

Tourism Rebound Post-COVID-19: A Scoping Review of Determinants, Mechanisms, and Recovery Trajectories.

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Abstract:

The COVID-19 pandemic caused an unprecedented contraction of global tourism: international arrivals fell 74% in 2020 and the sector lost an estimated USD 1.3 trillion in export revenues. Tourism rebound, the multidimensional process through which tourism demand, supply, and mobility recover after a systemic shock, has become a major scientific and policy concern, yet no protocol-driven synthesis has mapped its full thematic landscape.

This scoping review maps the scientific literature on tourism rebound after COVID-19, characterises the bibliometric profile of the field, synthesises its thematic structure, and identifies research gaps with implications for tourism policy.

The review followed a five-stage scoping-review framework and was reported using PRISMA-ScR guidelines. Systematic searching of Scopus identified 88 peer-reviewed articles published between January 2020 and March 2025.

The thematic synthesis around the 4T Framework, encompassing Tourist behaviour, Transport and mobility, Transformation and sustainability, and Technology and innovation, shows tourism rebound to be a multi-conditional, non-linear process co-determined by four interacting dimensions. An integrated conceptual model distinguishes two normatively opposed rebound pathways: volumetric restoration and structural transformation.

Tourism rebound requires simultaneous progress across behavioural, infrastructural, governance, and organisational dimensions. Five research gaps emerge, each carrying implications for tourism policy, resilience governance, and sustainable recovery.

Keywords: tourism rebound; COVID-19; scoping review; PRISMA-ScR; resilience; tourism recovery; sustainable transition

1. Introduction

1.1. Background and motivation

The COVID-19 pandemic was the most severe external shock to global tourism in the modern era. International tourist arrivals fell by around 74% in 2020. An estimated 100 to 120 million direct tourism-related jobs were placed at risk, and export revenues dropped by an estimated USD 1.3 trillion (UNWTO, 2021). What set this disruption apart from earlier crises was its reach. SARS in 2003, the global financial crisis of 2008 and 2009, and H1N1 in 2009 had each affected tourism, but none had grounded aviation worldwide, closed accommodation across continents, and shuttered attractions all at once. Supply collapsed at the same moment that demand evaporated (Gössling et al., 2020).

In the wake of this shock, the idea of tourism rebound moved to the centre of scholarly attention. The concept refers to the multidimensional recovery of tourism demand, supply, and mobility after a crisis. Publications proliferated. By the end of 2021, more than 60 relevant articles indexed in Scopus had appeared. This body of work is heterogeneous in almost every respect. Its theoretical orientations diverge, its methods range from survey modelling to macro-sectoral forecasting, and its disciplinary roots reach across tourism studies, transport geography, sustainability science, and organisational management. Levels of analysis differ too, spanning the individual traveller, the firm, the destination, and the global system. Such heterogeneity, together with the fact that, to the best of our knowledge, no previous protocol-driven scoping review has fully mapped this field, makes a scoping review the appropriate methodological response. As Arksey and O'Malley (2005) and Peters et al. (2015) argue, scoping reviews suit bodies of evidence that are large, complex, or heterogeneous and that have not yet been reviewed in full.

The stakes are high across all tourism-dependent economies. The central question is whether rebound reproduces the vulnerabilities of the pre-crisis model, such as overdependence on mass tourism, the carbon footprint of aviation, and labour precarity, or whether it marks a genuine structural transition. The question is global. Asia and the Pacific, the Americas, Africa, the Middle East, and Europe each face this trade-off under different institutional conditions, and a worldwide synthesis is needed to surface what is common across these contexts and what is specific to each.

1.2. Objectives

This review is guided by one overarching research question, framed using the Population, Concept, and Context (PCC) framework recommended by the Joanna Briggs Institute (Peters et al., 2015):

What is the scope, range, and thematic distribution of scientific evidence on the determinants, mechanisms, and trajectories of tourism rebound after COVID-19, as published in peer-reviewed literature between January 2020 and March 2025?

Three subsidiary questions guide data extraction and synthesis. The first asks which theoretical and conceptual frameworks have been used to study tourism rebound. The second asks which determinants, mechanisms, and moderating conditions shape the speed, form, and quality of rebound. The third asks which research gaps and future directions emerge from the evidence base. Four operational objectives follow: to characterise the corpus bibliometrically, to map its thematic structure using the 4T Framework, to synthesise the key findings within each cluster, and to set out a structured research agenda transferable across destination types and world regions.

Table 1. Population, Concept, and Context (PCC) framework

PCC element	Specification for this review
Population	Researchers, practitioners, and policymakers concerned with tourism recovery; studies involving tourists, hospitality firms, destinations, transport actors, and institutional stakeholders
Concept	Tourism rebound: determinants, mechanisms, moderating conditions, and structural outcomes of the multidimensional recovery of tourism activity (demand, supply, mobility, revenues, employment) after COVID-19
Context	The post-COVID-19 period, January 2020 to March 2025; international and domestic tourism; all destination types and tourism sub-sectors

2. Literature Review and Conceptual Framework

2.1. Defining tourism rebound

Tourism rebound is defined here as the multidimensional process through which tourism activity recovers after a major crisis. That activity includes demand, supply, mobility, employment, and revenues. The process may also reconstitute the tourism system itself, sometimes with altered structural features. This definition holds together two distinct dimensions. One is quantitative and volumetric, concerning the restoration of arrival numbers. The other is qualitative and structural, concerning the configuration of the system that recovers. A business-as-usual rebound restores pre-crisis volumes and little else. A transformed rebound, by contrast, yields greater resilience, equity, and ecological sustainability (Gössling et al., 2020; Ateljevic, 2020).

This definitional tension between volumetric and structural rebound forms the central normative axis of the literature reviewed here. It is encoded directly in the distinction between the two pathways of the conceptual model presented in Section 2.3.

Three related terms appear throughout this review and require disambiguation. Recovery denotes the restoration of operational indicators to pre-crisis levels, a largely quantitative baseline. Rebound is the broader multidimensional process that encompasses recovery but extends to structural reconfiguration. Resilience refers to the adaptive and transformative capacity of tourism systems to absorb, respond to, and reorganise after a shock. The three concepts are related but not synonymous. The search string for this review deliberately included all three to ensure comprehensive coverage. Where individual studies use recovery or resilience in senses that overlap with rebound as defined here, this review treats them as contributing evidence to the same overarching phenomenon.

2.2. Theoretical foundations

Research on tourism rebound draws on at least five theoretical traditions. At the level of the individual, the Theory of Planned Behaviour (Ajzen, 1991) and Protection Motivation Theory (Rogers, 1975) explain how health risk perceptions, coping appraisals, and the chain running from attitude to intention to behaviour shape recovery on the demand side. The Health Belief

Model adds a complementary lens on why vulnerability and responsiveness vary across market segments.

At the infrastructural level, the mobilities paradigm (Urry, 2007; Sheller & Urry, 2006) treats tourism as constitutively dependent on systems of mobile practice. Air networks, urban public transport, and cross-border movement were all disrupted during the pandemic, though selectively and to differing degrees. At the organisational level, dynamic capabilities theory (Teece et al., 1997) and the Resource-Based View (Barney, 1991) account for why firms differ in their ability to reconfigure resources and routines under crisis conditions. Resilience theory (Walker et al., 2004; Folke, 2006) supplies the normative frame for judging the quality of a rebound, separating engineering resilience (return to a prior state) from ecological resilience (transformation toward a new and more adaptive configuration). Transition theory (Geels, 2002) and the notion of windows of opportunity (Ioannides & Gyimóthy, 2020) ask whether a crisis-induced rebound might produce structural departure rather than continuity.

These traditions sit in productive but largely unacknowledged tension with one another. The Theory of Planned Behaviour and Protection Motivation Theory model rebound as the outcome of a deliberative chain running from risk appraisal to intention to behaviour, yet evidence within the corpus itself complicates that assumption. Wang and Xia (2021) document a revenge travel mechanism in which heightened perceived severity fuels nostalgia and desire rather than caution, an affect-driven dynamic that a strictly rational-choice model does not anticipate. The mobilities paradigm sits at the opposite pole, treating mobility as a structural property of the tourism system rather than an aggregation of individual decisions, which leaves comparatively little room for the demand-side heterogeneity that Cluster 1 documents in detail. The corpus rarely puts these two traditions in direct dialogue, even though both are mobilised to explain the same phenomenon from incompatible starting premises, one agency-centred and the other structure-centred.

A second tension runs through resilience theory itself. Studies that measure rebound by the speed of volumetric restoration implicitly invoke an engineering conception of resilience, in which recovery means returning to a prior equilibrium, while studies that foreground sustainability and equity invoke an ecological conception, in which a return to the prior state counts as failure rather than success (Folke, 2006). Because both camps draw on the vocabulary

of resilience without always declaring which conception they intend, the term risks functioning as a boundary object that conceals rather than resolves the field's central normative disagreement, the same disagreement that the volumetric and structural pathways of the conceptual model in Section 2.3 are designed to make explicit.

A third, less examined tension concerns scale. Dynamic capabilities theory and the Resource-Based View locate the agency for adaptive recovery at the level of the individual firm, while transition theory and the mobilities paradigm operate at the level of the sector or the system. A comparable criticism has been levelled at multi-level perspectives on transition more broadly, namely that they under-specify the micro-foundations through which firm-level action aggregates into regime-level change, and that criticism applies with similar force here. The corpus offers firm-level accounts of adaptive capacity and system-level accounts of structural transformation, but it does not yet explain how the former cumulates into the latter, an unresolved bridge between the organisational and the systemic levels of analysis.

2.3. The 4T analytical framework and conceptual model

Building on the thematic structure of the reviewed literature, this article organises its synthesis around the 4T Framework. The framework comprises four clusters, summarised in Table 2. It brings together supply-side perspectives (Cluster 2 and Cluster 4), a demand-side perspective (Cluster 1), and a systemic, normative perspective (Cluster 3). The label 4T reflects the four organising themes that name the clusters: Tourist behaviour, Transport and mobility, Transformation and sustainability, and Technology and innovation.

Table 2. The 4T analytical framework

Cluster	Label	Theoretical anchoring	Primary focus
Cluster 1	Tourist behaviour and risk	Theory of Planned Behaviour (Ajzen, 1991); Protection Motivation Theory (Rogers, 1975); Health Belief Model; S-O-R	Risk perception, health and safety trust, travel intention, coping, behavioural change
Cluster 2	Transport and mobility	Mobilities paradigm (Urry, 2007; Sheller & Urry, 2006); modal choice theory	Aviation connectivity, urban mobility, modal shift, digital nomadism, mobility data

Cluster 3	Transformation and sustainability	Resilience theory (Folke, 2006); transition theory (Geels, 2002); diverse economies	Resilience, sustainability governance, social equity, ecological externalities
Cluster 4	Technology and innovation	Dynamic capabilities (Teece et al., 1997); Resource-Based View (Barney, 1991); crisis management	Business model innovation, digital transformation, crisis management, human resources

The integrated conceptual model (Figure 1) formalises the causal structure of tourism rebound across the four clusters. It proposes that rebound is co-determined by four interdependent conditions that recurrently shape tourism rebound. These conditions are behavioural, infrastructural, governance-related, and organisational. They converge through a set of moderating institutional conditions to produce two rebound pathways that differ in normative character. Pathway A is volumetric restoration, and it carries a high risk of path continuation. Pathway B is structural and transformative, and it is oriented toward sustainability. Figure 1 should be read as a heuristic synthesis model rather than as a causal path diagram suited to structural equation testing.

Tourism Rebound Post-COVID-19: Integrated Conceptual Model (4T Framework)

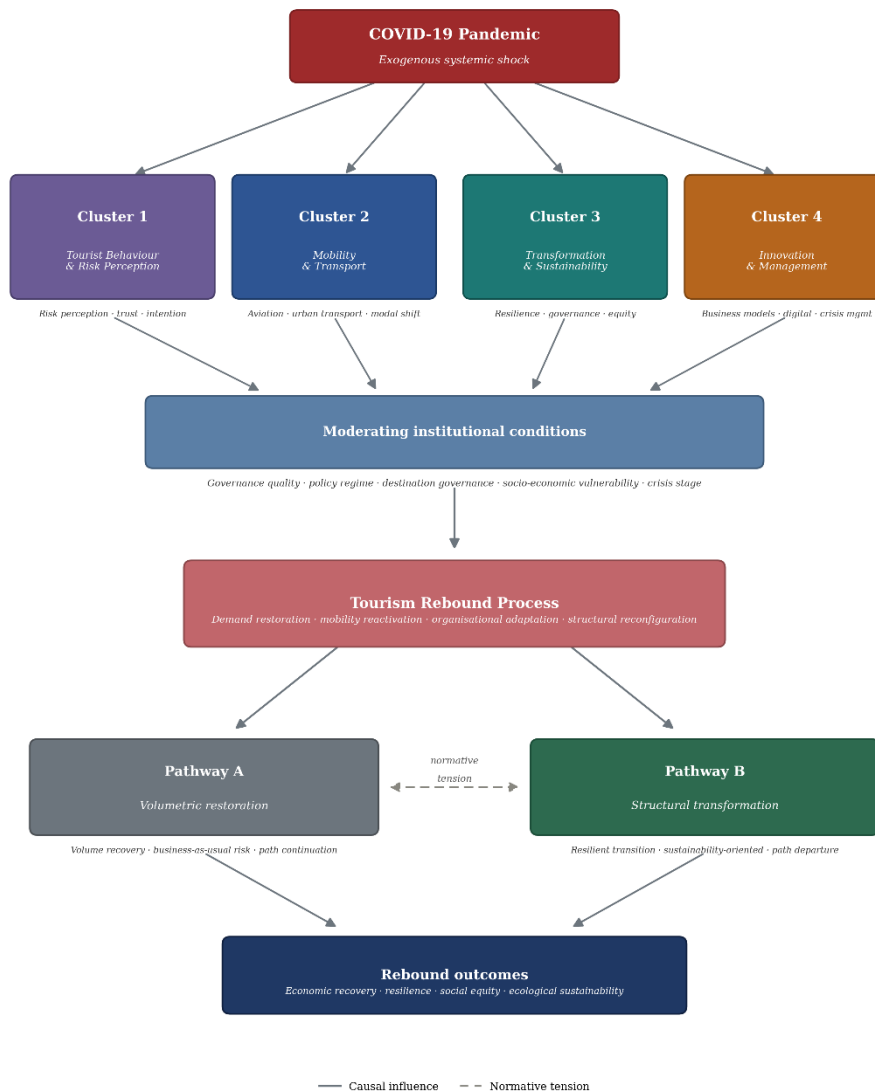


Figure 1. Integrated conceptual model of tourism rebound after COVID-19 (4T Framework). Solid arrows denote conceptual relationships; the dashed bidirectional arrow denotes the normative tension between the two rebound pathways.

3. Methods

This section sets out the full methodological protocol of the review. Each subsection maps to a specific item of the PRISMA-ScR checklist (Tricco et al., 2018). The complete compliance matrix appears in Appendix A (Table 8).

3.1. Scoping review framework

The review uses the five-stage iterative framework of Arksey and O'Malley (2005). The stages are identifying the research question, identifying relevant studies, selecting studies, charting the data, and collating, summarising, and reporting the results. Levac et al. (2010) refined this framework, and it was operationalised following the guidance of Peters et al. (2015). Reporting conforms to the 22-item PRISMA-ScR checklist (Tricco et al., 2018).

3.2. Protocol and registration

An internal protocol was developed before the final extraction. It specified the PCC framework, the eligibility criteria, the search strategy, the charting instruments, and the synthesis approach. This protocol was not lodged in a public registry. Scoping review protocols are not eligible for PROSPERO, which is restricted to systematic reviews reporting health outcomes, and this position is consistent with current disciplinary norms (Mak & Thomas, 2022). To preserve transparency in the absence of public registration, the team maintained a time-stamped log of decisions throughout the process, recording every change to the eligibility criteria and the charting instrument with its date and rationale.

3.3. Eligibility criteria

Eligibility criteria were defined a priori using the PCC structure (Peters et al., 2015). They appear in Table 3, together with the rationale for each one.

Table 3. Eligibility criteria

Criterion	Inclusion	Exclusion	Rationale
Document type	Peer-reviewed journal articles (empirical, conceptual, review)	Conference proceedings, book chapters, editorials, dissertations, grey literature	Quality signal and replicability
Subject matter	Tourism, hospitality, travel, transport, or mobility as the primary domain	Studies in which tourism is peripheral or incidental	PCC, Population alignment

Conceptual focus	Substantive contribution to recovery, resilience, or dynamics in tourism	COVID-19 studies with no rebound contribution	PCC, Concept alignment
Language	English	All other languages	Reviewer capacity and accessibility
Time span	January 2020 to March 2025	Before 2020 or after March 2025	PCC, Context alignment
Publication status	Final published or advance online in Scopus-indexed journals	Preprints, working papers, manuscripts under review	Peer-reviewed only

3.4. Information sources

Scopus (Elsevier) was the primary database. The search was run on 4 February 2026. Scopus was selected for its broad multidisciplinary coverage of tourism studies, hospitality management, transport research, sustainability science, and organisational management, all of which define the disciplinary perimeter of the review question, and for its strong indexing of the leading journals in these fields. Though the exclusion of Web of Science may have reduced database triangulation, Scopus has been shown to provide equivalent or superior coverage of the tourism literature in comparative assessments (Mongeon & Paul-Hus, 2016). Hand-searching supplemented the database search. Reference lists of the 10 most-cited articles were checked, and forward citation searches were run on the three foundational methodological references (Arksey & O'Malley, 2005; Peters et al., 2015; Tricco et al., 2018). This yielded 8 additional records that the automated search had missed.

3.5. Search strategy

The search string was built through iterative refinement. It combined controlled vocabulary and free-text terms tied to the three PCC components. The final string, applied to the TITLE-ABS-KEY fields, was the following:

("tourism rebound" OR "tourist recovery" OR "tourism recovery" OR "travel recovery" OR "hospitality recovery" OR "post-pandemic tourism" OR "tourism resilience") AND ("COVID-19" OR "coronavirus" OR "pandemic" OR "lockdown") AND ("travel" OR "tourism" OR "hospitality" OR "hotel" OR "mobility")

The following filters were applied: document type set to Article or Review, language set to English, publication year of 2020 or later, and source type set to Journals. No subject area restriction was applied, which preserved the full interdisciplinary coverage. The complete search log, including the exact number of results at each filter stage, appears in Supplementary Material S1.

3.6. Selection of sources of evidence

Study selection proceeded in two sequential stages, following Arksey and O'Malley (2005) and Mak and Thomas (2022). In the first stage, the lead reviewer screened the titles and abstracts of all retrieved records against the eligibility criteria. A calibration exercise preceded the full screen. The reviewer applied each criterion to the first 50 records, recorded the rationale for every decision, and resolved borderline cases against the PCC framework before continuing. A second reviewer independently checked 10% of the screened records ($n = 37$). Agreement was strong, with a Cohen's kappa of 0.84 (Mak & Thomas, 2022). In the second stage, full-text eligibility assessment was applied to every record retained after the first stage. Reasons for exclusion at the full-text stage were recorded under four pre-specified categories. Five studies met every eligibility criterion but could not be retrieved in full text, and they were recorded separately as not retrieved rather than as excluded on substantive grounds. All counts appear in the PRISMA-ScR flow diagram (Figure 2).

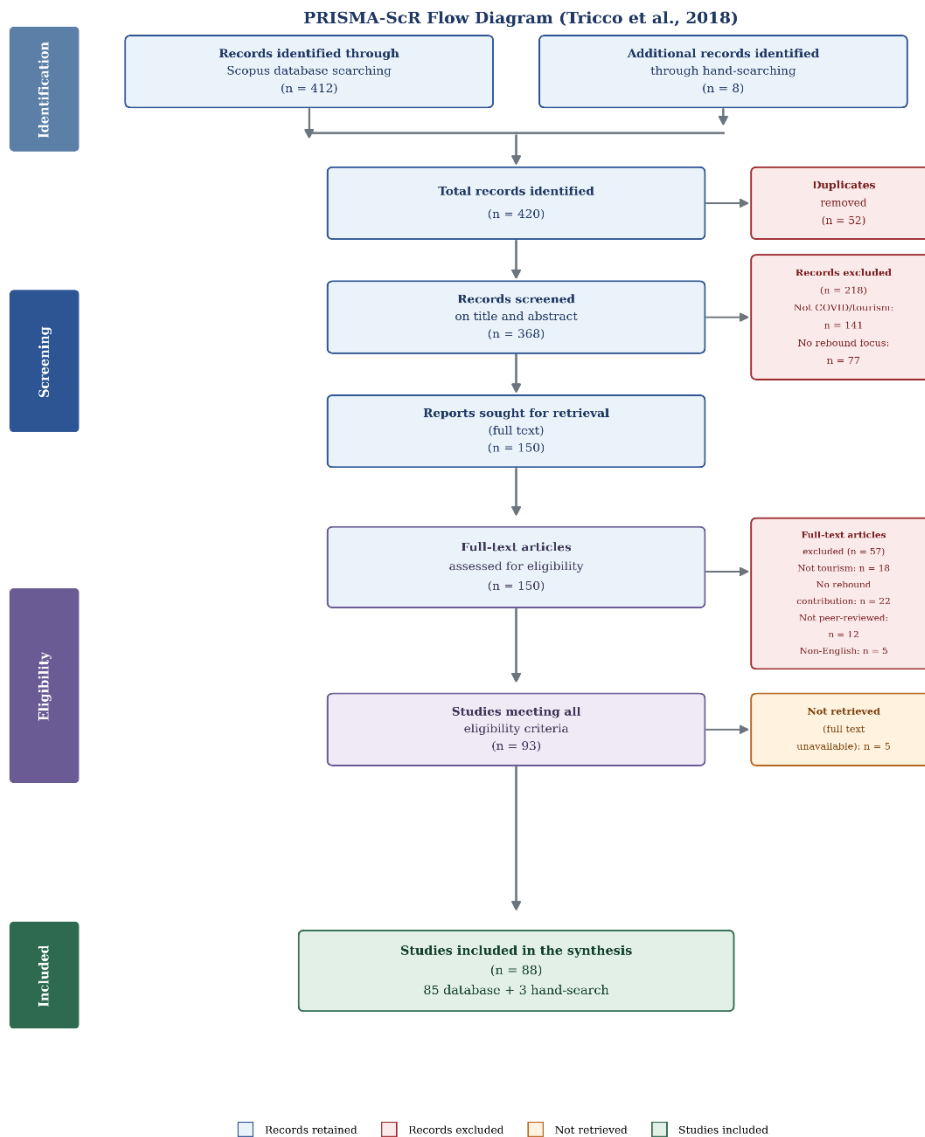


Figure 2. PRISMA-ScR flow diagram (Tricco et al., 2018).

3.7. Data charting process

In scoping reviews, data extraction is termed charting (Arksey & O'Malley, 2005). A structured charting form was developed jointly before data collection. It operationalised the eight variables listed in Table 4. The instrument was piloted on five randomly selected articles, which allowed the team to refine the variable definitions and the coding rules. All changes were documented and justified. The lead reviewer charted all 88 included studies. A verification pass covered 20% of the corpus (n = 19), drawn proportionally from each cluster by the second reviewer.

Disagreements were resolved by consensus. The final charting matrix is available from the corresponding author as Supplementary Material S2.

3.8. Data items

Table 4. Data items charted for each included study

No	Variable	Definition and coding rule	PRISMA-ScR item	Source
1	APA reference	Full APA citation including DOI	Traceability; items 15, 17	Scopus export
2	Study focus or analytical angle	Concise statement of the research question or analytical lens in relation to rebound	Item 17	Abstract, introduction
3	Research design	Survey or SEM, case study, qualitative, modelling, conceptual, review, bibliometric, and so on	Item 15	Methods section
4	Nature of study	Empirical-quantitative, empirical-qualitative, mixed-methods, conceptual-theoretical, or review	Item 15	Methods section
5	Principal findings	Key empirical or theoretical results relevant to the review question	Item 18	Results, conclusions
6	Cluster assignment	Primary and secondary assignment to Cluster 1, 2, 3, and/or 4 by dominant focus	Item 13	Lead reviewer
7	Principal conclusion	Main conclusion on rebound, paraphrased from the conclusion section	Item 18	Conclusion section
8	Study limitations	Limitations the authors state explicitly (sampling, time span, generalisability, measurement)	Item 20	Limitations section

3.9. Critical appraisal

No formal quality appraisal of the individual included studies was carried out. This is appropriate and consistent with scoping review methodology. Arksey and O'Malley (2005, p. 21) state that the purpose of a scoping study is not to evaluate the quality of studies but to map the evidence landscape, a position confirmed by Peters et al. (2015). All peer-reviewed contributions were therefore included without quality weighting, whether empirical, conceptual, or review-based. The limitations of each study, captured in Variable 8, were nonetheless extracted systematically. They feed into the discussion in Section 6.5, which keeps the heterogeneity and boundary conditions of the evidence base transparent.

3.10. Synthesis of results

Synthesis proceeded in two stages, following the JBI guidance (Peters et al., 2015). In the first stage, all 88 studies were assigned to one or more clusters of the 4T Framework (Variable 6), according to the dominant thematic focus identified through Variables 2, 5, and 7. The assignments were iterative. An initial coding round was followed by a validation pass that tested the internal coherence and the mutual exclusivity of the cluster boundaries. In the second stage, a narrative thematic synthesis was built for each cluster. It integrated the findings (Variable 5) and the conclusions (Variable 7) across the included studies, following the thematic analysis approach of Braun and Clarke (2006). Themes were generated inductively within clusters and then cross-validated against the a priori 4T Framework. No quantitative pooling of effect sizes was performed, in line with PRISMA-ScR item 13, which does not apply to scoping reviews.

4. Results

4.1. Selection of sources of evidence

The Scopus search returned 412 records, and hand-searching added 8 more. After 52 duplicates were removed, 368 records were screened on title and abstract. Of these, 218 were excluded. Most fell outside the scope of COVID-19 and tourism ($n = 141$), and the remainder lacked any focus on rebound ($n = 77$). The 150 records that remained went to full-text assessment, and 57 were then excluded. Reasons were as follows: not tourism or hospitality ($n = 18$), no substantive contribution to rebound ($n = 22$), a format that was not peer-reviewed ($n = 12$), and a language

other than English ($n = 5$). This left 93 studies that met all eligibility criteria. Of these, 5 could not be retrieved in full text and were recorded as not retrieved. The synthesis corpus accordingly comprises 88 studies. Figure 2 depicts the full selection process.

4.2. Characteristics of sources of evidence

4.2.1. Temporal distribution

The temporal distribution is markedly uneven, which fits the pattern of crisis-driven research cycles (Utkarsh & Sigala, 2021). Of the 88 studies, 37 (40%) were published in 2020 and 26 (28%) in 2021. Together these two years account for 68% of the corpus. The pattern reflects the rapid scholarly mobilisation that followed the pandemic. Conceptual papers written in response to the crisis set the agenda early and became reference anchors for the empirical work that followed. The years 2022 and 2023 show a sharp contraction ($n = 4$, 4%), which publication lag largely explains. A second wave then arrived in 2024 and 2025 ($n = 21$, 23%), as the field matured and as enough time had passed to allow retrospective and medium-term analysis.

4.2.2. Geographic and disciplinary scope

The corpus reflects a global research community that publishes mostly in English. Author affiliations cluster in China ($n = 15$), the United Kingdom ($n = 13$), the United States ($n = 10$), Australia ($n = 8$), India ($n = 7$), and Spain ($n = 7$). Beyond the top six, contributing countries span Europe, East and South-East Asia, and the Americas, signalling that the literature is genuinely transnational. The 88 studies are spread across 42 journals spanning tourism studies, hospitality management, transport research, sustainability science, environmental studies, and organisational management.

4.2.3. Methodological profile

Table 5. Temporal and methodological distribution of the corpus (n = 88)

Nature of study	2020	2021	2022-23	2024-25	Total (%)
Empirical (quantitative)	19	9	2	11	41 (47%)
Empirical (qualitative)	3	4	1	3	11 (12%)
Mixed methods	1	0	0	0	1 (1%)
Conceptual, theoretical	8	7	1	4	20 (23%)
Review, bibliometric	6	6	0	3	15 (17%)
Total	37	26	4	21	88 (100%)

4.2.4. Citation patterns

The cumulative citation count of 29,821 (mean = 338.9, median = 252), as indexed in Scopus at the date of extraction (4 February 2026), confirms the high academic and societal salience of the corpus. Five works lead the field. Gössling et al. (2020) hold first place with 3,530 citations. They are followed by Sigala (2020) with 1,713, Hall et al. (2020) with 951, De Vos (2020) with 829, and Sharma et al. (2021) with 706. The concentration of citations on 2020 publications matches the agenda-setting role that crisis-responsive conceptual work tends to play.

4.3. Visual bibliometric analysis: keyword co-occurrence mapping

To supplement the narrative thematic synthesis, a keyword co-occurrence analysis was performed using VOSviewer (Van Eck & Waltman, 2010) on the full corpus. Keyword co-occurrence mapping identifies which author keywords appear together across publications, and by extension which conceptual territories have been developed in parallel within the field (Van Eck & Waltman, 2010). The analysis was run with a minimum co-occurrence threshold of two, yielding a network of 187 keywords distributed across 11 clusters. Two complementary visualisations are presented.

Figure 4 presents the temporal overlay map of the same co-occurrence network. Node colour reflects the average year of publication of the articles in which each keyword appears, on a scale from 2022 (dark blue) to 2023.5 (yellow). The overlay reveals a clear temporal shift in the intellectual centre of gravity of the field. Keywords associated with acute crisis response, such as lockdown, viral disease, and public attitude, cluster in the earlier, darker period. Keywords associated with recovery management and structural transformation, such as machine learning, scenario analysis, travel demand management, and sustainability, are concentrated in the more recent, lighter period. This temporal gradient confirms that the field has moved from crisis documentation toward recovery analysis and structural reflection, a trajectory that is consistent with the second wave of publications (2024 and 2025) identified in the corpus and discussed in Section 4.2.

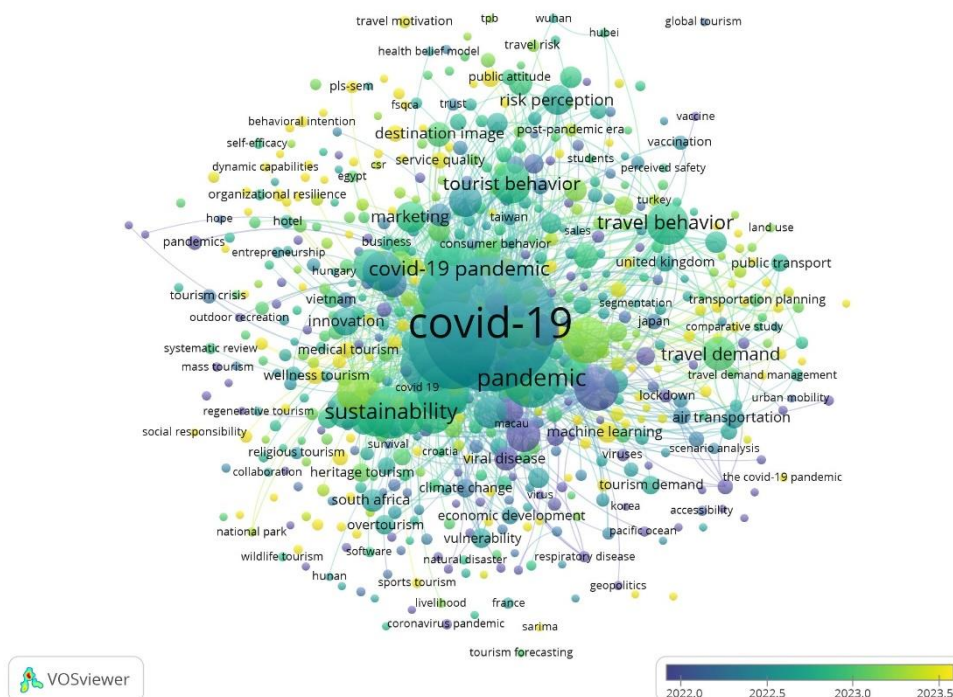


Figure 4. Keyword co-occurrence overlay map generated by VOSviewer (Van Eck & Waltman, 2010). Node colour reflects the average publication year of articles associated with each keyword (scale: dark blue = 2022, yellow = 2023.5), indicating the temporal trajectory of intellectual development within the field.

Taken together, Figures 3 and 4 provide convergent bibliometric evidence for the 4T Framework proposed in this review. The cluster structure of the co-occurrence network independently replicates the four thematic communities identified through manual charting, and the temporal overlay confirms that the field is undergoing the trajectory from crisis documentation to structural transformation that the conceptual model in Figure 1 theorises.

4.4. Thematic distribution across the 4T Framework

Table 6. Distribution of included studies across the 4T Framework (n = 88; multiple assignments possible)

Cluster	n (primary and secondary)	Most-cited study	representative	Core theoretical lens
Cluster 1, behaviour	39	Sánchez-Cañizares (2020)	et al.	Planned behaviour; protection motivation
Cluster 2, mobility	37	Gössling and Humpe (2020)		Mobilities paradigm
Cluster 3, transformation	55	Gössling et al. (2020), citations	3,530	Resilience; transition theory
Cluster 4, innovation	43	Sharma et al. (2021), citations	706	Dynamic capabilities; RBV

5. Thematic Synthesis: Results by Cluster

5.1. Cluster 1, tourist behaviour and risk perception

5.1.1. Overview

Cluster 1 contains 39 studies. They address the psychological and behavioural mechanisms through which tourism demand contracts and then recovers after a health shock. The dominant frameworks are the Theory of Planned Behaviour (Ajzen, 1991), Protection Motivation Theory (Rogers, 1975), and the stimulus-organism-response paradigm.

5.1.2. Risk perception as the central mediating mechanism

Across Cluster 1, perceived health risk is the variable that most consistently mediates between crisis exposure and behavioural response. Using PLS-SEM on a Spanish sample, Sánchez-Cañizares et al. (2020) show that risk perception suppresses travel intention through attitudinal, normative, and control pathways. The same model links risk perception to willingness to pay for safety measures, which serves as a direct indicator of rebound potential on the demand side. Zheng et al. (2021) document the coping mechanisms through which tourists manage pandemic travel fear, and they identify self-protection and problem-focused strategies as drivers of the timing and form of recovery. Synthesising scoping review evidence on travel intention, Seyfi, Kuhzady et al. (2024) confirm that risk perception, health and safety trust, subjective norms, and perceived behavioural control interact dynamically and produce heterogeneous rebound trajectories. Neuburger et al. (2020) draw a useful distinction. Objective epidemiological risk is one thing. Subjective risk perception, shaped by the media, by prior experience, and by trust in institutions, is another. Rebound speed tracks the latter rather than the former.

5.1.3. Trust restoration and rebound acceleration

Rainoldi et al. (2025) show that rapid rebound depends on three factors occurring together: a fall in perceived risk, the restoration of confidence through tangible health protocols, and flexibility on the supply side. Working with a two-wave design on Romanian tourists in May and December 2020, Orîndaru et al. (2021) find that fear of contamination and a preference for low-density settings are the principal behavioural barriers. Both can be partly addressed through visible hygiene and clear safety communication. Shin and Kang (2020) provide experimental evidence that contactless technology and advanced cleaning protocols lower perceived health risk and raise booking intention. A further demand-side dynamic appears in Wang and Xia (2021). Perceived pandemic severity amplifies nostalgia, which in turn fuels travel desire. This revenge travel mechanism is psychologically endogenous, and it carries implications for forecasting the timing of demand surges.

5.1.4. Behavioural heterogeneity

One of the most important contributions of Cluster 1 is its account of heterogeneity on the demand side. Bae and Chang (2021) show that untact, or contactless, tourism formats partly substitute for conventional demand, which produces displaced rather than simple rebound. González-Reverté et al. (2022) ask whether pandemic-induced change marks a genuine attitudinal reset or a temporary pause, and they find partial transformation alongside strong tendencies to revert to earlier behaviour. Seyfi, Hall et al. (2025) confirm that the determinants of travel intention shifted significantly between the pre-pandemic and pandemic periods, with health and safety variables gaining explanatory weight. That finding has direct implications for how destinations design post-crisis marketing in any context where pandemic-era safety concerns persist.

5.2. Cluster 2, mobility and transport

5.2.1. Aviation as the structural bottleneck

Gössling and Humpe (2020) set out the foundational argument of Cluster 2. International tourism depends structurally on aviation capacity. As long as flight restrictions, capacity cuts, and traveller reluctance persist, international rebound stays constrained, whatever the demand-side impulses. Iacus et al. (2020) quantify this dependence through scenario modelling of air passenger traffic. A critical tension surrounds the climate implications. A rebound led by aviation would deepen the sector's carbon footprint, and sustainable aviation policy has become a priority for international bodies, regional regulators, and national governments alike.

5.2.2. Urban mobility as an early recovery indicator

Three studies, taken together, show that the restoration of urban mobility precedes and predicts tourism recovery, and that pandemic-induced modal shifts create conditions that persist after restrictions lift. Tiikkaja et al. (2021) demonstrate the predictive relationship using panel data from Tampere. Aloi et al. (2020) find that modal reconfiguration toward cycling and walking conditions the pace of urban recovery. De Haas et al. (2020) document structural substitutions, such as telework and reduced obligatory travel, that may durably reshape the mobility demand underlying tourism. De Vos (2020) warns that, absent deliberate policy intervention, rebound may lock in less sustainable modal preferences. These findings carry direct weight for urban destinations worldwide that depend heavily on accessible public transport. Bao and Zhang

(2020) add an environmental note: reduced mobility improved air quality, which implies an environmental rebound risk as traffic returns.

5.2.3. Digital nomadism as a hybrid mobility form

A distinctive strand of recent Cluster 2 work concerns hybrid work-leisure mobility. Hannonen (2025, 2023) and Xiao and Lutz (2025) document the rise of the digital nomad, a segment capable of early and flexible rebound. This form of mobility is especially relevant to destinations that have introduced dedicated digital nomad visa schemes, a policy instrument now adopted across Europe, the Caribbean, Latin America, Asia, and Africa, with Portugal, Estonia, Croatia, and Malta among the most cited examples.

5.3. Cluster 3, transformation and sustainability

5.3.1. The path-dependency critique

Cluster 3 is the most normatively developed part of the corpus, with 55 contributing studies. Its central claim is that rapid volumetric rebound risks reproducing structural vulnerabilities. Drawing on path dependence, Ioannides and Gyimóthy (2020) argue that, without institutional intervention, rebound entrenches overdependence on mass tourism and its ecological externalities. Gössling et al. (2020), the most cited work in the corpus, frame COVID-19 as a moment that exposes the structural fragility of tourism and call for a recovery directed toward resilient, sustainable trajectories. Cave and Dredge (2020) introduce a diverse economies perspective, contending that systemic resilience requires diversified value logics that reach beyond market transactions. Benjamin et al. (2020) and Higgins-Desbiolles (2020) add the dimensions of equity and justice, arguing that a good rebound should be judged by its quality and not by its speed alone.

5.3.2. Resilience frameworks

In the most cited empirical paper in the corpus, with 706 citations, Sharma et al. (2021) propose a resilience-based framework. It integrates internal firm-level measures, such as technology, employee trust, and customer confidence, with external enabling factors, such as government support, community engagement, and governance. Their three-stage model, running from crisis

response through adaptive recovery to revitalisation, gives a temporal structure to the management of rebound. Sobaih et al. (2021) test these mechanisms in small Egyptian hospitality enterprises and confirm that planned and adaptive resilience improve performance and support sustainable outcomes. More radical transformation arguments come from Ateljevic (2020) and Crossley (2020). Pandemic-induced ecological grief, Crossley suggests, may foster demand for regenerative tourism, which creates bottom-up pressure for a structural rebound.

5.3.3. Environmental externalities

Two studies document environmental gains during the period of reduced mobility and caution against their reversal. Bao and Zhang (2020) record improvements in air quality, while Yunus et al. (2020) report better surface water quality during lockdown. Prideaux et al. (2020) make the normative case directly, arguing that COVID-19 should serve as a rehearsal for the transition to low-carbon tourism.

5.4. Cluster 4, innovation and management

5.4.1. Business model innovation

In a qualitative multiple-case study of six Austrian hospitality firms, Breier et al. (2021) show how the rapid reconfiguration of value propositions, revenue sources, and stakeholder relationships enables faster rebound. The finding supports dynamic capabilities theory. Organisational plasticity, the capacity to reconfigure routines under crisis, separates the firms that recover quickly from those that do not. Duarte Alonso et al. (2020) corroborate the pattern across small hospitality enterprises in several countries.

5.4.2. Digital transformation

Jiang and Wen (2020) identify robotics, artificial intelligence, and hygiene technology as the three pillars of a health-oriented value proposition for hospitality. Pillai et al. (2021) develop a Hospitality 5.0 framework that maps contactless and intelligent technologies across the guest journey and demonstrates benefits on both sides: trust restoration for demand and cost management for supply. Zeng et al. (2020) analyse the pandemic-accelerated adoption of robotics. Akhtar et al. (2021) and El-Said and Aziz (2022) provide evidence that virtual reality

and virtual tours sustain tourist engagement during restrictions. Agarwal et al. (2024) show that technology appetite moderates the speed of digital transformation, a finding of clear relevance to the SME-dominated hospitality sector that prevails in most tourism economies, where digital capability is unevenly distributed within and between countries.

5.4.3. Crisis management and human resources

Waller and Abbasian (2021) identify commercial flexibility, cost reduction, service reconfiguration, and stakeholder coordination as the dimensions of effective crisis management. Aldao et al. (2025), drawing on travel agent data, point to credible destination crisis governance and operational flexibility as joint enablers of rebound. Hao et al. (2020) propose a three-phase crisis management model running from response through recovery to adaptation. A final and often overlooked constraint appears in Formica and Sfodera (2022). The Great Resignation has created a supply-side bottleneck. Workforce instability limits service capacity even when demand has returned, a problem documented across multiple regions, with hospitality labour markets in the United Kingdom, Germany, the Netherlands, France, the United States, and Australia among the most affected.

6. Discussion

6.1. Synthesis of principal findings

The first research question concerned the theoretical frameworks used in the field. The corpus draws on at least five traditions distributed across the four clusters of Table 2. Planned behaviour and protection motivation dominate Cluster 1. The mobilities paradigm structures Cluster 2. Resilience and transition theories anchor Cluster 3. Dynamic capabilities and the Resource-Based View frame Cluster 4. This pluralism reflects the genuine multidimensionality of tourism rebound, but it also creates a terminological incommensurability that complicates synthesis across clusters: agency-centred traditions such as planned behaviour and dynamic capabilities theory explain rebound as something actors achieve, whereas structure-centred traditions such as the mobilities paradigm and transition theory explain it as something systems permit, a distinction the corpus rarely makes explicit.

The second research question concerned determinants, mechanisms, and moderating conditions, formalised in the conceptual model in Figure 1 as four interacting categories: the normalisation of perceived health risk and the restoration of trust (Cluster 1), the reactivation of mobility infrastructure (Cluster 2), organisational adaptive capacity (Cluster 4), and institutional governance quality (Cluster 3). The theoretical interest of this configuration lies less in the list itself, already detailed in Section 5, than in why the four conditions resist substitution. The mobilities paradigm treats tourism as constitutively, not merely instrumentally, dependent on systems of mobile practice (Urry, 2007): on that reading, a deficit in aviation or urban transport capacity is not a friction that demand-side confidence can offset, but a structural precondition that confidence cannot replace. Dynamic capabilities theory locates the agency for adaptive recovery at firm level (Teece et al., 1997), yet that agency operates within boundary conditions, infrastructure availability and governance quality, that no individual firm controls. The pattern is consistent with the logic of panarchy in resilience theory (Walker et al., 2004), in which adaptive cycles nested at different scales, behavioural, infrastructural, organisational, and institutional, must remain reasonably aligned for the system as a whole to reorganise; misalignment at any one scale constrains what the others can achieve. Read this way, the corpus's recurrent finding that single-dimension progress is insufficient is not merely an empirical regularity. It follows from the structural and multi-scalar character of tourism systems that the mobilities and resilience traditions, taken together, would predict.

6.2. The volumetric and structural tension

The central normative tension in the literature lies between two pathways. Pathway A is volumetric restoration. Pathway B is structural and transformative recovery. The tension reflects a disciplinary divide. Economics-oriented studies tend to treat rebound speed as the primary performance metric, whereas sustainability-oriented work judges rebound by its structural quality. The empirical evidence is mixed. González-Reverté et al. (2022) and De Haas et al. (2020) find partial attitudinal change that coexists with strong reversion to prior behaviour. Gössling et al. (2020), Hall et al. (2020), and Ateljevic (2020) argue for transformative potential. The review cannot resolve this tension, since it reflects genuine empirical heterogeneity. The practical implication is clear enough. Policymakers cannot assume that the sustainability commitments written into recovery frameworks will translate on their own into durable behavioural or operational change.

6.3. Policy implications

The corpus is global in scope, and the findings translate into four cross-cutting policy implications that apply across tourism systems worldwide. The first concerns communication. The evidence from Cluster 1 on risk perception suggests that credible safety signalling, rather than volume-focused marketing, is the proximal accelerator of demand rebound. National tourism organisations and destination marketing organisations should accordingly design risk communication that is evidence based, transparent, and continuously updated. The second concerns aviation. The evidence from Cluster 2 on the structural role of air transport places sustainable aviation policy at the centre of any rebound that aspires to be both economically robust and environmentally responsible. International instruments such as ICAO's CORSIA scheme, regional emissions trading systems, and complementary national measures all bear on this question. Destinations with dense aviation dependence will face the sharpest trade-offs. The third concerns resilience. The frameworks in Cluster 3 apply to destination management worldwide. Multilateral facilities, regional cohesion mechanisms, and dedicated tourism recovery funds at the national level provide institutional resources for structured resilience governance, although the practical challenge is less the existence of instruments than their calibration to local destination profiles. The fourth concerns the digital divide. The evidence from Cluster 4 on uneven digital transformation, both within and between countries, points to a need for targeted digital transition support, particularly for the SMEs that dominate hospitality employment in most tourism economies. The objective is the same across contexts. The post-COVID-19 rebound must not entrench digital inequalities between firms, destinations, and regions.

6.4. Research gaps and future research agenda

Five research gaps emerge from the synthesis. Together they form a structured agenda, set out in Table 7.

Table 7. Research agenda: gaps, directions, and relevance

Gap	Gap identified	Recommended direction	research	Relevance and illustrations	operational
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1	Absence of longitudinal empirical designs	Panel and longitudinal studies tracking behavioural and structural change across three to five recovery years	Regional tourism data infrastructures, including the European Eurobarometer, UNWTO statistical frameworks, and OECD tourism panels, could supply the longitudinal data
2	Under-representation of comparative cross-destination designs	Systematic comparison drawing on institutional diversity across destinations and national policy regimes	The institutional diversity of national policy regimes worldwide forms a natural laboratory for comparative resilience research
3	Limited empirical work on the social equity of rebound	Empirical study of distributive outcomes: who gains from rebound and who bears its costs	Social tourism initiatives, accessibility frameworks, and rights based holiday programmes offer normative anchors for equity analysis
4	Environmental sustainability of rebound unquantified at the meso level	Destination-level and firm-level studies measuring the carbon and biodiversity impacts of recovery	Sustainability reporting standards such as GRI and EMAS, together with national tourism satellite accounts, offer a measurement infrastructure
5	Little empirical work on human resources as a supply-side constraint	Empirical study of workforce recovery: talent retention, reskilling, and sector attractiveness	Hospitality labour markets in several regions, including parts of Europe, North America, and Australasia, saw acute post-pandemic workforce exit

6.5. Strengths and limitations of the review

The principal strength of this review lies in its methodological rigour. The Scopus search used a reproducible string. Selection followed a documented two-stage process with an inter-rater reliability check, where Cohen's kappa reached 0.84. Data charting used a structured eight-variable instrument, piloted in advance and verified on 20% of the corpus. Reporting complies fully with PRISMA-ScR, as Appendix A confirms. The breadth of the corpus, covering 88 studies, 42 journals, and five years, gives a comprehensive map of the field that no earlier review has produced.

Four limitations deserve acknowledgement. First, restricting the search to Scopus-indexed, English-language publications may exclude relevant work in other languages or databases, such as Web of Science, CINAHL, and MEDLINE, and may underrepresent research communities

in regions where Scopus-indexed, English-language publishing is less prevalent. Second, the scoping method maps breadth rather than estimating causal effect sizes, so the conceptual model proposed here is a heuristic synthesis and not a meta-analytic result. Third, the field is moving fast. Some 2024 and 2025 publications were available only in advance online form when the search was run, which may leave the recent end of the time span slightly incomplete. Fourth, the absence of formal quality appraisal, appropriate for a scoping review yet still a limitation relative to a systematic review, means that the evidentiary weight of individual findings cannot be formally ranked.

7. Conclusion

This scoping review has mapped the scientific literature on tourism rebound after COVID-19. It drew on 88 peer-reviewed articles published between January 2020 and March 2025 in 42 journals, with 29,821 cumulative citations (Scopus, extracted 4 February 2026). The review was conducted according to the five-stage protocol of Arksey and O'Malley (2005) and reported using the PRISMA-ScR framework (Tricco et al., 2018).

Three contributions stand out. The first is conceptual. The 4T Framework and its associated model (Figure 1) show that tourism rebound is not unidimensional and not automatic. It is a co-determined process that requires simultaneous progress along behavioural, infrastructural, governance, and organisational dimensions. The normative tension between volumetric restoration and structural transformation remains the field's most consequential unresolved debate. The second is empirical. The synthesis identifies four interdependent conditions that recurrently shape high-quality rebound: a reduction in perceived health risk and the restoration of trust, the reactivation of mobility infrastructure, the adaptive capacity of tourism firms, and the quality of institutional governance. The evidence consistently shows that progress along any single dimension is insufficient without commensurate progress on the others. The third is practical. The review identifies five research gaps (Table 7) and a set of policy implications concerning evidence-based risk communication, sustainable aviation governance, destination resilience funding, and digital transition support for an SME-dominated hospitality sector.

Beyond the COVID-19 case itself, the evidence base consolidated in this review offers a structured reference point for future systemic crises affecting tourism. COVID-19 is, to date, the most thoroughly documented disruption to global tourism in the peer-reviewed Scopus-indexed literature. The empirical regularities that emerge from the 88 analyses synthesised here form a baseline against which subsequent shocks can be read. The 4T Framework operationalises that baseline. It identifies the dimensions that destination managers, transport authorities, hospitality firms, and tourism researchers should monitor first when a comparable shock occurs, namely perceived risk and trust dynamics, aviation throughput and urban mobility, firm-level adaptive capacity, and governance commitment. It also indicates where bottlenecks are most likely to form, and which policy instruments have shown empirical traction in the post-pandemic recovery. The framework is not a prediction. Pathogens, transmission

profiles, public health responses, and geopolitical contexts will differ from one crisis to the next, and any single case study, COVID-19 included, has limits as a forecasting instrument. What the framework offers is a structured response model, transferable across destination types and across world regions, that practitioners and researchers can mobilise from the first days of a future shock. Crisis preparedness in tourism would gain from treating the post-COVID-19 evidence not as a closed chapter, but as the most complete observational record currently available. Contingency protocols, monitoring dashboards, and recovery funding instruments could usefully be calibrated to the four conditions and the two rebound pathways identified in this review.

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Appendix A. PRISMA-ScR Compliance Matrix

Table 8. PRISMA-ScR compliance matrix (Tricco et al., 2018), 22 items

No	PRISMA-ScR item	Status	Location in this article
1	Title identifies the report as a scoping review	Reported	Title
2	Abstract provides a structured summary	Reported	Abstract (five paragraphs)
3	Rationale for the scoping review approach	Reported	Section 1.1
4	Objectives stated with a PCC framework	Reported	Section 1.2, Table 1
5	Protocol and registration	Reported	Section 3.2
6	Eligibility criteria	Reported	Section 3.3, Table 3
7	Information sources	Reported	Section 3.4
8	Full search strategy	Reported	Section 3.5
9	Selection process	Reported	Section 3.6
10	Data charting process	Reported	Section 3.7
11	Data items	Reported	Section 3.8, Table 4
12	Rationale for critical appraisal	Reported	Section 3.9
13	Summary measures	Not applicable	Scoping review
14	Selection of sources and flow diagram	Reported	Section 4.1, Figure 2
15	Characteristics of sources of evidence	Reported	Section 4.2, Tables 5 and 6
16	Critical appraisal within sources	Not applicable	Scoping review
17	Results of individual sources	Reported	Section 5
18	Synthesis of results	Reported	Section 5, Figure 1
19	Summary of evidence	Reported	Section 6.1
20	Limitations	Reported	Section 6.5
21	Conclusions	Reported	Section 7
22	Funding	Reported	Title page