1997), in the context of overtourism and high accommodation density (Mihalic, 2020; Simancas & Peñarrubia, 2019), require a shift towards sustainable transformation as a disruptive (Hall, 2025; Leichenko & Taylor, 2024) and systemic pathway (Fennell & Bowyer, 2019; Kumar, 2024; Olsson *et al.*, 2017; Scoones *et al.*, 2020). In these settings, partial improvements within existing paths may reinforce structural lock-ins (Westley *et al.*, 2011). Accordingly, sustainable transformation in tourism is conceptualised as a fundamental shift that restructures the system and extends beyond incremental approaches (Fennell & Bowyer, 2019; Kumar, 2024). While earlier contributions highlight that a rejuvenation of over-saturated destinations must happen through a complete change of the existing tourism infrastructure (Butler, 1980), recent statements have moved beyond that point and call for more radical innovations (Koens *et al.*, 2018). Building on the empirical clustering identified in the results, the connection between mature or saturated destinations and the need for sustainable transformation in tourism is further supported by the SLR-based conceptual synthesis in Tables 5 and 6. In particular, sustainable transformation in tourism is conceptualised as a systemic and dynamic pathway involving fundamental restructuring and non-linear, disruptive change processes. These characteristics help explain why structurally constrained destination contexts, such as mature or saturated destinations, may require more than incremental transition approaches. In this sense, a "destination maturity" perspective provides an analytical lens to

understand how structural conditions across destinations relate to different transformation characteristics.

Transformation-oriented governance therefore implies a fundamental reconfiguration of dominant development logics, decision-making processes, and success metrics. For DMOs, this entails moving beyond promotional functions towards roles focused on facilitating learning, coordination, and strategic reorientation. However, transformation cannot be driven by DMOs alone. Public institutions are required to enable integrative and experimental governance arrangements, private firms must engage in structural and business model innovation, and local communities need to be actively involved in decision-making processes to ensure social legitimacy and distributive justice (Fennell & Bowyer, 2019; Lupini *et al.*, 2024; Pan *et al.*, 2018).

Across both pathways, the analysis highlights the importance of shared enablers, including knowledge, governance, stakeholder participation, and strategic capacity. What differentiates sustainable transition from sustainable transformation is not the presence of these enablers, but the way in which they are functionally configured, mobilised with different intensities, and applied across adaptive/tourism-focused versus disruptive/systemic pathways. While transition pathways mobilise coordination, planning, and efficiency-oriented technological innovation to adapt tourism systems (Falcone, 2019; Rastegar *et al.*, 2023), transformation processes require reflexive and transdisciplinary learning, cross-sectoral collaboration, and innovations capable of decoupling growth from environmental impact (Fennell & Bowyer, 2019; Pan *et al.*, 2018). In this regard, academia and research institutions play a critical role as knowledge brokers, contributing evidence, critical reflection, and methodological tools to support policy learning and stakeholder engagement (Pan *et al.*, 2018; Lupini *et al.*, 2024).

5.5. Key takeaways and implications

The key takeaways from the systematic literature review are threefold. First, tourism-related sustainability concepts differ in their timing and patterns of emergence. Second, they strongly overlap in their core dimensions and enablers. Third, they differ primarily in how change is conceptualised. Established tourism-related concepts such as sustainable development, sustainability, and sustainable tourism remain central in the literature, while sustainable transition and sustainable transformation in tourism have gained particular visibility in the last decade. The contribution of sustainable transformation to the tourism sustainability discourse therefore lies less in introducing a separate concept with entirely distinct enablers, and more in clarifying a specific understanding of change. Sustainable transformation in tourism is more closely associated with process, change, and spatial and urban dimensions, pointing to broader, systemic, and potentially disruptive forms of change.

These findings have direct implications for tourism governance and policy-making because they support a more differentiated and context-sensitive application of sustainability concepts according to the type and depth of change required in a given destination context. Rather than applying sustainability concepts interchangeably, tourism actors can use the distinction between transition and transformation as a decision-making lens to distinguish between adaptive improvement within existing tourism structures or broader systemic reconfiguration. In mature or saturated destinations, structural pressures may limit the effectiveness of incremental approaches, making sustainable transformation in tourism more relevant as a framework for more fundamental and systemic change. Accordingly, shared enablers such as knowledge and learning, governance and policy, stakeholders, and innovation and technology should not be treated as generic solutions but configured according to the type and depth of change required.

6. Conclusion

This paper contributes to the tourism sustainability literature by clarifying the conceptual landscape surrounding five closely related sustainability concepts, with particular emphasis on sustainable

transformation in tourism. Through a systematic literature review and content analysis, the study advances conceptual clarity by positioning these concepts in relation to each other, highlighting their shared foundations while distinguishing their scope, emphasis, and conceptual orientation.

Rather than introducing entirely new ideas, the findings suggest that sustainable transformation in tourism emerges as part of an evolving sustainability discourse, reflecting growing attention to systemic, strategic, and potentially disruptive forms of change. The analysis demonstrates that the five concepts share common enabling factors, while differing in how these enablers are mobilised and combined. This supports the view that sustainable transformation does not replace earlier sustainability concepts but builds upon them, offering an integrative perspective that connects incremental and more radical approaches to change, although this distinction should be interpreted with caution given the concept-specific selection strategy used to construct the review corpus. The review introduces the notion of a “threshold” to clarify the boundary between adaptive sustainable transition and systemic sustainable transformation in tourism. Importantly, the findings indicate that this threshold is not defined by distinct enablers, as these are largely shared across concepts, but rather by the scope, nature, and pattern of change processes. The findings further suggest that crises such as COVID-19 and climate change can be understood both as systemic disruptions that accelerate transformation processes and as enablers of change, reinforcing the systemic nature of transformation. Sustainable transformation in tourism appears particularly relevant in mature or saturated destinations, where structural pressures limit the effectiveness of incremental approaches and require more fundamental and systemic change.

From a methodological perspective, this study illustrates the value of systematic literature reviews for synthesising fragmented conceptual debates and identifying patterns across large bodies of research. By applying consistent coding procedures and comparative analysis, the review provides a structured basis for future theoretical refinement and empirical investigation.

As with any literature-based study, this research has limitations. One limitation concerns the asymmetrical application of selection criteria across concepts in constructing the review corpus. While established concepts are analysed exclusively through review articles, emerging concepts include both review and primary research due to the limited availability of review literature. This difference reflects the current structure of the literature but limits the direct comparability of findings across concepts and may amplify the perceived radicality of sustainable transformation in tourism. Future research is encouraged to revisit this comparison once a more consistent body of review literature is available. In addition, the reliance on Scopus and Web of Science may have excluded relevant contributions outside these databases, and the selection of keywords inevitably reflects interpretative choices regarding sustainability and transformation.

Future research could address these limitations by expanding data sources, refining search strategies, and conducting empirical studies to operationalise and test the proposed conceptual distinctions. In particular, further empirical work is needed to examine how sustainable transformation in tourism unfolds in practice across different contexts and governance settings.

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